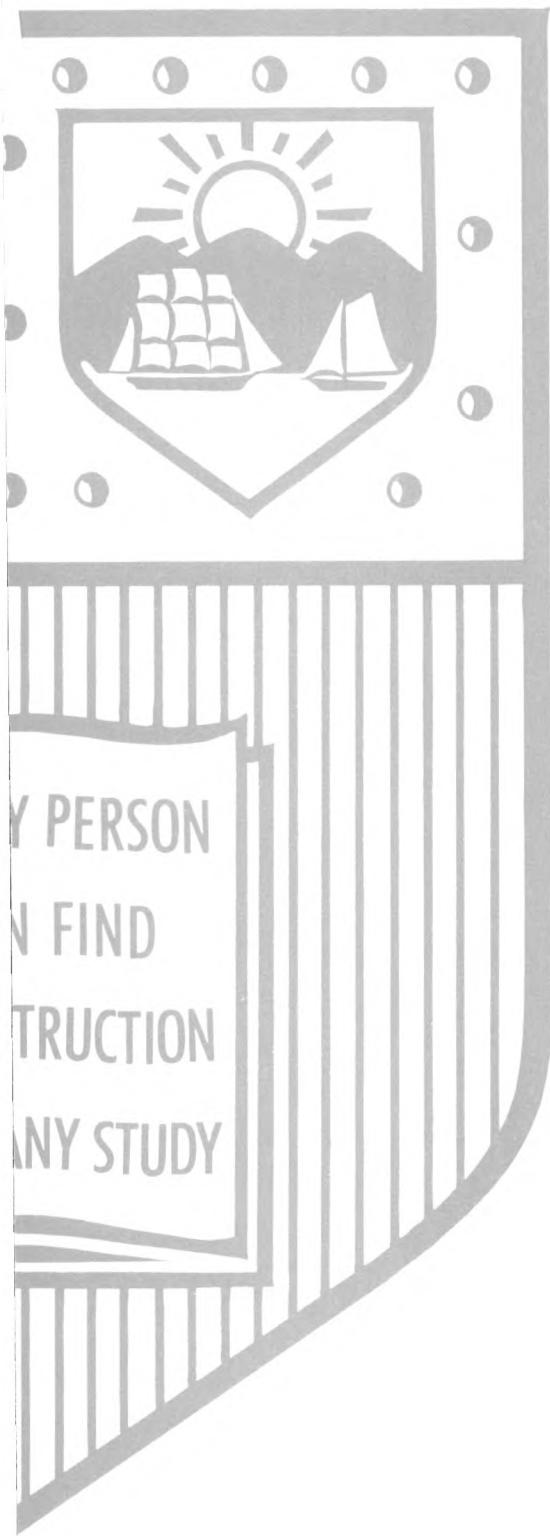
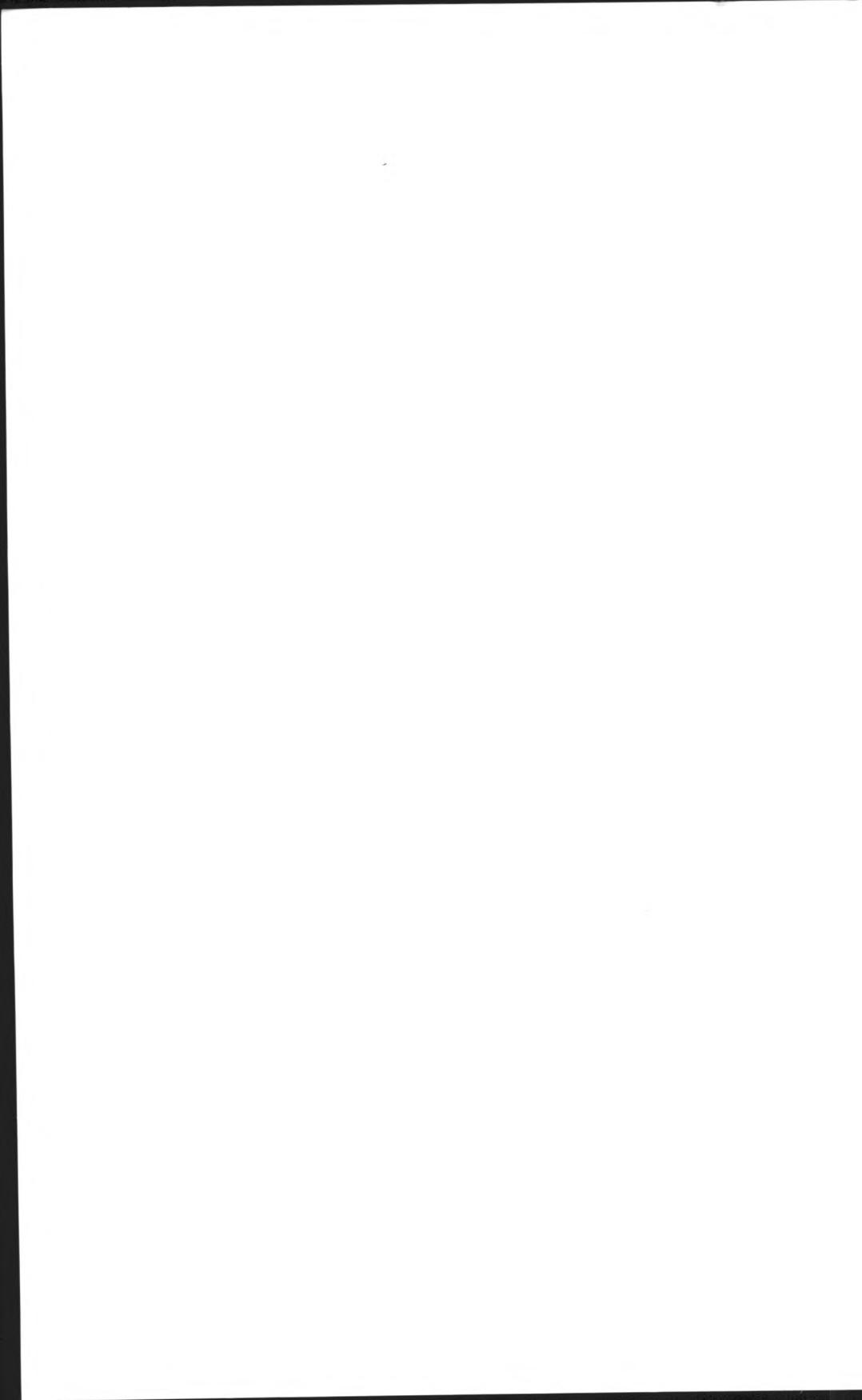


nell University Announcements



College of
Architecture,
Art, and
Planning



Cornell University

**College of Architecture,
Art, and Planning**

1975-76

Cornell University Announcements

Volume 67 of the Cornell University Announcements consists of twenty-two catalogs, of which this is number 5 dated March 17, 1975. Publication dates: twenty-tw times a year (four times in August; three time in January and March; twice in June, July, September, and November; once in April, May October, and December). Publisher: Cornell University, Sheldon Court, 420 College Aven Ithaca, New York 14853. Second-class postage paid at Ithaca, New York.

Cornell Academic Calendar

1975-76

Registration, new students	Thursday, August 28
Registration, continuing and rejoining students	Friday, August 29
Fall term instruction begins	Monday, September 1
Thanksgiving recess:	
Instruction suspended, 1:10 p.m.	Wednesday, November 26
Instruction resumed, 7:30 a.m.	Monday, December 1
Fall term instruction ends, 1:10 p.m.	Saturday, December 6
Final examinations begin	Saturday, December 13
Final examinations end	Saturday, December 20
Registration, new and rejoining students	Thursday, January 22
Registration, continuing students	Friday, January 23
Spring term instruction begins, 7:30 a.m.	Monday, January 26
Spring recess:	
Instruction suspended, 1:10 p.m.	Saturday, March 27
Instruction resumed, 7:30 a.m.	Monday, April 5
Spring term instruction ends, 1:10 p.m.	Saturday, May 8
Final examinations begin	Monday, May 17
Final examinations end	Monday, May 24
Commencement Day	Friday, May 28

The dates shown in the Academic Calendar are subject to change at any time by official action of Cornell University.

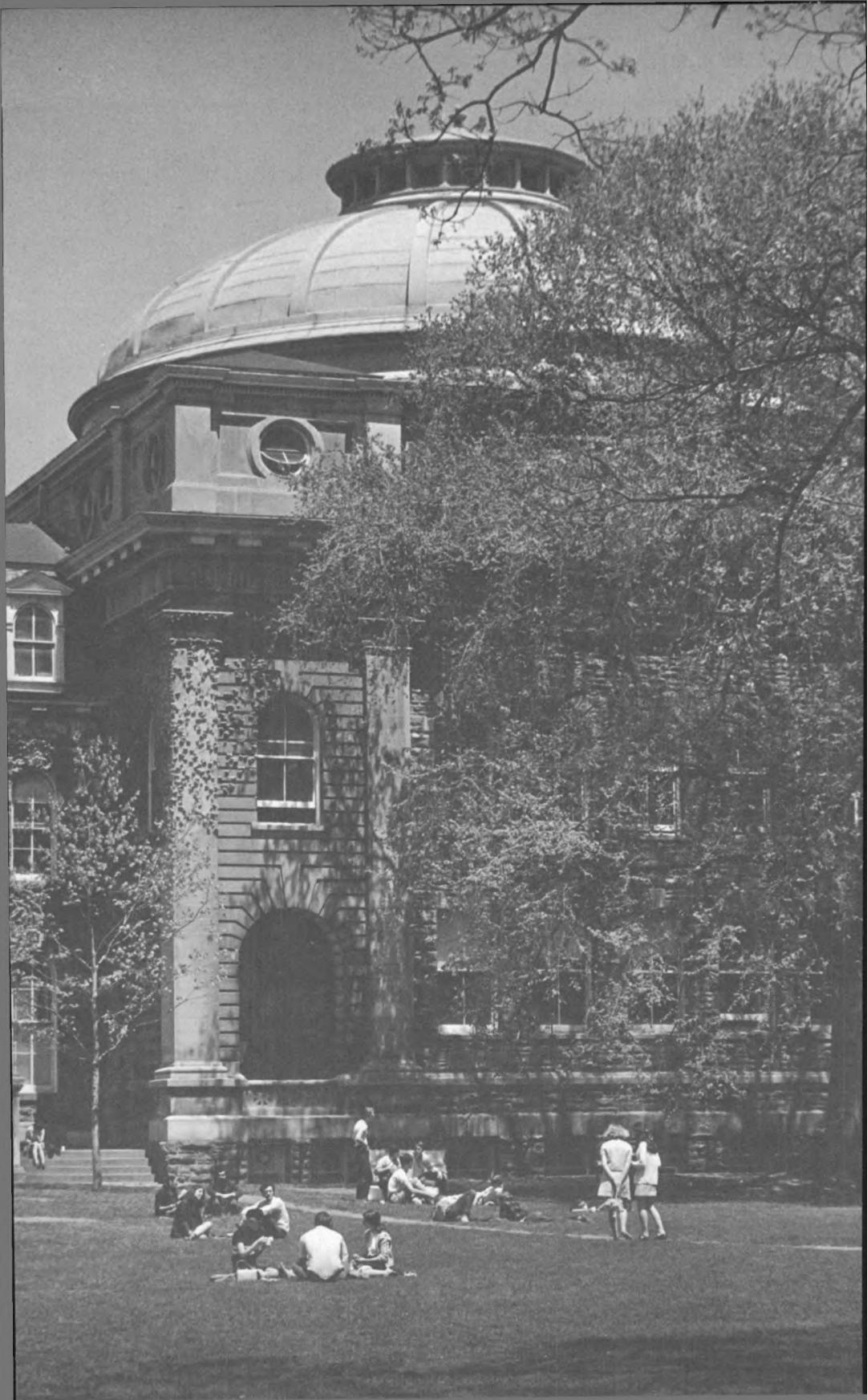
In enacting this calendar, the University Senate has scheduled classes on religious holidays. It is the intent of Senate legislation that students missing classes due to the observance of religious holidays be given ample opportunity to make up work.

Announcements

Contents

2	Academic Calendar
5	College of Architecture, Art, and Planning
6	Architecture
14	Art
17	City and Regional Planning
23	Landscape Architecture
26	General Admissions
27	Financial Aid
31	General Information
35	Courses of Instruction
35	Architecture
42	Art
44	City and Regional Planning
57	Register
60	Map
61	Index
62	List of Announcements

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



Cornell University

College of Architecture, Art, and Planning

At Cornell, from the first, there was a place in the University for the teaching of architecture. In October 1871, three years after the University opened, a School of Architecture was established and Charles Babcock, an associate of Richard Upjohn, was appointed professor of architecture. The School was fortunate to have the president of the University, Andrew Dickson White, 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 school all that he had accumulated—a large architectural library and several thousand architectural photographs, drawings, casts, models, and other items 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 school became the College of Architecture. A Department of Art, organized in 1921, has played an increasingly important part in the College and in the life of the University. In recognition of the growing importance of urban planning, a Department of City and Regional Planning was established in 1935.

In 1967, to reflect the independent strength of its three programs, the name of the College was changed to the College of Architecture, Art, and Planning.

In 1971, the College celebrated the centennial of professional instruction in architecture. A bronze portrait head of Professor Babcock was placed in the south porch of Sage Chapel to culminate in the celebration of the centennial year.

The College offers three programs leading to the bachelor's degree—the five-year program in architecture leads to the Bachelor of Architecture, and four-year programs in art

and architecture lead to the Bachelor of Fine Arts. These three programs have entirely different objectives that are described in detail in the following sections.

The faculty of the College, acting as a division of the Graduate School, has jurisdiction over the advanced professional degrees Master of Architecture, Master of Landscape Architecture, Master of Regional Planning, and Master of Fine Arts. The College also offers programs in the following fields leading to degrees over which the Graduate School has jurisdiction: architectural sciences, M.S.; history of architecture and urban development, M.A. and Ph.D.; city and regional planning, Ph.D.

Students in each of these programs, working in physical proximity to one other, gain a broader understanding of their own special area of interest through close contact with the students and teachers in other disciplines.

Early in its development, the College set a limit to the number of its students and devised a selective method of admission. It now enrolls over 650 students and has full-time teaching staff of over sixty, supplemented by visiting teachers, part-time lecturers, and assistants. Teachers and students in such proportion mix together freely, and much instruction and criticism is on an individual basis.

The College's courses are parts of professional curricula with fundamental subjects given within the College by a faculty reflecting professional points of view. This professional concentration of courses within the College is balanced by the breadth of view gained from courses and informal learning in the rest of the University. The College is convinced that this breadth is an essential element of professional education. This conviction is evidenced by the form of the curriculum, the methods of teaching, and the extracurricular life of teachers and students.

Architecture

The field of architecture is becoming increasingly complex as architects assume a wider range of responsibility toward problems of the built environment. In this profession, the architect has the opportunity to make contributions to the major human efforts of our time towards improving the habitat of people. These efforts will benefit from the particular vision and innovative ability of the architect, who will, however, not be the exclusive designer of the environment, but will perform the task within a total framework and in close relationship with other professionals. With the changes taking place in world society, the architectural profession in the future will be very different from today. This is not to say that architecture will abandon its traditional functions, but that new factors will affect the profession—the emergence of regional ecology, the application of the social sciences, the shift of focus from the construction of individual buildings to inclusion of the whole building process, the evolution of design methodology, the revival of large-scale design, and the emergence of new roles for the design profession. In general, architects are less and less called upon to design for individuals and must now see the client as society at large. Thus, architectural education must assess what the total environment asks of the architect.

While the larger environmental problems are the concern of a number of disciplines, architecture as a profession may be more narrowly defined in terms of those services it performs that characterize its distinct role in giving concrete three-dimensional form to the physical environment. The nature of the field calls for an undergraduate education that establishes a broad understanding of human values and social problems, as well as the theoretical and technical base of professional competence. In meeting these objectives, the undergraduate professional program structures the exploration of a wide range of architectural issues and scales of involvement, and provides the opportunity to develop particular emphasis that may become a basis for specialized studies at the graduate level.

Faculty Interests

- Stanley Bowman: visual communication systems
- Thomas Canfield: architectural design, architectural technology
- Peter Cohen: architectural design, housing in developing countries, design aspects of transportation
- Ralph Crump: environmental controls
- W. Wilson Cummer: architectural history (Classic and pre-Classical), archaeology

- Michael Dennis: architectural design, urban design
- Eric Dluhosch: architectural science, building design
- Joseph Gentili: open space planning and design, landscape analysis and planning, community service planning
- Donald Greenberg: architectural technology, structural analysis and design, suspension structures, computer graphics, model analysis
- Keith Grey: architectural design, planning design, community service design
- Martin Harms: architectural design
- George Hascup: architectural design, simulation
- Lee Hodgden: architectural design, theory and criticism
- Stephen Jacobs: architectural history, American architecture, architectural preservation
- Burnham Kelly: legal aspects of architecture, industrialization of building
- Alexander Kira: human engineering and psychological aspects of architecture
- Urszula Lesnikowski: architectural design
- Wojciech Lesnikowski: architectural design, housing, building systems
- Jacqueline Livingston: photography
- Robert MacDougall: anthropological methods applied to architecture
- Archie Mackenzie: architectural design methods, urban design
- R. Eugene Messick: visual communication systems
- Leonard Mirin: landscape architectural history, urban landscape design
- Christian Otto: architectural history (baroque, renaissance, modern)
- Charles Pearman: architectural design, urban design, American housing, building systems
- Henry Richardson: architectural design, urban design, housing in developing countries
- Colin Rowe: architectural history (renaissance and modern architecture, urban design, architectural criticism, contemporary European and American architecture)
- Francis Saul: structural steel and reinforced concrete building design, timber, foundation, structural plastics and blast-resistant design
- Mario Schack: architectural design, urban design
- Werner Seligmann: architectural design, urban design
- John Shaw: architectural design, urban design, regional design
- David Simons: computer applications, architectural design
- Stuart Stein: urban design, site planning, urban renewal, housing
- O. M. Ungers: architectural design, urban design, regional design, housing
- J. Alan Wells: architectural design, urban design, housing, building systems

Professional Degree Program

The first professional degree in architecture is the Bachelor of Architecture. This degree counts towards the professional registration requirements established by the various states and the National Council of Architectural Registration Boards. The professional program is normally five years in length and is particularly designed for those who have identified before matriculation their interest and motivation to enter the field. It therefore incorporates both a general and professional educational base.

The program is strongly oriented towards developing the student's ability to deal creatively with architectural problems on analytical, conceptual, and developmental levels. The sequence courses in design, consisting of studio work augmented by lectures and seminars dealing with theory and method, are the core of the program. Sequences of studies in human behavior, environmental science, structures, and building technology provide a base for the work in design.

In the first two years, the student has the opportunity to establish a foundation in the humanities and sciences through electives. During the fourth and fifth years, this base may be extended and applied by further studies in these areas. Within the professional program, the basis is established for understanding architecture in its contemporary and historical cultural context.

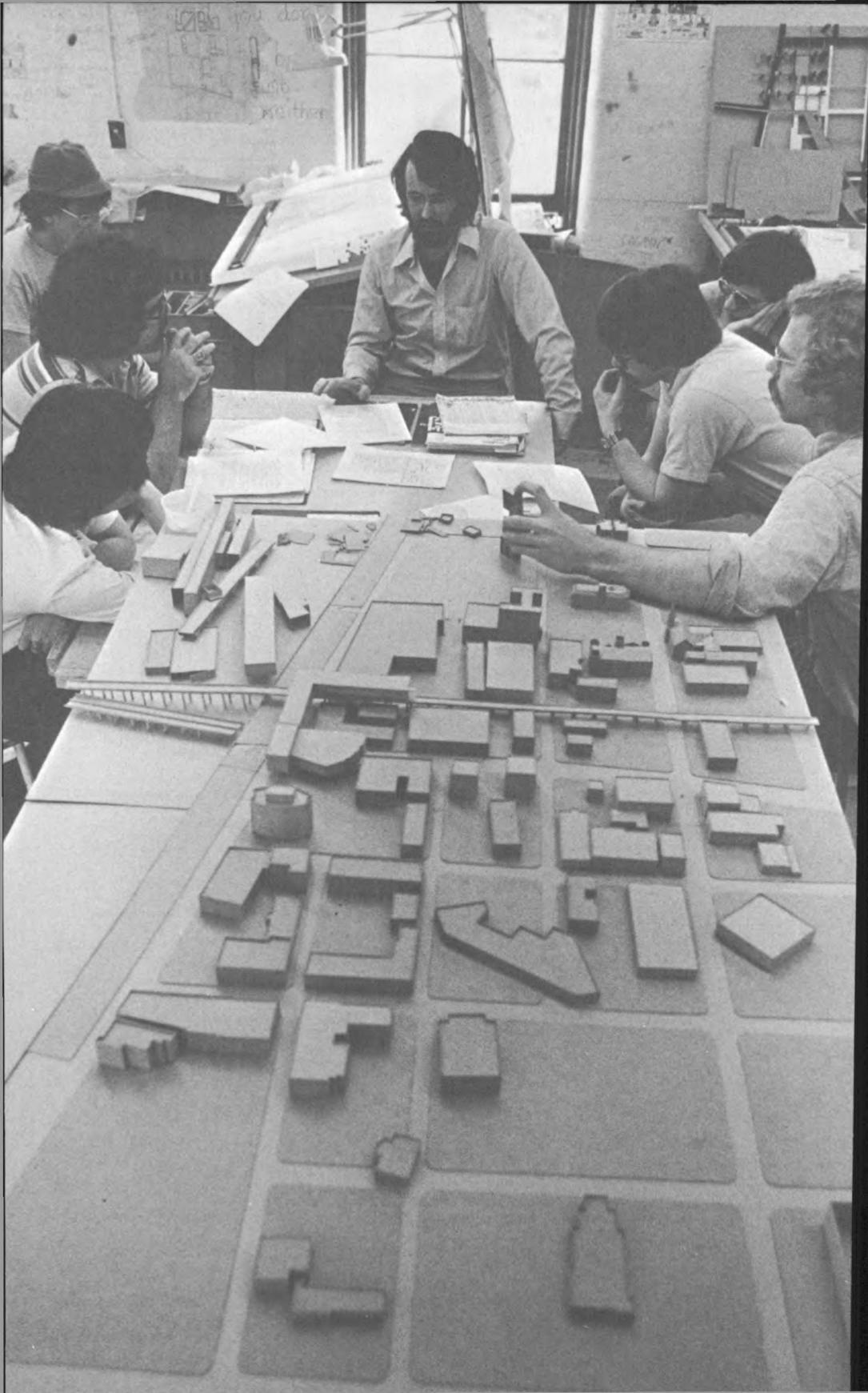
The structure of the program incorporates considerable flexibility for the individual student to pursue his or her particular interest in the fourth and fifth years. By planning options and electives in the fifth year, it is possible for a qualified student to apply the last year's work toward the Bachelor of Architecture degree to one of the graduate programs offered in the department, with the possibility of completing the requirements for the master's degree in a minimum of one additional year.

Curriculum

<i>First Year</i>	<i>Fall Term</i>	<i>Credit Hours</i>
101 Design I		4
131 Introduction to Architecture		2
151 Visual Communication I		3
141 History of Architecture		3
Elective (out of College) or fine arts option ¹		3
Elective (out of College)		3
		—
		18

<i>Spring Term</i>	<i>Credit Hours</i>
102 Design II	4
132 Introduction to Architecture	2
152 Visual Communication II	3
Elective (out of College) or fine arts option ¹	3
Elective (out of College)	3
	—
	18
<i>Second Year</i>	
<i>Fall Term</i>	
201 Design III	4
231 Architectural Elements and Principles	2
221 Mathematical Techniques	3
261 Introduction to Environmental Science	2
Option (200 Design Communication or 300-level course or fine arts course)	3
Elective (out of College)	3
	—
	17
<i>Spring Term</i>	
202 Design IV	4
232 Architectural Elements and Principles	2
222 Structural Concepts	4
262 Introduction to Social Sciences in Design	2
Option (200 Design Communication or 300-level course or fine arts course)	3
Elective (out of College)	3
	—
	18
<i>Third Year</i>	
<i>Fall Term</i>	
301 Design V	6
360 Building Technology, Materials, and Methods	3
321 Structural Systems I	3
Elective option (in Department)	2
Elective (in College)	3
	—
	17
<i>Spring Term</i>	
302 Design VI	6
362 Environmental Controls I	3
322 Structural Systems II	3
Elective (in Department)	2
Elective (in College)	4
	—
	18
<i>Fourth Year</i>	
<i>Fall Term</i>	
401 Design VII	6
462 Environmental Controls II	2
Elective (in College)	3
Elective (in Department)	2
Elective (in College)	4
	—
	17

¹ One course in fine arts must be taken during the first year.



Spring Term	Credit Hours
402 Design VIII	6
465 Technological Integration in Design	2
480 The Practice of Architecture	2
Elective (in or out of College)	3
Elective (out of College)	4
Program Planning for Fifth Year (Required)*	0
	—
	17
Fifth Year	
Fall Term	
501 Architectural Studio, 503 Thesis, or 505 Special Program	8
630 Advanced Seminar in Architecture	2
Elective (in or out of College)	3
Elective (out of College)	4
	—
	17
Spring Term	
502 Architectural Studio, 504 Thesis, or 505 Special Program	8
631 Advanced Seminar in Architecture	2
Elective (in or out of College)	3
Elective (out of College)	3
	—
	16
Total	173

Distribution Requirements

In order to fulfill the College distribution requirement, a student must take two intermediate level courses in architectural history in addition to Architecture 141 and 142, one three-hour course in city and regional planning, and two three-hour courses in fine arts. In-college electives may include courses in the Architecture Department.

Each student must also fulfill the out-of-college distribution requirement with one three-hour course from each of the following areas:

(1) social or behavioral sciences; (2) humanities; and (3) mathematics, or physical or biological sciences.

Degree Option

After the completion of the four years credit requirements, the student can opt to receive the nonprofessional degree, Bachelor of Fine Arts (B.F.A.) in architecture. The B.F.A. degree allows the student to enter a graduate program in architecture or related fields in other schools. The Master of Architecture Program at Cornell requires a Bachelor of Architecture degree.

* Students in 401-402 Design elect a studio option in architectural design, urban design, or architectural technology-environmental science each term of the fourth year. The student is expected to take recommended elective courses that relate to the studio concentration.

Transfer Students

While the professional degree program is specifically directed to those who are strongly motivated to begin a professional program when entering college, it is sufficiently flexible to allow admission of students who do not make this determination until after one or two years of college work. Each transfer case is considered individually. Transfer students are usually able to complete requirements for the B. Arch. degree in less than five years by attending summer sessions.

Nonprofessional Alternative Programs

The first two years of the professional program are considered a basic introduction to the field. It is possible after this phase to depart from the professional program to develop a concentration in some area of the broader field without the intention of becoming a licensed practicing architect. A student choosing an undergraduate major should apply in writing by February 1 in the second year to the department chairman. The student will be interviewed and informed about acceptance by March 1.

Programs developing major concentrations in the third and fourth years leading to the non-professional Bachelor of Fine Arts degree after the fourth year include history of architecture and urban development, design communications, urban planning and development, and policy planning and regional analysis. A student attaining the B.F.A. degree can either terminate studies or apply to a graduate program in the area of concentration.

History of Architecture and Urban Development

The major in history of architecture and urban development is intended for undergraduate students interested in historical studies of architecture and planning offered in the context of a professional school. The program benefits from a tradition of pioneer work in the history of architecture and urban development that has grown at Cornell over the last thirty years. Special features of the new major are the availability of work in preservation planning and the architectural aspects of archaeology. Nine members of the College faculty offer courses appropriate for this major.

Admission to the Major

Architectural history and urban development may be elected as a major subject if a student has completed Architecture 141 and 142 with a grade of B or better. Others may petition for admission to the major.

10 Nonprofessional Alternative Programs

Requirements

To satisfy the major subject requirement, a minimum of forty hours of history course work must be completed with a grade of C or better. Of these forty credits, twenty-six must be in architectural history and urban development with eight of these twenty-six credits obtained in courses above the intermediate level. In addition, eight credits must be obtained in related fields, such as history of art; archaeology; intellectual, cultural, or political history; and history of science.

Majors will be expected to meet the language requirement in the manner specified for students enrolled in the College of Arts and Sciences.

Honors Program

Students wishing to enroll in the Honors Program must indicate this intention in writing before the end of their junior year and be accepted for the program by the history of architecture faculty. Minimum requirements for admission to candidacy for honors are:

1. a cumulative average of B- or better in all courses;
2. a cumulative average of B or better in all history of architecture and urban development courses.

Honors candidates will take a four-credit-hour research course in the fall of their senior year. In the spring there will be a four-credit-hour session during which they will prepare and defend an architectural history presentation or demonstration, or a paper approximately fifty pages long.

Curriculum

<i>Prerequisite: first two years of</i>	<i>Credit Hours</i>
Bachelor of Architecture curriculum	70
<i>Third Year</i>	
<i>Fall</i>	
Fine art elective	3
Related field courses	4
History of architecture (intermediate level) or history of urban development	4
Electives	4
	15
<i>Third Year</i>	
<i>Spring</i>	
Related field courses	4
History of architecture (intermediate level) or history of urban development	4
Electives	7
	15

Fourth Year

	<i>Credit Hours</i>
<i>Fall</i>	
History of architecture (advanced level) or history of urban development	4
Honors or history related subject	4
Electives	8
	16

Fourth Year

	<i>Credit Hours</i>
<i>Spring</i>	
History of architecture (advanced level) or history of urban development	4
Honors or history related subject	4
Electives	8
	16
Total	132

Design Communication

The Design Communication Program has been formulated to prepare students with the skills and abilities to deal effectively with the complex possibilities presented by the new technologies in media communication forms. The program is directed toward an applied problem-solving approach to the design process in general and to architecture in particular.

Admission to the Major

Entrance to the Design Communication B.F.A. Degree Program is open to students who have successfully completed the first two years of the architecture program, and who have a grade of B or better in Architecture 151 and 152. Others may petition for admission to the major.

Requirements

A minimum of forty-two hours of coursework must be completed in the major field beyond the basic sequence courses with a grade of C or better. Twenty-four of the forty-two credits must be in design communication. The remaining eighteen credits must be obtained in related fields, such as fine arts, mass communication, perceptual psychology, lighting and acoustics, or the performing arts.

Curriculum

<i>Prerequisite: first two years of</i>	<i>Credit Hours</i>
Bachelor of Architecture curriculum	70
<i>Third Year</i>	
<i>Fall</i>	
Design communication courses, 300 level	6
Related field courses	6
Electives	3
	15

<i>Third Year</i>	<i>Credit Hours</i>
<i>Spring</i>	
Design communication courses, 300 level	6
Related field courses	6
Electives	3
	—
	15
<i>Fourth Year</i>	
<i>Fall</i>	
Design communication courses, 400 level	6
Related field courses	3
Electives	7
	—
	16
<i>Fourth Year</i>	
<i>Spring</i>	
Design communication courses, 400 level	3
Thesis project in design communication	6
Electives	7
	—
	16
Total	132

City and Regional Planning

The intention of this program is to offer students completing their first two years in the undergraduate architecture program the opportunity to major in planning during their third and fourth undergraduate years. It is not the goal of this undergraduate major program to train students to be professional urban planners; the master's program in planning is organized for that purpose. The major is organized primarily to offer students coming from an architectural program an opportunity to redirect their academic training toward the understanding of urban and regional problems and their potential solutions.

In general, this major will open up new directions for students for academic or professional activity that can be pursued in greater depth in a variety of graduate programs either at Cornell or elsewhere. It is anticipated that qualified students will be able to move more rapidly through the professional master's program, requiring less than the normal two years because of the concentrated course work taken in the undergraduate program.

Students in the undergraduate planning program may study in any one of several formal options or may work out a special program with a faculty adviser. Examples of special programs are exhibited below. Descriptions of other options and further elaboration follow later in the catalog, in the discussion of the graduate program in city and regional planning. Students completing the program should be well prepared to undertake graduate work in a variety of fields, such as urban design, landscape architecture, city and regional planning, public policy, or depending on the concentrations they choose, a number of the

social sciences. They should also be well prepared to enter the field of planning at various levels of government as policy planning becomes more and more an integral part of a wide range of public organizations whose programs attempt to address the critical social problems of our time.

Admissions to Major

Students intending to take the undergraduate major in city and regional planning must indicate their election to do so by the end of the spring term of their second year. They must be in good standing and approved by the CRP Committee on Undergraduate Majors.

Requirements and Programs of Study

The major requires a minimum of thirty credit hours of course work in the Department of City and Regional Planning. A total of 132 credit hours is required for the degree. Depending upon the option chosen, the core is comprised of from 18 to 24 credit hours. Examples of possible programs follow.

Possible Programs of Study for Undergraduate Major in Policy Planning and Regional Analysis

Undergraduate Planning Major Interested in Social Planning:

- Introduction to Urban and Regional Theory
- Introduction to Social Policy
- Theories and Strategies of Social Change
- Ghetto and Subgroup Economic Development
- Urban Social Planning Theory
- Internship in Urban Studies and Policy Planning
- Social science electives

Undergraduate Planning Major Interested in Urban Environmental Policy Planning:

- Introduction to Urban and Regional Theory
- Introduction to Environmental Policy
- The Public Economy of Urban Areas
- Regional Economic Development
- Field Studies in Urban Policy Planning
- The Political Economy of Environmental Protection
- Engineering electives

Undergraduate Planning Major Interested in Community Development Planning:

- Introduction to Urban and Regional Theory
- Planning Analysis
- Ghetto and Subgroup Economic Development
- Regional Economic Development
- Theories and Strategies of Social Change
- Field Studies in Planning
- Social science electives

12 Graduate Programs

Undergraduate Planning Major Interested in Urban Planning History:

Introduction to Concepts and Principles of Urban Planning and Development
Introduction to Human Ecology
Core Studies in Preservation Planning
Design and Conservation
Historical Development of the World's Cities
Seminar in American Urban History
Electives

Undergraduate Planning Major Interested in the Urban Development Process:

Introduction to Concepts and Principles of Urban Planning and Development
Introduction to Human Ecology
Introduction to Quantitative Techniques
Methods and Techniques of Urban Land-Use Planning
Controls and the Planner and Architect
Suburbanization and New Communities
Electives

A number of other programs can be developed.

Departmental Electives and Independent Study

A number of courses are specifically designated for undergraduates. Undergraduate students having the necessary prerequisites may be admitted, with the consent of the instructor, to the more advanced courses.

A number of independent work courses are available for students interested in pursuing subjects of special interest to them.

Fieldwork

Students are encouraged to take fieldwork problems providing them with experience in dealing with the problems of Upstate communities. Credit can be awarded.

During the three month summer period between the third and fourth year, the student is encouraged to gain the experience of an internship in city and regional planning. The field placement is generally in a planning agency or group and could be supervised by a faculty member. Credit can be awarded, if circumstances warrant.

Curriculum

The department releases each year a schedule of courses, comprised of offerings from the list in the back of this catalog. Suggested undergraduate curricula vary from year to year, and consultation with the most recent departmental listing is necessary.

Graduate Programs

The programs in which graduate study may be pursued in the Department of Architecture are architectural design, urban design, and regional design, all leading to the Master of Architecture (M. Arch) degree; architectural science leading to the Master of Science degree; architectural history and history of urban development leading to the Master of Arts and Ph.D. degrees. There is also a joint program, conducted by the Departments of Architecture, Policy Planning and Regional Analysis, and Urban Planning and Development, which normally requires three years and leads to both the Master of Architecture and the Master of Regional Planning degrees.

The graduate program in landscape architecture leading to the Master of Landscape Architecture (M. L. A.) degree is administered jointly by the Department of Architecture and the Department of Urban Planning and Development.

Graduate Program in Design

Students who have satisfactorily completed all requirements for an undergraduate professional degree in architecture or its equivalent at an approved institution may be admitted as candidates for the degree of Master of Architecture. Holders of nonprofessional degrees in architectural studies or environmental design should apply as transfers into the undergraduate program leading to the first professional degree (B. Arch.).

Three areas of major concentration are offered: architectural design, urban design, and regional design. These areas are each sufficiently broad to verge on one another while focusing in general on the scale of problems suggested by the designation. It is assumed that each student will develop an elective program to reinforce and supplement the studio work. A minimum of sixty credit hours is required. Of these, thirty-six are in design studio work, between nine and twelve in a minor concentration within or outside the Department of Architecture, and the remainder in general course work of which at least six credit hours must be taken outside the Department of Architecture and, preferably, outside the College. Students majoring in urban design or regional design are required to take a minimum of nine credit hours in planning course work. Candidates for admission should indicate their preferred area of major concentration on the application.

The normal length of time required to complete the program is four terms. The minimum number of residence terms is two, regardless of previous graduate work. Students acquiring the B. Arch. at Cornell are also required

to be registered in the Graduate School for at least two terms. For those pursuing the joint degree program in architecture and planning a minimum of two terms of residence is required in the graduate program in architecture.

The programs leading to the Master of Architecture degrees are administered by Program Concentration Committees consisting of the field representative and those faculty offering work in the area of concentration. Each graduate student selects a Special Committee of advisers. The Special Committee includes two advisers in the area of major concentration and one adviser in the area of minor concentration. The thesis is directed by the Special Committee with an additional faculty member at the student's option.

First-year graduate students normally elect the studio in their area of major concentration. Special projects organized by the faculty may be offered and elected as an alternative to participation in one of the studios with the permission of the instructor and the Program Concentration Committee. Second-year studio work is normally devoted to the thesis. However, the student may elect, with permission of the Program Committee, to devote only the fourth term to the thesis.

Graduate Program in Architectural Science

Qualified students enrolled in the Graduate School in programs leading to the degree of Master of Science may elect architectural science as either a major or a minor subject; those enrolled in programs leading to the degree of Doctor of Philosophy may elect it as a minor subject.

Students with undergraduate degrees in architecture, architectural engineering or the various branches of engineering, or social science, are likely candidates for this program. The program is extremely flexible and can be arranged to meet the specific needs and objectives of the individual students and to build on their prior technical preparation and competence.

The objectives of the graduate program in architectural science are the following:

1. To afford an opportunity for students of architecture to expand their creative design potential by increasing their knowledge and understanding of environmental science, computer science, or building technologies.
2. To provide a framework within which students who have graduated in related technical disciplines can explore building science and technology related specifically to architecture. This training prepares students with such backgrounds to join the ranks of consultants well versed in the architectural implications of contemporary science.

3. To provide a framework within which the student can explore the application of these disciplines in an architectural context.

A candidate for the Master of Science degree with a major in architectural science must satisfy the following requirements: (a) completion of the program of study prescribed by the student's Special Committee; (b) a minimum of two terms of residence; (c) presentation of a satisfactory thesis; and (d) passing of a final comprehensive examination.

Ordinarily more than two terms of residence will be required to complete the program of study, depending on the student's background and experience as they relate to his or her needs and interests. A portion of the student's program will consist of formal course work. In addition to the courses offered by the College of Architecture, Art, and Planning, a student may select courses offered elsewhere in the University, such as courses in civil engineering, engineering mechanics, mechanical engineering, electrical engineering, physics, computer science, mathematics, housing and environmental analysis, anthropology, and sociology.

Cornell facilities include a well-equipped state-of-the-art computer graphics laboratory and immediate access to the Cornell Computing center, IBM 370/168.

Graduate Program in Architectural History

Students interested in programs leading to the degree of Master of Arts or Doctor of Philosophy offered by the Field of History of Architecture and Urban Development enroll in the Graduate School of the University. They may elect either history of architecture or history of urban development as major or minor subjects. They have normally undertaken undergraduate curricula emphasizing architecture, history of art, or related studies.

The graduate program in architectural history is concerned with methods of scholarship and research as well as the record of development of architecture from the earliest times to the present day. A special feature of the program is the opportunity for the student to prepare for the teaching of the history of architecture in the context of the professional school of architecture. It is administered jointly with the graduate program in history of urban development. Preservation planning is offered as a minor subject.

Graduate work consists of seminars and courses in this and other departments in combination with independent study under individual direction by faculty. Though a specialized focus of study will be necessary, students are required to become generally acquainted with

the history and scholarship of architectural traditions in the West. For the degree of Master of Arts in architectural history, candidates must satisfy the requirement for a reading knowledge of one approved foreign language, pass examinations in their major and minor subjects, and submit a satisfactory thesis. The Fine Arts Library provides a focus and resources for study and preparation of the thesis.

Candidates for the doctoral degree must demonstrate a reading knowledge of two approved foreign languages, pass an admission to candidacy examination, and complete a satisfactory dissertation.

Graduate Program in Landscape Architecture

The graduate program in landscape architecture leading to the Master of Landscape Architecture (M. L. A.) degree is administered jointly by the Department of Architecture and the Department of Urban Planning Development. A full description of the program may be found on page 54.

Thomas' Lectures

The Preston H. Thomas Memorial Lecture Series, made possible through an endowment provided by a generous gift from Mr. and Mrs. Leonard B. Thomas in memory of their son, Preston H. Thomas, Class of '75, makes possible outstanding lectures in the field of architecture and related areas each year. The first lectures in this series will be given in the fall of 1976.

Summer Term in Architecture

The summer term offers students the opportunity of a concentrated period of design work. Design is offered at both undergraduate and graduate levels; the term is six to eight weeks duration.

Undergraduate design sequence courses are offered at second-through fifth-year levels in Ithaca. Normally there is also a design program abroad for fourth- and fifth-year students.

Registration is limited to students of satisfactory standing who have completed the sophomore year of study. In exceptional cases a student who has completed only one year of study may be allowed to register.

Students from schools of architecture other than Cornell are invited to apply to the College for admission to all summer programs.

At the graduate level, the summer term is devoted to problems forming part of the student's program of work. The term may carry

residence credit equal to that of a normal academic term. Participation in the program cannot be undertaken without the consent of the student's Special Committee.

Art

Undergraduate Program

The undergraduate curriculum in art, leading to the degree of Bachelor of Fine Arts, provides an opportunity for the student to combine a general liberal education with the studio concentration required for a professional degree. During the first year, all students follow a common course of study designed to provide a broad introduction to the arts and to provide a basis for the intensive studio experience in painting, sculpture, photography, and the graphic arts afforded in the last three years. In the third semester, students take either painting, sculpture, or photography and a required course in printmaking. Beginning with the fourth term, students concentrate on painting, sculpture, photography, or printmaking. They may elect additional studio work in any of these subjects during the last two years, with the consent of the instructor, providing the courses are taken in sequence and at the hours scheduled. These courses are designed to promote a knowledge and critical understanding of these arts and to develop the individual student's talent. All members of the faculty in the Department of Art are active practicing artists whose work represents a broad range of expression.

Studio courses occupy approximately one-half of the student's time during the four years at Cornell; the remainder is devoted to a diversified program of academic subjects with a generous provision for electives.

The curriculum in art is an independent program of studies within the College of Architecture, Art, and Planning. The intimate relationship thus established between training in fine arts and training in architecture and city planning is a source of special strength in the Cornell program and affords unusual benefits to the students in these three disciplines.

Although the undergraduate curriculum in art is an excellent background for a career in applied art and offers courses in the use of graphics in modern communications, no specific technical courses are offered in such areas as interior design, fashion, or commercial art.

The department discourages the concept of accelerated graduation. However, a student may petition for consideration of accelerated graduation upon the following terms and conditions: (1) The petition must be submitted to the faculty prior to preregistration in the spring semester of the student's junior year;

and (2) the student must have a cumulative average that places him or her in the first quarter of the class in order for the petition to be considered.

A candidate for the B.F.A. degree who wishes, in addition, to earn an A.B. degree from the College of Arts and Sciences can arrange to do so. This decision should be made early in the candidate's career (no later than the third semester) so that he or she can petition to be registered in both Colleges simultaneously, and an adviser in the College of Arts and Sciences can supply needed guidance. Those students who are primarily interested in the history rather than in the practice of art should apply for admission to the College of Arts and Sciences with the objective of doing major work in the Department of the History of Art in that college. They may, if they wish, take studio courses as electives in the Department of Art in the College of Architecture, Art, and Planning.

Curriculum

<i>First Year</i>		<i>Credit Hours</i>
<i>Fall Term</i>		
151 Introductory Drawing	3	
110 Color, Form, and Space	3	
B.F.A. students must take at least two of the following three courses:		
121 Introductory Painting	3	
141 Introductory Sculpture	3	
161 Beginning Photography	3	
Out-of-college electives	0 or 3	
	15	
<i>Spring Term</i>		
152 Introductory Drawing	3	
B.F.A. students must take two of the following three courses:		
122 Introductory Painting	3	
142 Introductory Sculpture	3	
162 Intermediate Photography	3	
Out-of-college electives	4 or 7	
	16	
<i>Second Year</i>		
<i>Fall Term</i>		
251 Second-Year Drawing	3	
131 or 132 Introductory Graphics (one term, fall or spring)	3	
B.F.A. students must take two of the following three courses:		
221 Second-Year Painting	3	
241 Second-Year Sculpture	3	
261 Advanced Photography	3	
Electives	4 or 7	
	16	

<i>Spring Term</i>	<i>Credit Hours</i>
252 Second-Year Drawing	3
131 or 132 Introductory Graphics (one term, fall or spring)	3
B.F.A. students must take two of the following three courses:	
222 Second-Year Painting	3
242 Second-Year Sculpture	3
262 Color Photography	3
Electives	4 or 7
	16

Third and Fourth Years

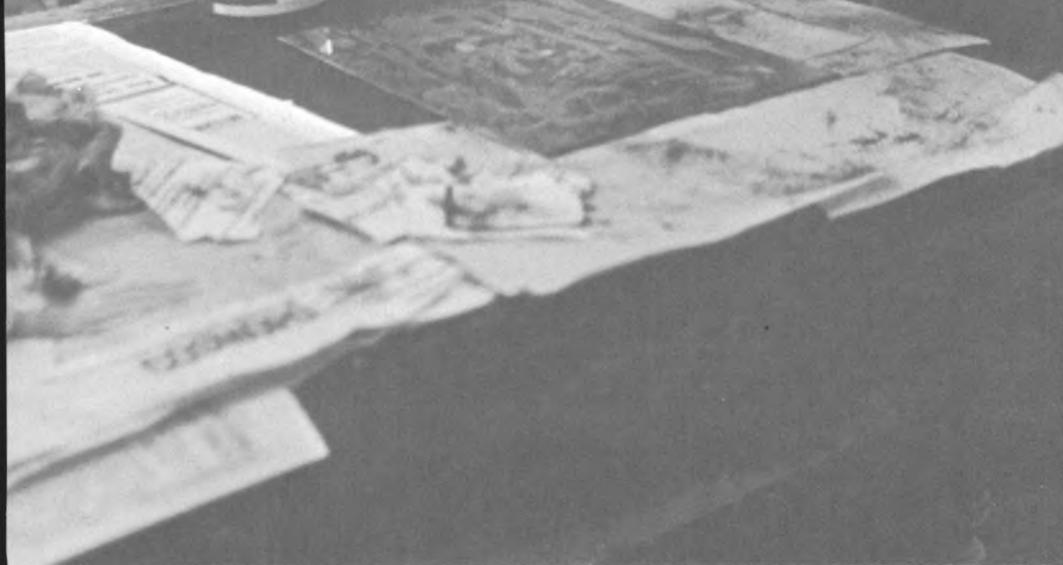
In the last two years students should design their programs so that they complete the fourth-year level in painting, sculpture, graphics, or photography, or so that they achieve the completion of the third-year level in two of those four areas. Twelve additional credits in art history at the 200 level or higher or in architectural history must also be completed. Students are expected to take thirty-two credit hours in their third and fourth years respectively.

The B.F.A. program is designed so that students may fulfill the degree requirement of 128 credit hours with a minimum of 52 credits to be taken in the Department of Art and a minimum of 52 credits to be taken outside of the Department. Within these ranges, students may design their own programs subject to the following limitations:

1. Of the minimum of 52 elective credit hours to be taken outside the Department of Art, four courses must be in English, history, or other humanities offered in the College of Arts and Sciences. Six credits in art history at the 200 level or higher or in architectural history must be completed in the first two years. Twelve additional credits in art history at the 200 level or higher or in architectural history must be completed in the last two years.
2. Of the minimum of 52 credit hours to be taken within the Department of Art, the following courses must be completed in the first two years: 110 Color, Form, and Space; 151-152 Introductory Drawing; 251-252 Second-Year Drawing; at least two of the following sequences: 121-122 Introductory Painting, 141-142 Introductory Sculpture, 161 Beginning Photography and 162 Intermediate Photography; and either 131 or 132 Introductory Graphics.

The University requirement of four terms in physical education must be met.

A candidate for the B.F.A. degree at Cornell is required to spend the last two terms of candidacy in residence at the University subject to the conditions of the Cornell Faculty Legislation of November 14, 1962.



Graduate Study

A student who holds a bachelor's degree or its equivalent and has clearly demonstrated professional promise in the field of art may be admitted as a candidate for the degree of Master of Fine Arts, majoring in painting, sculpture, or graphic arts.

The course of study leading to this degree requires four terms of residence and is intended for those who wish to complete their education as artists. A high proportion of those who receive the degree enter the field of teaching at the college level.

The curriculum leading to the master's degree is flexible to accommodate the needs of the individual student. The normal requirement of each of the first three terms is fifteen credit hours; of this, from seven to ten credit hours will be assigned to studio work, two credit hours to Art 610 (Seminar in Art Criticism) and the remainder to courses outside the Department of Art. Students are required to take at least twelve hours of academic work outside the Department of Art during their four terms in residence.

Graduate students in art may enroll in introductory or advanced courses in any field of study offered at the University; courses in writing, stagecraft, cinema, and music are available, as well as those in the usual academic subjects of the history of art, philosophy, anthropology, etc. Candidates for the master's degree must complete fifteen credit hours of courses in the history of art taken either as graduate or undergraduate students.

At the end of the third term of residence, the candidate is required to present a one-person exhibition of work done while in residence. The principal effort of the fourth term is a thesis consisting of creative work and, in addition, an essay dealing with a subject in the theory or history of the visual arts. A verbal examination on these subjects in general occurs on presentation of the thesis.

Since the course of study is intended for those who, in the opinion of the faculty, are competent to do independent work in the field of their choice, all applicants must submit photographs of their work. Color slides are preferable for paintings. Original works should not be sent.

It is not practical to admit candidates to the program at the beginning of the spring term as all available studio facilities, scholarships, and assistantships will have been allocated at the beginning of the school year. Assistantships are generally awarded to second-year students only. Transfer credit for work done elsewhere, or during the summer, is not acceptable.

City and Regional Planning

Objectives and Facilities

Planning seeks to guide the development of the environment in order that people's needs and aspirations may be better satisfied. Urban planning is concerned primarily with the urban environment, the social and economic forces that affect this environment, and the processes of plan making and administration. Regional analysis is concerned primarily with economic and resource regions, the forces that generate economic growth, and the ways in which resources can best be used in area development. Policy planning is concerned with the social decision processes involved in both city and regional planning. The programs of study in this field, primarily at the graduate level, have two major objectives: (1) professional education for participation in planning the physical, economic, and social development of urban areas and regions; and (2) more advanced specialized education for those who seek careers in teaching and research, as well as policymaking positions.

Study for the degree of Master of Regional Planning prepares candidates for professional service in city, county, and metropolitan area planning agencies; in state, interstate, and federal planning agencies; in private businesses and other organizations dealing with urban problems; and in private consulting practice. Study for the degree of Doctor of Philosophy offers advanced work for those interested in research and teaching positions in the growing number of graduate and undergraduate planning education programs, or in research positions in governmental agencies, private organizations, or professional practice.

Students in planning are encouraged to take advantage of the resources in related programs at Cornell. The expanding program of urban research at the University is focused in the Center for Urban Development Research as well as in the College of Architecture, Art, and Planning. The Center for Aerial Photographic Studies, the Water Resources and Marine Sciences Center, and the Center for Environmental Quality Management also provide research programs and assistance that enable the departments and individuals to focus their interests in these areas. Graduate programs in the Graduate School of Business and Public Administration, the School of Civil Engineering and the School of Industrial Engineering and Operations Research in the College of Engineering, the Law School, and the Department of Architecture offer opportunities for related or combined programs of study.

In addition to the specialized urban and regional planning collection of the Fine Arts Library, the research facilities of the John M. Olin Library, as well as branch libraries such as Albert R. Mann, Business and Public Administration, Engineering, Industrial and Labor Relations, and Law are available for graduate student use. The City Planning Archives in the Department of Regional History and University Archives in Olin Library which contain the papers and records of many pioneering individuals and organizations in the profession, provide unique research resources.

Master of Regional Planning

Graduate study for the Master of Regional Planning degree is administered by the College under the jurisdiction of the Graduate School operating through the department. The standard requirements of the Graduate School for the selection of major and minor subjects do not apply to planning students at the master's level. Instead, prospective students are subject to the specific requirements of the department. These requirements are listed below.

Doctor of Philosophy

Graduate study leading to the degree of Doctor of Philosophy is offered through the Field of City and Regional Planning under the jurisdiction of the faculty of the Graduate School. A master's degree with course work equivalent to that required in the first year of the graduate programs in planning at Cornell is ordinarily required for admission to candidacy for the Ph.D. degree. Applicants who hold the master's degree in a related field and have had acceptable experience in planning practice, or have completed substantial graduate-level course work in planning may be considered for admission. Such candidates may be required to take additional work at the master's level.

Candidates for the Ph.D. degree must complete a program of studies approved by their Special Committees, composed of a chairperson representing the major subject and other members of the graduate faculty representing minor subjects. Those interested in obtaining the Ph.D. degree should consult the *Announcement of the Graduate School* for additional information on the requirements for the degree.

The course of study requires work in two minor subjects in addition to a major subject in the Field of City and Regional Planning and the preparation of a satisfactory thesis. Minor work is possible in such subjects as aerial photographic studies, agricultural economics, anthropology, architectural history, comparative government, econometrics and economic statistics, economic development, economic

theory, consumer economics and public policy, environmental analysis and design, law, natural resources, conservation, operations research, the political process, political theory, psychology, public administration, research methodology, sociology, statistics, environmental and civil engineering, sanitary engineering, and transportation engineering among others. In consultation with the chairperson of his or her Special Committee, the Ph.D. candidate will normally select two minor subjects that best complement the research interests in city and regional planning.

Work for the Ph.D. is considered preparatory to making creative contributions to the field. For that reason, substantial competence and knowledge of basic analytical and research methods will be required. Candidates may fulfill this requirement by preparation previous to entrance or by course work at Cornell that may be in a minor subject.

Information not found in this *Announcement* may be obtained by writing the Graduate Faculty Representative, City and Regional Planning, 202 West Sibley Hall.

Master of Professional Studies in International Development (Regional Planning)

In conjunction with the graduate Field of International Studies the Department of City and Regional Planning also offers the M.P.S.(I.D.), a one-year program either for experienced professional planners with specific training needs, or for other midlevel professionals with needs for short-term planning training. The program is described in the Department's brochure on International Studies in Regional Planning.

The Professional Program

The professional degree program in the Department of City and Regional Planning is comprised of reorganized components of two former departments: Policy Planning and Regional Analysis and Urban Planning and Development. Though changes in requirements, program organization, and curriculum will continue to be made, the description below captures the essence of the department.

The Department of City and Regional Planning is broadly concerned with social decision-making processes: the formation of public policies, the design and evaluation of programs, the development of institutions, and the creation of legislative and administrative implementation devices. These concerns reflect a general view of planning that can be applied to a number of areas: urban physical development; health, welfare, education, manpower, housing, and recreation systems; and

the development of lagging regions and of regions in third world nations. This view of planning entails the use of theoretical and analytical tools developed for the study of social and economic systems and the relationships between them.

Within this broad framework, students have considerable flexibility in pursuing their own areas of interest. It is possible to develop programs of study that may vary across a wide spectrum, from those that have a very general approach to planning to those with a more specialized focus. Some current areas of specialization of interest to the faculty are: urban planning history, historic area preservation, urban development policies and programs, legal aspects of planning, land-use planning, planning design, science, technology, and urban development, ecological planning, sociology of urban communities, planning politics and administration, institutional and campus planning, social policy planning, regional analysis and development planning, urban and environmental systems planning, housing, health planning, and nonmetropolitan planning, among others.

The basic goal of the department is to provide graduate-level professional training essential for persons seeking careers with the broad range of public agencies involved in planning.

For academic year 1975-76 the department has concentrated its efforts in three main programs: Urban Planning and Development, Regional Development Planning, and Social Policy Planning. There is a variety of other programs subsumed within these, and programs of special studies are available for graduate students upon petition to the department. Description of the main three programs follow:

Urban Planning and Development

The program in UPD is concerned with urban planning, development, housing, renewal, the history of urban development, and many other related activities. Employment in these fields is primarily at the municipal, metropolitan, county, regional, and state levels, with citizens' and neighborhood groups that require technical planning services, private consultants serving public agencies or private clients, and private organizations directly engaged in development work.

The major focus of the teaching, research, and community service programs is on the applied aspects of urban planning and development activities. The program is concerned to a great extent with the determinants of land use and arrangement of space within cities and regions—their planning, development, control, and management. Considerable attention is also given to economic, social, and political matters as they affect development and change of the urban environment.

Methodological skills appropriate to finding solutions for urban problems of this kind are an integral part of the program. Applied social services programs, as they relate to broader planning and development programs, are considered an important input, as are matters of improving the quality of the physical environment. Emphasis is on the urban aspects of these programs, generally at the scale of neighborhood, city, or metropolitan region.

The educational approach of the program is primarily prescriptive, emphasizing case studies and fieldwork courses that are integrated with a broad range of academic courses. These necessarily drew upon a base of urban and planning theory. The student is offered a number of opportunities to work directly with real clients and real problems that would ordinarily face the practicing urban planner. Working together with faculty and fellow students, a student can learn his or her own strengths and weaknesses and can also develop an individual style of operation. Much of the work produced in fieldwork courses provides the basis for student term papers, reports, and thesis projects.

The special areas of strength within the urban planning and development program depend, to a great extent, upon the resident faculty. Across the breadth of the University, there are many course offerings, research projects, and community service activities that are available to students to supplement the offerings of the department. However, to guide prospective students, the department considers that its greatest strengths within this program are in the following specific areas: urban planning history; historic area preservation; housing; urban development policies and programs; legal aspects of planning and urban development; land-use planning; planning design; transportation planning; science, technology, and urban development; ecological planning; sociology of urban communities; economic planning and development; planning politics and administration; institutional and campus planning.

It should be emphasized that this program of studies concentrates primarily on those aspects of planning dealing in a comprehensive way with improving the urban physical environment and with the action programs necessary to achieve that goal.

Social Policy Planning

Policy planning is the attempt to analyze choices and values that underlie public policy and, given sparse resources, to help policy makers choose between policy alternatives so as to reach the community's goals and objectives. The structure and content of the program reflect the expanding scope and changing

functions of the planning profession. The specialization offers quantitative and nonquantitative training for students at the professional and advanced graduate levels who are interested in urban planning and social policy careers at the national and subnational levels of public and private activity. The educational goal of social policy planning is to integrate and sharpen the perspective of the policy-related aspects of physical and social planning through the application of social theory, policy research methods, and social change strategies. The objective is to train planners and policy specialists whose work will create linkages between social scientists, government policy makers, and indigenous groups interested in effective public services. The program offers instruction and research in the socioeconomic, spatial, and political aspects of social systems and the policymaking process. Regional analysis is the study of subnational social systems at the regional, community, and group levels and the ways in which they relate to the larger systems of which they are part.

Regional Development Planning

Regional Development Planning is the study of subnational social systems at the regional, community, and group levels and the ways in which they relate to the larger systems of which they are part. The program studies the growth and development of cities and regions, mainly through the use of economic analysis and the tools of political economy. There are three special components of the program now in the department: (1) To meet the need for research and training for professionals working on planning problems in developing countries, a specialization in international aspects of urban and regional planning has been established in the department. The objectives of this specialization are to offer training for students and planners from low-income countries to enable them to begin or continue work in research, planning, or administration of local and regional efforts; to exchange information and ideas about new techniques of planning and to encourage through comparative studies their modification for application in developing countries; to support research in an interdisciplinary environment; and to develop materials for training and research for programs abroad. (2) There are a wide variety of planning problems associated with nonmetropolitan areas. For example, one might be to identify ways that the poor of the nonmetropolitan United States may find their way into more prosperous and less dependent situations, with more control over their own fortunes. The study of social and political institutions in communities is emphasized because, rather than the several approaches open to those concerned with urban poverty,

it is practically the only one for the study of rural areas. Furthermore, problems of regional economic development and decline, an issue just emerging in national politics, are also dealt with. (3) Urban and environmental systems planning is concerned with the application of systems analysis techniques and computers to the solution of appropriate urban and regional problems. The role of such analytical methods and of information systems in planning and policy formulation and analysis are also concerns.

Faculty Interests

- Pierre Clavel, planning theory, administration, regional development
- Stan Czamanski: economic analysis for planning, including urban growth models, regional social accounts, regional applications of input-output analysis, location theory, housing economics, urban land economics
- Joseph Gentili: landscape architecture analysis, social factors in landscape design, large-scale environmental programming and implementation
- William Goldsmith, regional development planning and administration, economic analysis, urban and regional planning in developing countries
- Keith Grey: urban design, site planning, land-use planning
- Howard Hammerman: social science research and analysis techniques, ecological influences on land development, human ecology, operational gaming techniques
- Cary Hershey: social policy planning, social change, administrative theory, manpower, education and welfare programs
- Michael Hugo-Brunt: history of architecture, city planning and development
- Walter Isard: regional science
- Barclay G. Jones: urban and regional quantitative analysis, urbanization theory, planning theory, environmental health planning, historic preservation planning
- Burnham Kelly: land-use regulation, development controls, the housing industry
- David B. Lewis: urban and regional planning in developing countries, technology transfer
- Dorothy Nelkin: impact of science and technology on urban society, environmental policy development
- Kermit C. Parsons: comprehensive land-use planning, new community planning, university planning
- John W. Reps: land-use regulation, planning administration, comparative planning, history of city planning in the United States
- Sidney Saltzman: quantitative methods and systems analysis in planning, computers and information processing systems

Stuart W. Stein: planning and urban design within the context of comprehensive planning, housing and renewal, preservation of historic districts, enhancement of the visual assets of the city, land-use planning, urban planning practice

Ian R. Stewart: urban housing, renewal and development policies and programs; urban politics; new town and suburban development policies and programs; American urban history

Bert Swift: public administration, social policy planning, planned organizational and community change

Thomas Vietorisz: urban economics, regional economics, regional science, center city economic development

D. F. Williams: housing, urban public sector, analysis, social policy planning, planning theory, subgroup economic development, and community planning

Admissions

Students from all undergraduate disciplines are encouraged to apply for admission to the department. Applicants are expected to hold a bachelor's degree from a recognized institution.

Beginning graduate students can apply to the master's program or to the doctoral program as candidates for the master's degree. Application for transfer to the doctoral program can be made at any time after the second semester of work. Applicants with previous graduate work can apply for advanced standing or direct admission to doctoral study.

All applicants resident in the United States during the year preceding matriculation must submit scores from the Graduate Record Examination Aptitude Tests taken within the previous two years. Applicants are urged to take the tests as early as possible, preferably October. Upon request, the department may accept scores from the Law School Aptitude Tests (LSAT) in place of GRE test scores.

For further information not found in this *Announcement*, the student may write to the Graduate Faculty Representative, City and Regional Planning, 202 West Sibley Hall.

Curriculum and Requirements

The curriculum has been designed to provide students with the opportunity to gain knowledge across a breadth of disciplines while at the same time permitting them to concentrate and study in depth in one or more areas of activity within the field. A small number of foundation courses are required very early in the program. These are designed to present a comprehensive view of the field and the opportunities for study within the depart-

ment and the University. Following this, students are permitted to develop their own programs of study, with the guidance of a faculty member, so that they can build knowledge and skills in at least one area within the field while continuing to broaden their understanding of planning through selection of a wide range of courses drawn from many disciplines. Throughout the program, attention is given to the development of close working relationships between students and individual faculty members.

A minimum of sixty credit hours of course work are required for the M.R.P. degree in the department. At least thirty of these credits must be taken in courses offered within the department. Ordinarily, two years of course work are necessary to complete the requirements for the degree.

Curriculum

The first semester, in 1975-76, will be primarily devoted to introductory courses in social policy planning, urban planning and development, and urban and regional socio-economic planning. In addition, two courses in methods of analysis are strongly suggested during the first year. Most students will then design advanced curricula with the advice of faculty in one of the three major programs.

Thesis or Final Project

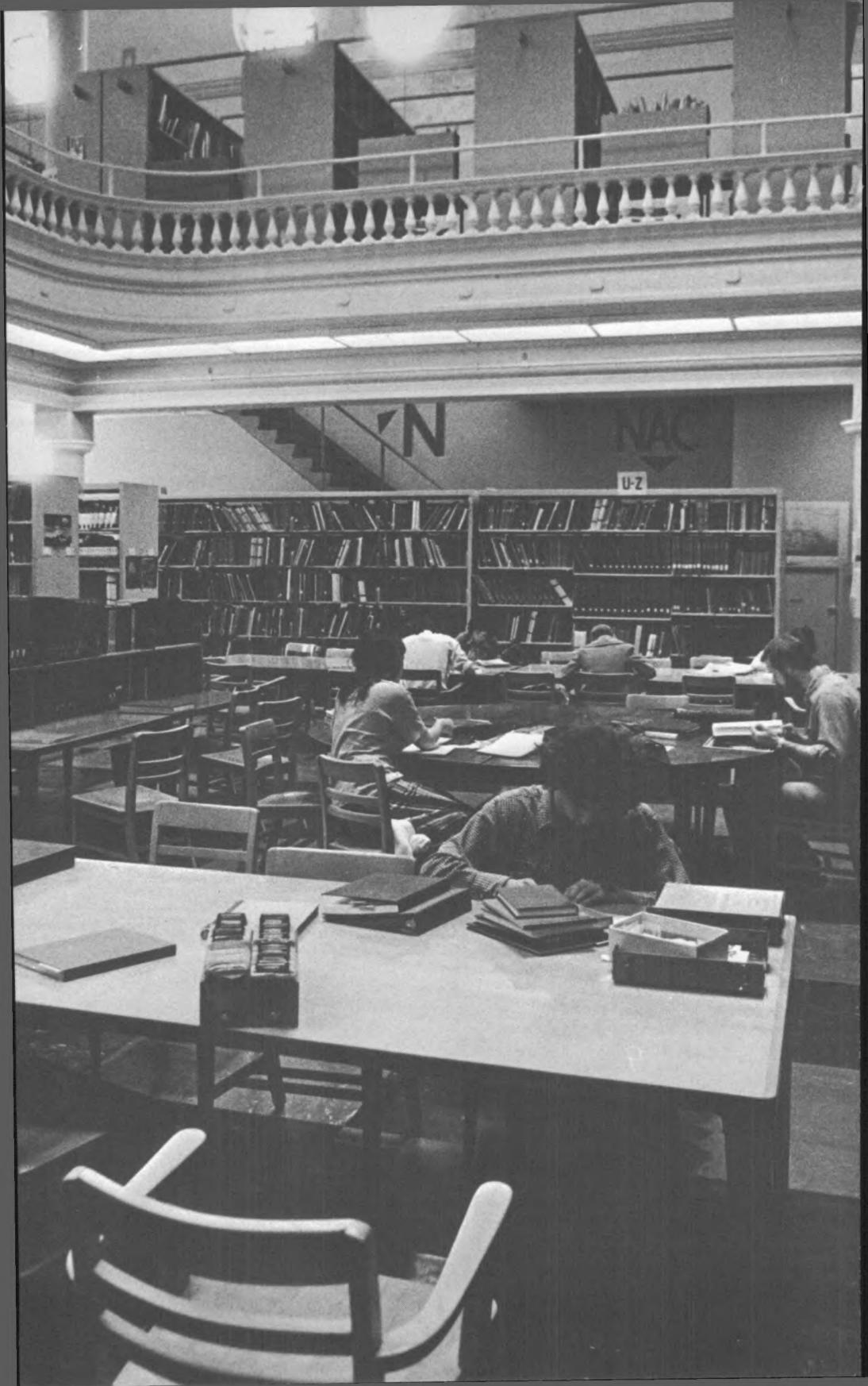
Candidates for the M.R.P. degree must demonstrate an ability to do independent work as professionals in planning. The nature of this independent effort will be planned by the student and the chairperson of his or her Special Committee. Independent work normally entails specialization in course offerings during the latter part of the program, and students are encouraged to choose an adviser relevant to such specialization early in the program of study.

The faculty of the department encourages the student to integrate his or her applied fieldwork experience with the thesis project or research paper.

The opportunities for satisfying this requirement are very broad and varied.

Electives

Electives may be taken in any area or in any department or program of the University. The selection of the electives should be made with the guidance of the student's adviser. The department generally attempts to identify relevant courses available outside the department and to provide an up-to-date listing of such courses to all students.



Joint Programs

Joint graduate programs between planning and law and between planning and urban design are possible. Students desiring to pursue such a joint program must be admitted to the two fields of study of interest to them. Under such a joint program, it may be possible to complete the requirements for both professional degrees in less time than normally required when both degrees are pursued separately.

The Department has recently initiated a new graduate Program in Landscape Architecture jointly with the Department of Architecture. Students will have the opportunity to benefit from the growing potential of the landscape and large-scale environmental design field because of its close integration with the urban planning and development department's program. Students interested specifically in pursuing a graduate-level program in landscape architecture should apply for admission directly to that program by writing to the Landscape Architecture Graduate Program, College of Architecture, Art, and Planning.

Graduate Program in Landscape Architecture

The Department of Urban Planning and Development and the Department of Architecture jointly sponsor a graduate Program in Landscape Architecture. The two-year program leads to the degree of Master of Landscape Architecture (M.L.A.).

The primary objectives of the M.L.A. program are to conduct research and to provide appropriate education and training for individuals who choose to practice, to conduct applied research, or to teach in the field of landscape architecture.

A secondary objective of the program is to provide increased educational opportunities to students of architecture, city and regional planning, civil and environmental engineering, design and environmental analysis, natural resources, and other related fields.

The emphasis of the program is on the systematic inventory, analysis, and synthesis of data from diverse disciplines for the practical purposes of planning and designing modifications of the natural environment. The modifications of the natural environment result from a design process concerned with user needs for man-made physical space and the relationship of that space to the natural environment. The program should be distinguished from training programs concerned mainly with environmental systems engineering or environmental quality control.

Admission

The program serves to supplement undergraduate education in design through providing a broader educational experience to those who are technically skilled. Applicants are therefore expected to hold a bachelor's degree in architecture, landscape architecture, environmental design, planning, or a similar field from a recognized institution of higher learning.

Undergraduate academic performance, Graduate Record Examination scores (optional), examples of work, letters of recommendation, and the applicant's statement of program-related objectives, considered collectively, must indicate a level of ability adequate for the successful completion of the program.

Degree Requirements

The M.L.A. degree is to be awarded upon the student's demonstration of a satisfactory level of competence in an individualized curriculum that he or she has designed in collaboration with a landscape architecture major adviser.

A total of sixty credit hours of course work constitute the course work requirement; one academic year constitutes the minimum residence requirement. A student may petition the Graduate School for a maximum of one semester's advanced standing based upon previous education or experience.

The core courses include 481 Contemporary Issues in Landscape Architecture, and 581, 582, and 681 Landscape Planning, and Design Workshop I, II, and III. Directed electives may include courses in statistics, quantitative methods, landscape construction, landscape history, plant materials, and design, and will vary among individual students depending upon their educational backgrounds and interests.

A minor area of concentration, to be chosen by the student before the beginning of the second semester of study, is also required.

The minor area of concentration consists of a minimum of fifteen credit hours of course work and may be chosen from any of the relevant fields in the Graduate School or from the following nonexhaustive list: ecologic systems determinants of landscape design, economic determinants of landscape design, historic aspects of landscape design, legal determinants of landscape design, social determinants of landscape design.

Other than satisfactory completion of course work, requirements for the M.L.A. degree include an approved summer internship experience and completion of a thesis or final project. Six credit hours will be granted for the thesis or final project. It should represent the student's findings based upon an inquiry into a subject selected in collaboration with

the major adviser. The thesis or final project must be presented in a form that is suitable for storage and retrieval by members of the University community.

General Admissions

Undergraduate

The University believes in the educational values inherent in bringing to the campus persons of widely different backgrounds, and directs its admissions policy to the preservation of this fundamental principle. In choosing from among candidates of approximately equal qualifications, some preference may be given to those whose homes are in areas not adequately represented in the student body.

It is the policy of Cornell University actively to support equality of educational opportunity. No student shall be denied admission to the University or be discriminated against otherwise because of race, color, creed, religion, national origin, or sex.

The number of students that may be admitted each year in each program, undergraduate and graduate, is limited. Preference is given to those applicants whose academic preparation and character show greatest evidence of professional promise.

Students entering the College are reminded that they are entering specialized programs with the intention of becoming professional artists or architects. In a few cases, students may find that their aims change when they are in residence, and it is, therefore, important for all to understand that transfer to other programs in Cornell is not possible as a rule until the student has completed a full year in the program originally entered.

A maximum of ninety students a year matriculate in the program in architecture; the entering class in art is limited to thirty students. Those selected for admission must have demonstrated through their previous schooling the intellectual capacity to carry the classroom work and to profit from the instruction offered. Intellectual preparedness is judged by the candidate's entire secondary school record, the recommendations from the school, and either the Scholastic Aptitude Test of the College Entrance Examination Board or the American College Testing Program. Transfer students are normally accepted for admission only in September.

The intangible, but important, factors that form good character, personal integrity, and effective personality receive full consideration by the selection committee. Capacity for creative work and degree of motivation for a specific field of professional education are basic considerations.

Prospective students should write to the Office of Admissions, Cornell University, 410 Thurston Avenue, Ithaca, New York 14853, for forms to be used in making application for admission. Applications for admission must be received at the University in ample time to allow credentials to be assembled, required tests to be completed, and the application to be reviewed by the Committee on Admissions. Secondary school students should, if possible, initiate their applications in the fall of the year preceding matriculation in college. Undergraduate applications for entrance in the College of Architecture, Art, and Planning should be completed by January 15.

Every undergraduate applicant should plan to come to Ithaca during the fall term preceding the year for which he or she has made application for a visit to the College and an interview with a member of its Committee on Admissions. An appointment for this interview can be made by writing directly to the Office of the Dean, College of Architecture, Art, and Planning, West Sibley Hall, Ithaca, New York 14853. Interviews will also be arranged in cities across the country during the month of February, and those who have not been able to come to Ithaca will be sent a list of these locations and times.

Requirements

All candidates for admission to the College must take the Scholastic Aptitude Test of the College Entrance Examination Board or submit American College Testing Program scores. Entrance credit on the basis of the school record will be granted only in those subjects in which the candidate has attained the college-recommending mark of the school.

Three years of a foreign language, ancient or modern, are required for entrance. Candidates who have less than three years of preparation in a foreign language, but who make a satisfactory score on the Achievement Test of the College Entrance Examination Board may meet the requirement. When the required language credit is not offered for admission, a letter of explanation of this deficiency must be sent to the Committee on Admissions for its consideration. If the applicant is admitted, the language requirement must be satisfied before graduation. If an applicant plans to continue in college the study of a language already begun, the College advises the student to take the College Entrance Examination Board Achievement Test in that language, for placement in the proper course. Three college credits in a language are considered, for the purpose of making up the entrance requirement while in college, to be equivalent to one year of high school language credit.

Candidates for admission to the *Department of Architecture* must present sixteen units including four units of English, four units of mathematics, and three units of foreign language (see above). Mathematics must include intermediate algebra, plane geometry, and trigonometry, taken either as separate courses or included within comprehensive mathematics courses. An acceptable course in physics, taken either in secondary school or in college is required for graduation.

The program in architecture is professional in its objectives. Only those who are seriously interested in careers in architecture should make application for admission. Candidates for admission are advised to read professional literature, visit professional offices, talk with students of architecture or recent graduates, and otherwise inform themselves about the field. It is usually wise to resolve serious doubts by starting with a program of general education.

Candidates for admission to the *Department of Art* must present sixteen units including four units of English, two units of college preparatory mathematics, and three units of foreign language (see above). Remaining units should, in the main, consist of science and social studies (including history).

The program in art is preprofessional in objective. Those who are seriously interested in careers in painting, sculpture, or the graphic arts are the most logical candidates. Candidates for admission are advised to read art criticism and art history, to visit museums and galleries, and to otherwise inform themselves about the field of art. Art work done by the applicant, or slides thereof, should be presented at the time of the interview. Examples of class assignments, or independent work, or both, are acceptable. Prospective students who live outside the radius of the Boston-New York-Ithaca areas and cannot travel for personal interviews may write to the Department of Art to arrange for an interview with a Cornell graduate who lives in the prospective student's part of the country and in addition send to the Department of Art one unmatted 9" x 12" self-portrait in pencil, exactly ten selective slides of their work, and a brief statement of professional interest and purpose.

Transfer Students

A student who has already attended another institution of collegiate rank is admitted at the beginning of the fall term. The applicant is required to meet all entrance requirements and to comply with the rules governing admission. In addition, the applicant should file with the Office of Admissions, 410 Thurston Avenue, an official transcript of record of work at the institution already attended, together with a

certificate of honorable dismissal. The applicant should be prepared to send, if requested, a catalog of that institution, and marking the courses taken as listed in the transcript. The Scholastic Aptitude Test of the College Entrance Examination Board is required.

Graduate

Graduate programs in the College of Architecture, Art, and Planning are of two general types, requiring different admissions procedures. First, professional programs leading to the degrees of Master of Architecture, Master of Fine Arts, Master of Regional Planning and Master of Landscape Architecture are formally under the jurisdiction of the Division of Architecture, Art, and Planning of the Graduate School. Candidates for admission should apply for the necessary forms to the appropriate office at Cornell University, Ithaca, New York 14853 as follows: Candidates for the degree of Master of Architecture should write to the Chairman, Department of Architecture, Sibley Hall; candidates for the degree of Master of Fine Arts should write to the Chairman, Department of Art, Franklin Hall; candidates for the degree of Master of Regional Planning should write to the chairman, Department of City and Regional Planning. Candidates for the degree Master of Landscape Architecture should write to the Program Coordinator for Landscape Architecture, Sibley Hall.

Second, academic programs leading to the degrees of Master of Science (architectural sciences), Master of Arts (history of architecture and urban development), and Doctor of Philosophy (architectural history, city and regional planning) are formally under the jurisdiction of the dean of the Graduate School. Candidates for admission should apply for the necessary forms to the Graduate School, Sage Graduate Center, Cornell University, Ithaca, New York 14853, sending a copy of the letter to the appropriate department chairman in the College of Architecture, Art, and Planning so that the College may know when an application is in process. Regulations governing the students in these academic programs may be found in the *Announcement of the Graduate School*.

Graduate applications should be completed by February 1 except in the Field of City and Regional Planning where applications will be received until March 15. However, in all graduate programs, applications should be completed by February 1 in order to be considered for awards of fellowships, scholarships, and other financial aids. When places remain to be filled, later applications will be accepted. The applications from United States citizens and from foreign applicants who reside in the United States and Canada must be accompanied by



a \$20 nonrefundable application fee. Foreign applicants residing elsewhere who have been accepted for admission must pay this application fee before registration.

Foreign students whose undergraduate training has been outside the United States are usually admitted to provisional candidacy during the first semester, during which their qualifications to continue in their selected programs will be evaluated. In most cases, they should plan to spend at least four terms in residence. Foreign applicants whose native language is not English, but who received their secondary school or their university education in the English language, must submit a statement certifying to this, signed by a responsible officer of a United States Embassy or Consulate or by an appropriate official of the educational institution involved. All other foreign applicants must take the National Council Test of English as a Foreign Language by arrangement with the Educational Testing Service, Princeton, New Jersey 08540, or the Michigan English Language Test by arrangement with the English Language Institute, University of Michigan, Ann Arbor, Michigan 48104. In either case, the test scores must be reported directly by the testing organization to the Graduate School as part of the essential application information, and no final action on applications will be taken until the scores have been received. Both testing programs are available throughout the world. Information on times and places for administration of the tests may be obtained directly from the addresses given above. Since these tests are diagnostic, admission to those applicants whose scores indicate unsatisfactory command of English may be denied or it may be made contingent upon evidence of improved command of English.

All applicants for admission to the programs in history of architecture and urban design, architectural science, and city and regional planning who are currently residing in the United States are required to take the Graduate Record Examination (GRE) Aptitude (Verbal and Quantitative) Tests of the Educational Testing Service, and to have the scores sent to the College or to the Graduate School as part of their application materials. Information about the times and places of test administration may be obtained directly from the Educational Testing Service, Princeton, New Jersey 08540.

Special Students

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. Applicants must give evidence of ability to do creditable work in the College, and their applications for admission must be recommended by the department in

which they propose to do the main part of their work. They must file applications with the Office of Admission, 410 Thurston Avenue.

If a person admitted as a special student without satisfying the entrance requirements subsequently satisfies those requirements, he or she may be graduated under the ordinary regulations of the College.

Special Opportunity Programs

Cornell University administers a variety of special opportunity programs designed to provide financial assistance and other forms of assistance to low-income, minority students and others meeting program guidelines. Special programs exist to aid in increasing representation of students from minority groups present in New York State who historically have been underrepresented in higher education. For details, prospective students should consult the *Guide for Candidates* which accompanies each undergraduate application or will be sent upon request by the Office of Admissions, Cornell University, 410 Thurston Avenue, Ithaca, New York 14853.

Financial Aid

Undergraduate Scholarships

Prospective students requiring financial assistance should write to the Office of Scholarships and Financial Aid, Cornell University, Day Hall, Ithaca, New York 14853; students in residence should call in person at that office.

As one of the more than 900 colleges that are members of the College Scholarship Service, Cornell follows the general policies as outlined by that organization. Scholarship awards are made on the basis of academic achievement and promise, but the actual cash stipends vary according to the financial need of the applicant. As a matter of policy every effort is made by means of scholarship aid and the student work and loan programs to make it financially possible for students of promise to come to and remain at Cornell.

Financial assistance is awarded through scholarships and long- and short-term loans available to students in all branches of the University, and through scholarships administered by the various colleges.

The scholarships described below are awarded by the Scholarship Committee of the College of Architecture, Art, and Planning. All awards are made on the basis of promise and need.

Dean's Scholarships. The University has made available annually approximately \$80,000 that may be awarded to undergraduate students, including entering students, in architecture and art.

Gillespie Prize Scholarships. Scholarships totaling \$800 may be awarded each year to fourth- or fifth-year students in architecture. These awards are made from the bequest of a former student of the College, the late Albert D. Gillespie, and are granted on the basis of general academic performance and need.

The Waldo S. Kellogg Scholarship Fund. Through a bequest made by Mrs. Frances E. Osborne Kellogg in memory of her husband, Waldo S. Kellogg '93, \$5,000 is available annually to students in the undergraduate and graduate programs in architecture.

H. R. Dowswell Scholarship Fund. Open to a student in the College who stands in the top quarter of his class academically, who has a good personality, and who has demonstrated qualities of leadership. This fund was established by Col. John R. Dowswell and Mrs. Harold E. Van Der Linde in memory of their father. Annual award, \$700.

Nancy A. Bernstein Scholarship. Open to a promising undergraduate woman in art in need of financial assistance. This scholarship is granted from a fund established by Mr. and Mrs. Nathan C. Bernstein and Margaret Bernstein in memory of Nancy A. Bernstein '49. Annual award, \$700.

The David Bean Scholarship was established in 1972 by Mr. and Mrs. Robert C. Bean in memory of their son David R. Bean '71. The sum of \$1800 is to be awarded to a student in art who wishes to spend the junior spring semester or senior fall semester working in Europe.

The Charles A. Holcomb Memorial Scholarship of \$200 was established in 1963 by Mrs. Holcomb in memory of her husband, who received his Bachelor of Architecture degree from Cornell in 1920. It is to be awarded to a student, preferably a sophomore, in the College.

George Louis Coleman Scholarships. These scholarships were established for students in the College in 1965 through a bequest of Louise Gertrude Coleman, in memory of her husband, a devoted alumnus of Cornell, B.A. in architecture '95.

The Norman C. Weiffenbach Memorial Fund. Established in July 1967 by Mr. and Mrs. Eugene W. Kettering in memory of Mrs. Kettering's father, Norman C. Weiffenbach, architecture '04. The sum of approximately \$3,000 is to be awarded to worthy and financially needy young men or women.

The George Fraser Awards. Established in 1968 for the benefit of one or more upper-class or graduate students who, in the opinion of the faculty, have done outstanding work

and who preferably are in need of financial assistance.

Medals and Prizes

The Alpha Rho Chi Medal is awarded by Alpha Rho Chi, a professional architectural fraternity, to a student in the graduating class who has shown ability for leadership, has performed service to the school, and gives promise of professional merit through attitude and personality.

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 academic grade average throughout the entire course.

The Baird Prizes consist of one or more prizes in the total amount of \$400 in a special problem competition in second-year design. The fund established in 1927 was the gift of Mrs. M. Z. Baird.

The Paul Dickinson Prize, established in 1927 by Mrs. George A. Shedd '23 in memory of her father, is a \$50 prize awarded to the student in the first-year undergraduate class of the College who has attained the highest scholastic record. This prize is not awarded unless the record is well above the average of the first-year work in the College.

The Eschweiler Prize is made from a bequest of Alexander C. Eschweiler, Jr., '15 in memory of his father, Alexander C. Eschweiler, Sr., '90. An annual award of approximately \$700 is awarded to a student in architecture with high scholastic achievement who has been accepted to one of the architecture graduate programs at the end of the fifth year.

The New York Society of Architects Medal and Certificate are awarded annually to that senior student who, in the opinion of the faculty and the Society's committee, is the leader of the class in total design—that is, design, planning, and construction.

The Charles Goodwin Sands Memorial Medal, founded in 1900 by the family of Charles Goodwin Sands '90, may be awarded for work of exceptional merit done by a student in courses in architectural design, or by a student in the art curriculum for work of exceptional merit in painting and composition or sculpture. Theses in architecture or painting and sculpture are eligible for medal consideration.

The Edwin A. Seipp Memorial Prizes, one or more prizes in the total amount of \$150, were established in 1948 by Mrs. E. A. Seipp in memory of her husband, an alumnus of the Class of 1905. They are awarded in a special competition in third-year design.

The Edward Palmer York Memorial Prizes, one or more prizes in the total amount of \$100 which shall be awarded in a special competition for students in introductory design. Traditionally, the problem, lasting approximately one week, is given in the second term. The fund, established in 1931, was the gift of Mrs. Edward P. York.

The Faculty Medal in Art is awarded each year to the member of the graduating class in the curriculum in art who, by academic record and work in the studio, has, in the estimation of the faculty, shown the greatest promise of future achievement in the field of art.

The Edith and Walter King Stone Memorial Prizes are awarded to juniors at the end of their third year. Two awards of \$250 each are given on the basis of promise and accomplishment in the field of art.

The American Institute of Planners Student Award is presented to a candidate for the professional degree in planning (M.R.P.) in recognition of outstanding ability. The qualities to be identified include consistently high academic record, leadership ability, maturity, research ability, and professional promise.

The Peter B. Andrews Memorial Thesis Prize is awarded for the best thesis prepared for the degree of Master of Regional Planning. It is granted from the income of a fund established by Mrs. Peter B. Andrews and Dr. George C. Andrews in memory of Peter B. Andrews, Bachelor of Architecture, 1955, M.R.P., 1957.

The Mackesey Prize, in honor of former dean of the College of Architecture, Thomas W. Mackesey, is awarded to a candidate for a degree in city and regional planning who has demonstrated unusual competence in academic work or who, by qualities of personality or leadership, has significantly contributed to the intellectual advancement of fellow students.

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, Art, and Planning for excellence in public speaking. The prizes are cash awards totaling \$400.

Traveling Fellowship

The Robert James Eidritz Fellowship, the gift of Sadie Boulton Eidritz, is available to persons who hold a degree in architecture from Cornell or who are now graduate students in architecture at Cornell. Its purpose is to supplement

the professional training, by foreign travel or in other ways, of those who could not otherwise afford it. The income of the fund, approximately \$4000 per year, may be awarded to one or more candidates.

Graduate Fellowships

The Announcement of the Graduate School carries full information about Cornell University graduate fellowships and scholarships for which both entering students and students in residence are eligible. These awards are made by the Fellowship Board of the Graduate School. Graduate fellowships carry stipends from \$2,000 to \$3,000 plus tuition. Application forms may be obtained from the Office of the Graduate School.

The Kellogg Scholarships and the Eidritz Fellowships, described earlier in reference to undergraduates, are also available to graduate students in architecture.

Twenty-one teaching assistantships are awarded by the College of Architecture, Art, and Planning. Fellows are assigned to aid in the instruction in the various areas of study offered by the College: architectural design, architectural sciences, city and regional planning, architectural history, painting, sculpture, and graphic arts. Teaching assistantships carry a stipend of \$2,700 plus tuition.

The Department of Urban Planning and Development and the Department of Policy Planning and Regional Analysis also award a number of research assistantships in planning and for study in the M.R.P. program.

Prospective graduate students are reminded that there are a number of private agencies and foundations that offer scholarships for highly qualified students. The American Institute of Architects, for instance, awards a number of such scholarships annually.

Prospective foreign students should investigate awards under the fellowship program of the Organization of American States, the United Nations, United States Fulbright Commissions in many foreign countries, and the United States Agency for International Development. The United Nations publication *Study Abroad* lists numerous scholarships and fellowships, many of them for study in the United States, by citizens of other countries.

Loans

University, New York State, and National Defense student loans are available to students at Cornell. Applications should be made through the Office of Scholarships and Financial Aid, Cornell University, 203 Day Hall, Ithaca, New York 14853.



General Information

Expenses

Living costs depend to a great extent upon the individual's standard of living. Recent estimates indicate that undergraduate students spend approximately \$1,700 a year for room and board. Laundry and cleaning, books, instruments, and other supplies will cost about \$700 a year. Additional allowance must be made for clothing, travel, and incidentals.

The tuition charge for both undergraduate and graduate students in the College of Architecture, Art, and Planning is \$3,775 for the 1975-76 academic year. In addition, a nonrefundable fee of \$20 is required at the time of application and a nonrefundable \$50 registration fee must be paid when an applicant receives notice of acceptance.

University Health Requirements

Each entering student, graduate or undergraduate, is expected to assume personal responsibility for the health requirements adopted by the Board of Trustees of Cornell University. Prospective students should consult the *Announcement of General Information*. Permission to register for a new semester will not be granted unless all health requirements pertaining to the previous semester have been fulfilled.

Health Services and Medical Care

The health services for students are centered in two Cornell facilities: the Gannett Medical Clinic (outpatient department) and the Sage Infirmary. Students are entitled to unlimited visits at the Clinic. Appointments with individual doctors at the Clinic may be made, if desired, by calling or by going in person; an acutely ill student will be seen promptly whether he or she has an appointment or not. Students are also entitled to laboratory and x-ray examinations indicated for diagnosis and treatment, hospitalization in the Sage Infirmary with medical care for a maximum of fourteen days each term, and emergency surgical care. The cost of these services is covered by tuition.

The University Health Services offers a pre-paid health care plan for student spouses that is identical in benefits to the student health care. For the payment of a fee each term a student spouse is entitled to unlimited medical visits to Gannett Clinic, up to fourteen days each term of hospitalization in Sage Infirmary and emergency surgical care. In addition, the Health Services will assume the cost of a first visit to a specialist (when referred by a Health Services physician).

Other services are available at reduced cost to those who participate in this program.

Students may enroll their spouses prior to or during the first thirty days of any term.

This primary care program is not to be confused with the Student Accident and Sickness Insurance Plan (for Cornell students and their dependents). The student insurance supplements basic health care by providing twelve-month insurance coverage for students (and dependents) over and above benefits of the University Health Services, and by protecting the student when away from the Cornell campus (e.g., vacations).

Information and enrollment forms for the Student Spouse Prepaid Health Care Plan may be obtained by writing or visiting the University Health Services, Gannett Medical Clinic, Cornell University, 10 Central Avenue, Ithaca, New York 14853.

If, in the opinion of the University authorities, the student's health makes it unwise for the student to remain in the University, he or she may be required to withdraw.

Physical Education

All undergraduate students are required to complete four semesters of physical education within the first four terms. Postponements are allowed only by consent of the University Faculty Committee on Physical Education.

Exemptions from the requirement may be made by the Committee on Physical Education when it is recommended by the University Medical Department or because of unusual conditions of age, residence, or outside responsibility.

For a student entering with advanced standing, the number of terms of physical education required is reduced by the number of terms that the student has satisfactorily completed (whether or not physical education was included in the student's program) in a college of recognized standing.

Swim Test

A fifty yard swim test will be required of all new students who have not fulfilled the physical education requirement. All nonswimmers will be registered in beginner swim classes. This will serve as the physical education requirement during the semester or semesters involved. All other students may elect the activity of their choice from a wide range of offerings. Publications describing the courses offered will be made available to entering students by the Department of Physical Education.

Military Training

As a land-grant institution chartered under the Morrill Act of 1862, Cornell has offered instruction in military science for more than 100 years. This instruction is provided through the ROTC programs of the three military departments, the Army, the Navy, and the Air Force.

These programs offer students the opportunity to earn a commission while completing their education. Participation in ROTC is voluntary. Interested students should consult the *Announcement of Officer Education*.

University Summer Session

It is usual for the Departments of Art and Architecture to offer certain studio courses as part of the University's six- or eight-week Summer Sessions. Further particulars can be obtained from the Division of Summer Session and Extramural Courses, Cornell University, Day Hall, Ithaca, New York 14853.

Special summer conferences and institutes are offered in addition, principally by the graduate Program in City and Regional Planning. Particulars regarding these special offerings may be obtained from the College.

Information on the summer term in architecture is given on page 14.

Facilities

Buildings

The College occupies Sibley Hall, Franklin Hall, part of Rand Hall, and the Foundry. In Sibley are the facilities for architecture and city and regional planning as well as the administrative offices and the Fine Arts Library. The Department of Art is housed in Franklin Hall. Sculpture and shop facilities are in the Foundry. The Green Dragon, a student lounge, is located in the basement of Sibley Hall.

Through the generosity of the late Mrs. Lillian P. Heller, the College has acquired the home of William H. Miller, the first student to enroll for the study of architecture at Cornell and later a practicing architect in Ithaca. This building is used to house visiting teachers and guests of the College and for occasional receptions and social events.

Libraries

The Fine Arts Library in Sibley Dome serves the College of Architecture, Art, and Planning through its collections on architecture, fine arts, and city and regional planning. A library of over 85,000 books, it is capable of supporting undergraduate, graduate, and research programs. Some 1,600 serials are currently received and maintained.

The College maintains in Sibley Hall a slide library containing extensive files of slides of architectural history and a large and growing collection of slides of art and architecture from all parts of the world. The library now includes approximately 185,000 slides.

The facilities of the libraries of other schools and departments on campus and the Olin Library, designed primarily as a research library for graduate students, are also available.

Museums and Galleries

The new Herbert F. Johnson Museum of Art was formally opened in May 1973. Although many of its exhibitions and activities relate quite directly to academic programs of the University, the museum has no administrative affiliation with any department. In this way, its programs cut freely across academic boundaries, stimulating interchange among disciplines. With a strong and varied collection and a continuous series of high-quality exhibitions, it can fulfill its mission as a new center for the visual arts at Cornell. Art galleries are also maintained in Willard Straight Hall, where loan exhibitions of paintings and graphic work by contemporary artists are held. Current work of students in the College of Architecture, Art, and Planning is shown in the exhibition areas in Sibley Hall and the gallery in Franklin Hall.

Housing

Cornell University provides residence halls on the campus for approximately 5500 single students. Meals may be taken where desired. Freshmen are strongly urged to live in residence halls although there is no requirement. An application form will be mailed each candidate for admission as a freshman or transfer student at the time of notification of provisional acceptance. Because space is limited, a prompt return of the application form with a \$10 application fee before May 1 will help to ensure assignment to University housing facilities. Entering students should note that acceptance to Cornell does not necessarily guarantee space in University residence halls.

Further information about housing may be obtained from the Student Housing Assignment Office, 223 Day Hall, or the Office of the Dean of Students, Cornell University, Barnes Hall, Ithaca, New York 14853.

Graduate Students

Sage Graduate Center provides dormitory housing for about 190 men and women. The building is in the center of the campus and provides a convenient cafeteria. Cascadilla Hall houses 155 men and women. An application form is enclosed with notice of provisional

acceptance. Assignments are made in order of receipt of the completed application form at the Housing Assignment Office. Prompt return of the form will help to ensure an on-campus housing assignment. A \$10 application fee must be enclosed with the application form.

Married Students

The University operates the Pleasant Grove Apartments and the Hasbrouck Apartments, garden-type housing developments at the edge of the campus, and the Cornell Quarters, a housing development southeast of the campus. For more detailed information, address inquiries to Married Student Housing Office, Building 40, Hasbrouck Apartments, Pleasant Grove Road, Ithaca, New York 14850.

Off-Campus Housing

Off-campus housing may be obtained in privately owned properties in Ithaca and the vicinity. As a service to students, the University posts and maintains a partial listing of available housing in the Housing Assignment Office, 223 Day Hall. An off-campus housing adviser is also available in the Housing Assignment Office.

Faculty Advisers

Each undergraduate student will be assigned a faculty adviser who, with those in charge of preregistration, will assist the student in working out an academic schedule, term by term.

The Office of the Dean stands ready at all times to help and guide students, not only in academic matters, but also, when possible, in personal problems and difficulties they may encounter. In addition, the Office of the Dean of Students has trained staffs of counselors who may be consulted by University students on nonacademic matters.

University Privileges

Students of the College of Architecture, Art, and Planning are entitled to the use of all of the University's general facilities and privileges. They may elect courses of study in any of the University's colleges. All the usual extracurricular activities ordinarily to be found at a university are open to all students at Cornell. They include: musical and dramatic clubs; undergraduate publications; religious, social, and professional organizations; and a great variety of athletic sports both intramural and intercollegiate.

Foreign Students

The staff of the University's International Student Office is prepared to advise and assist students from other countries in every way possible. It is suggested that foreign students interested in studying at Cornell University write for advice on registration, living conditions, and other matters to Director of the International Student Office, Cornell University, Barnes Hall, Ithaca, New York 14853.



Cornell University

Courses of Instruction

All academic courses of the University are open to students of all races, religions, ethnic origins, ages, sexes, and political persuasions. No requirement, prerequisite, device, rule, or other means shall be used by any employee of the University to encourage, establish, or maintain segregation on the basis of race, religion, ethnic origin, age, sex, or political persuasion in any academic course of the University.

Architecture

Architectural Design

Sequence Courses

101-102 Design I and II Throughout the year. Credit four hours a term. Studio and seminar. Must be accompanied by Architecture 131-132.

201-202 Design III and IV Throughout the year. Credit four hours a term. Studio and seminar. Must be accompanied by Architecture 231-232.

301-302 Design V and VI Either term. Credit six hours a term. Studio and seminar.

401-402 Design VII and VIII Either term. Credit six hours a term. Studio option and seminar. The studio options are offered in architectural design, urban design, or architectural technology and environmental science each term.

501-502 Design IX and X Either term. Credit eight hours a term. Studio.

Advanced Design Studio

503-504 Thesis-Research Either or both terms. Credit eight hours a term. Thesis to be prearranged with the advisers during the fourth year.

505 Special Program Either or both terms. Credit eight hours per term. To be arranged with faculty during the fourth year. Intended primarily for students applying to a graduate program in the College.

Nonsequence Courses

200, 300, 400, 500 Elective Design Either term. Credit as assigned. May be repeated for credit. Open by permission to students who wish to take additional work in design or transfers who have not been assigned to a sequence course. The student will be assigned to work with a class of appropriate level.

111-112 Elective Design Studio Either term. Credit as assigned. Registration restricted to out-of-department students. Permission of instructor required. To be coordinated by Architecture Department Office. Must be accompanied by Architecture 131-132.

310 Special Problems in Architectural Design Either term. Independent study. Registration and credit by arrangement. Elective. Staff.

610 Theory of Organic Architecture Spring term. Credit three hours. Seminar. Open to undergraduate and graduate students. W. G. Lesnikowski.

Concepts of organic and cellular architecture, the world of biological forces, the concept of balance in architecture, the meaning of symbols and central forms, ideas of centrum and core, and morphological growth patterns and repetitions of architectural functions. Various concepts of habitation and planning as well as technical innovations will be discussed and researched.

[611-612 Urban Housing Developments]

Either term. Credit two hours. Seminar. Limited to fourth- and fifth-year students in architecture and graduate students. Prerequisite: permission of instructor. O. M. Ungers. Not offered 1975-76.

Concentrates on large-scale housing developments, particularly in relation to size, density, and problems of infrastructure.]

613 Transportation Spring term. Credit two hours. Seminar. Prerequisite: permission of instructor. P. Cohen and A. Meyburg. A seminar concerning the impact of various transportation forms upon the urban environment involving architects, engineers, planners, and human ecologists. Readings and discussions of past, current, and future transportation modes will focus on the aesthetic and physical aspects.

Graduate Courses

618-619 Seminar in Urban and Regional Design Throughout the year. Credit three hours. Open to fifth-year and graduate students. O. M. Uengers, staff, and visitors. Deals with a broad range of issues and problems of urban and regional development and the context in which the designer functions. Selected case studies are presented by the participants and visitors.

711-712 Problems in Architectural Design Throughout the year. Credit nine hours each term. Studio and seminar. Open to fifth-year undergraduate students by permission of chairman and instructor. The basic first-year design course for graduate students whose major concentration is architectural design.

713-714 Problems in Urban Design Throughout the year. Credit nine hours each term. Studio and seminar. Open to fifth-year undergraduate students by permission of chairman and instructor. The basic first-year design course for graduate students whose major concentration is urban design.

715-716 Problems in Regional Design Throughout the year. Credit nine hours each term. Studio and seminar. Open to fifth-year undergraduate students by permission of chairman and instructor. The basic first-year design course for graduate students whose major concentration is regional design.

811 Thesis or Research in Architectural Design Throughout the year. Credit eighteen hours. Second-year design course for graduate students whose major concentration is architectural design.

812 Thesis or Research in Urban Design Throughout the year. Credit eighteen hours. Second-year design course for graduate students whose major concentration is urban design.

813 Thesis or Research in Regional Design Throughout the year. Credit eighteen hours. Second-year design course for graduate students whose major concentration is regional design.

Structures

Sequence Courses

221 Mathematical Techniques Fall term. Credit three hours. Mathematics Department. Two lectures and one recitation. Introduction to mathematical concepts and operations utilized in architecture.

222 Structural Concepts Spring term. Credit four hours. Prerequisite: Architecture 221 or approved equivalent. Lectures and seminars. Staff. Fundamental concepts of structural behavior. Statics and Strength of materials.

321 Structural Systems I Fall term. Credit three hours. Prerequisites: Architecture 221 and 222. Structural design concepts and procedures for steel building construction.

322 Structural Systems II Spring term. Credit three hours. Prerequisite: Architecture 222. Structural design concepts and procedures for reinforced concrete building construction.

Nonsequence Courses

323 Advanced Steel Building Design Fall term. Credit three hours. Prerequisites: Architecture 321 and permission of instructor. F. W. Saul. Design and investigation of advanced systems of steel building structure, plastic design of continuous beams, rigid frames, and high-rise buildings.

324 Surface Structures Spring term. Credit three hours. Permission of instructor required. D. P. Greenberg. Not offered 1975-76. The qualitative and quantitative analysis and design of thin shell architectural structures including shells of revolution, cylindrical shells, hypars, and folded plates. Suspension structures. The architectural implications and problems of curvilinear forms. Construction techniques.]

326 Building Substructure Spring term. Credit three hours. Prerequisites: Architecture 322 or concurrent registration and permission of instructor. F. W. Saul. The principles of soil mechanics and subsurface exploration. Design of building foundations—footings, piles, subgrade walls.

328 Advanced Reinforced Concrete Building Systems

Spring term. Credit three hours. Prerequisites: Architecture 322 and permission of instructor.

Review of methods and specifications for the design and construction of reinforced concrete building systems. Two-way framing systems. Precast concrete construction. Discussion of ultimate strength and yield line theories. Quality control of reinforced concrete. Exploration of new techniques in concrete construction. Selected topics.

Architectural Principles, Theories, and Methods**Sequence Courses****131-132 Introduction to Architecture**

Throughout the year. Credit two hours a term. Lecture. Architecture students must register for this course with Architecture 101-102. Also open to out-of-department students.

Introduction to the field of architecture and its relation to other disciplines.

231-232 Architectural Elements and Principles

Throughout the year. Credit two hours per term. Lecture. Architecture students must register for this course with Architecture 201-202. Also open to out-of-department students. Prerequisite: Architecture 131-132. Discussion of basic principles and components of architectural organization.

630-631 Advanced Seminar in Architecture

Throughout the year. Credit two hours per term. Required for all fifth-year architecture students. Open to graduate students. Staff and visiting critics.

Nonsequence Courses**333 Computer Applications**

Fall term. Credit three hours. Enrollment limited to third-year students and above. D. P. Greenberg. Designed to acquaint the student with the current uses and potentials of electronic computers in the architectural profession. No prior knowledge of computers is assumed. Topics will include basic principles and logic of computing systems, computer programming (PL/I and FORTRAN), architectural planning models, examples of linear programming problems, computer graphics, and data processing.

335-336 Theory of Architecture

Throughout the year. Credit three hours a term. First term not prerequisite to the second. L. Hodgden.

437-438 Special Projects in Computer

Applications in Architecture Either term. Credit variable. Prerequisite: Architecture 333. D. P. Greenberg.

Advanced work in particular topics covered in Architecture 333 such as CPM, urban models, and computer graphics.

633-634 Introduction to Comparative Theories

in Inquiry Throughout the year. Credit three hours per term. Seminar. Third-year students and above. D. M. Simons.

The study of approaches to problem inquiry; the formal procedures of the fields of architecture, natural sciences, and applied sciences; aesthetical and rational intelligences exemplified in these. Discussions of significant writings from the several literatures.

639 Principles of the Design Process

Spring term. Credit three hours. Third-year architecture students and above. Out-of-college students by permission of instructor. A. Mackenzie.

Analysis of the major theories and techniques of design developed during the past fifteen years, with special emphasis on the application to the solution of whole problems in architectural design. Students are required to complete exercises and a paper or a project.

Architectural History**141-142 History of Architecture I and II**

Throughout the year. Credit three hours a term. Staff.

History of architecture as social and cultural expressions of Western civilization. The nature of the field is considered in the fall; history of modern architecture is discussed in the spring. Students in other colleges may take either or both terms for credit. Slide lectures, readings, short papers, and examinations.

[244 History of Preindustrial Building] Spring term. Credit four hours. W. Cummer. Not offered 1975-76.

The development of traditional architectural elements and forms: materials, methods, and design expression. Lectures, readings, and papers or exercises.]

340 The Ancient Near East Spring term. Credit four hours. Prerequisite: Architecture 141 or permission of instructor.

Architecture of the oldest historic civilizations associated with Western tradition with emphasis on Egypt, Mesopotamia, and Anatolia.

341 The Classical World Fall term. Credit four hours. Prerequisite: Architecture 141 or permission of instructor. W. Cummer.

Architecture of the ancient Mediterranean civilizations, with emphasis on Greece and Rome.

[342 The Early Middle Ages] Credit four hours. Prerequisite: permission of instructor. Not offered 1975-76.]

[344 Islamic Architecture Spring term. Credit four hours. Prerequisite: permission of instructor. Not offered 1975-76.]

345 Architecture and Planning in the Orient (CRP 403) Fall term. Credit four hours. Prerequisite: permission of instructor. M. Hugo Brunt.

The evolution of urbanization and architecture in India, China, Cambodia, Japan, and Thailand.

346 The Renaissance Fall term. Credit four hours. Prerequisite: Architecture 141-142 or permission of instructor. C. Otto. European architecture of the fifteenth and sixteenth centuries.

[347 The Baroque Fall term. Credit four hours. Prerequisite: Architecture 141-142 or permission of instructor. C. Otto. Not offered 1975-76.

European architecture of the seventeenth and eighteenth centuries.]

348 American Architecture Throughout the year. Credit four hours. Prerequisite: permission of instructor. S. Jacobs. Building in the United States from colonial time to 1860, in the fall; after 1860, in the spring.

[349 Modern European Architecture Fall term. Credit four hours. Prerequisite: permission of instructor. C. Otto. Not offered 1975-76. A survey of nineteenth- and twentieth-century architecture in Europe.]

442 Historical Seminars in Architecture

Throughout the year. Credit two hours a term. Prerequisite: permission of the instructor. Staff.

Students will prepare papers discussing problems relating to design or architecture using historical evidence as the basis.

445 Special Investigations in the History of Architecture Either term. Credit as assigned. Prerequisite: permission of instructor. Staff.

447 History Workshop Either term. Credit as assigned. Staff. Consideration of problems often slighted in histories of architecture.

448 Historical Lectures in Architecture

Throughout the year. Credit as assigned. Prerequisite: permission of instructor. Staff. A series of one or two lectures per week on topics related to architectural history.

540 Architectural Problems in Archaeological Fieldwork Fall term. Credit as assigned. W. Cummer. A review and critique of students' participation in the excavation of ancient cities or historic

sites during the previous summer. For students in architecture, the archaeology concentration, or related subjects.

541 Introduction to Architectural Aspects of Archaeological Fieldwork Spring term. Credit variable. W. Cummer.

The excavation architect on an archaeological team. Methods of site survey, recording ancient buildings, and preparation of working, analytic, and restored drawings. For students in architecture or the archaeology concentration who anticipate joining a summer excavation.

542 Methods of Archival Research Spring term. Credit three hours. K. C. Parsons. Examination of methods of using archival materials for research in the history of architecture and urban development, using manuscripts, drawings, correspondence, and documents in the Cornell University archives and regional history collections.

544 Case Studies in Preservation Planning

Spring term. Credit two hours. S. W. Jacobs, staff, and visiting lecturers. A review and critique of preservation planning projects selected to indicate the range of current approaches.

545 Design and Conservation Fall term.

Credit two hours. S. W. Jacobs, B. Jones. Introductory course for preservation planning. The rationale for and methods of utilizing existing cultural and aesthetic resources in the planning and design of regions and cities.

546 Documentation for Preservation Planning

Spring term. Credit two hours. S. W. Jacobs, staff, and visiting lecturers. Methods of collecting, recording, processing, and analyzing architectural and cultural survey materials.

548 Problems in Modern Architecture

Spring term. Credit two hours. Prerequisite: permission of instructor. C. Rowe.

[640 Seminar in Architecture of the Ancient Near East Fall term. Credit four hours. Prerequisite: Architecture 340 or permission of instructor. W. Cummer. Not offered 1975-76. Problems in Near Eastern architectural history.]

641 Seminar in Architecture of the Classical World Spring term. Credit four hours. W. Cummer. Prerequisite: Architecture 341 or permission of instructor. Problems in Greek and Roman architectural history.

[643 Seminar in Medieval Art and Architecture Credit four hours. Prerequisite: permission of the instructor. Not offered 1975-76.]

646 Seminar in Renaissance Architecture

Spring term. Credit four hours. Prerequisite: Architecture 346 or permission of instructor. C. Otto.

Historical problems of European architecture of the fifteenth and sixteenth centuries.

647 Seminar in Baroque Architecture

Spring term. Credit four hours. Prerequisite: Architecture 349 or permission of instructor. C. Otto.

Historical problems in European architecture of the seventeenth and eighteenth centuries.

648 Seminar in the History of American Architecture

Fall term. Credit four hours. Prerequisite: permission of instructor. S. W. Jacobs.

Investigation by means of reading, lectures, and reports of historical problems in architecture of the nineteenth and twentieth centuries in the United States.

649 Seminar in the History of Modern Architecture

Fall term. Credit four hours. Prerequisite: permission of instructor.

Problems in modern art and architecture.

650 Introductory Seminar in the History of Architecture and Urban Development

Fall term. Credit two hours. S. W. Jacobs, C. F. Otto, and staff.

Motives, methods, and resources for scholarly work in history of architecture and history of urban development. Lectures, readings, reports. Required for graduate students entering the field, and undergraduates in BFA history of architecture program.

Graduate Courses**740 Informal Study in the History of Architecture**

Throughout the year. Credit as assigned. Prerequisite: permission of instructor.

840 Thesis in Architectural History

Either term. Credit as assigned. Independent study for the master's degree.

940 Dissertation in Architectural History

Either term. Credit as assigned. Independent research by candidates for the Ph.D. degree.

Design Communications**Sequence Courses****151 Visual Communications I**

Fall term. Credit three hours. R. E. Messick.

Fundamental problems of graphic representation related to the design process. Emphasis on drawing systems including axonometric and perspective forms.

152 Visual Communication II

Spring term. Credit three hours. R. E. Messick.

Fundamental problems in design graphics including an introduction to the use of light and color in design.

251 Visual Communication III

Either term. Credit three hours. S. Bowman.

Introduction to photographic tools and methods and their application to architectural presentation and design simulation.

Nonsequence Courses**250 Beginning Photography (also Art 161)**

Fall and spring terms. Credit three hours. S. Bowman.

A lecture-studio course in black and white photography for beginners. Emphasis on basic camera skill, darkroom techniques, and understanding of photographic imagery. Fee charged.

350 Intermediate Photography (also Art 162)

Fall and spring terms. Credit three hours.

Prerequisite: Art 161 or permission of instructor. A studio course in black and white photography at intermediate level. Emphasis on expanding camera and darkroom skills, image, content, and creative use of black and white photography. Fee charged.

351 Photo Tools for Architects

Fall and spring terms. Credit three hours. Prerequisite: Architecture 152 or 250 or permission of instructor.

A lecture-studio in the use of photography in architecture. Emphasis on architectural photography, photography as a graphic tool, photographic techniques in design, and photographic methods in presentation. Fee charged.

352 Color Photography (also Art 262)

Spring term. Credit three hours. Prerequisite: Architecture 250 or permission of instructor. S. Bowman.

A studio course in color photography. Emphasis on camera skill, basic color darkroom techniques, image content, and creative use of color photography. Fee charged.

353 Photo Processes (also Art 263)

Fall and spring terms. Credit three hours. Prerequisite: Architecture 250 or permission of instructor. Staff.

A studio course in early photo and nonsilver processes. Emphasis on camera skill, basic techniques and processes, image content, and creative use of photo processes. Fee charged.

354 Graphic Design Studio

Either term. Credit three hours. Prerequisite: Architecture 152 or permission of instructor. R. E. Messick. An introduction lecture-studio course in design and preparation of materials for reproduction

in print media. Studio in typography, available printing processes, and photomechanical methods of reproduction.

356 Architectural Simulation Techniques

Spring term. Credit three hours. Prerequisite: Architecture 152 or permission of instructor. G. Hascup.

A lecture-studio course in two and three dimensional simulation techniques in architecture. Emphasis on simulation of environment, space, materials, and lighting as visual tools for architectural design.

357 Large Format Architectural Spring term.

Credit three hours. Prerequisites: Architecture 250 and one 300-level photography course or permission of instructor. Staff.

A lecture-studio course dealing with the special uses of large format view camera photography. Emphasis on the creative use of the view camera in architectural photography.

450 Advanced Photography (also Art 261)

Fall term. Credit three hours. Prerequisite: Architecture 350 or permission of instructor. S. Bowman.

A studio course in black and white photography. Emphasis on advanced camera and darkroom skills, image content, and creative use of black and white photography. Fee charged.

451 Advanced Graphic Design Spring term.

Credit three hours. Prerequisite: Architecture 355 or permission of instructor. R. E. Messick. An advanced lecture-studio course in design and preparation of materials for reproduction in print media. Emphasis on specialized projects dealing with graphic processes.

452 Media Environments Studio Spring term.

Credit three hours. Prerequisites: Architecture 250 and permission of instructor. R. E. Messick.

A studio course dealing with programmed multiple projection presentations as communication systems, including the use of multi-screen slides, motion film, and sound in the creation of media environment. Fee charged.

457 Special Project in Photography

Throughout the year. Credit one to eight hours. Prerequisite: permission of instructor in design communications.

An independent study course for exploration of a special project. Written proposal required. Meetings and credit by arrangement.

458 Special Project in Design Communica-

tion Throughout the year. Credit one to eight hours. Prerequisite: permission of instructor in design communications.

An independent study course for exploration of a special project. Written proposal required. Meetings and credit by arrangement.

459 Thesis Project in Design Communication

Spring term. Credit six hours. Prerequisite: design communication majors only.

A special study in design communication leading to a thesis project. Written proposal required. Meetings by arrangement.

Architectural Science and Technology

Sequence Courses

261 Introduction to Environmental Science

Fall term. Credit two hours. Spring term. T. Eyerman and R. Crump.

The role of the architect in controlling environment. Natural influences and climatological factors. The body as an environmental control device. Theoretical aspects of behavioral science that relate to physical design.

262 Introduction to Social Sciences in Design

Spring term. Credit two hours. Lecture and discussion. R. MacDougall.

An introduction to concepts and methods in the social sciences for architects, on how approaches from anthropology, environmental psychology, and sociology can be utilized in the study and design of the built environment.

360 Building Technology, Materials and

Methods Fall term. Credit three hours. Lecture. Prerequisites: Architecture 261-262.

E. Dluhosch.

Properties of materials, their use and application to the design of buildings and building systems. Discussion of various methods of building construction and assembly.

361 Environmental Technology Workshop I

Spring term. Credit two hours. Must be preceded or accompanied by Architecture 362. R. Crump.

The acoustical consultant's, the electrical engineer's, and illumination consultant's tasks in relation to the architect's work. Acoustical and lighting design studies utilizing full-scale mock-ups and specific building type studies. Cost factors.

362 Environmental Controls I Spring term.

Credit three hours. Prerequisite: Architecture 360. R. Crump.

Basic properties and principles of sound and light. Sound phenomena, noise control, absorption, acoustical design. Light, color, and form. Natural lighting, possibilities, and constraints. Artificial lighting. Good and bad examples.

461 Environmental Technology Workshop II

Fall term. Credit two hours. Must be preceded or accompanied by Architecture 462. R. Crump. The mechanical engineer's task and its relation to the architectural design process.

Mechanical equipment and its selection, poten-

tial developments. Heating and plumbing design studies of specific building types. Full scale and model studies of the role of air movement and temperature in building design. Cost factors.

462 Environmental Controls II Fall term. Credit two hours. Prerequisite: Architecture 262. R. Crump.

Basic properties and principles of air movement and temperature. Criteria for health, comfort, efficiency. Water use and return as an ecological factor.

464 Technological Integration in Design

Spring term. Credit two hours. Lecture. Prerequisite: All preceding sequence courses in architectural science and technology, or permission of instructor. E. Dluhosch.

Integration of various aspects of architectural science and technology with issues of design. Discussion of new developments in the area of architectural science and technology.

Nonsequence Courses

561 Special Problems in Architectural Science Throughout the year. Registration and credit by arrangement. Elective. Staff.

662 Environmental Control Systems Spring term. Credit three hours. Prerequisites: Architecture 362 and 462. R. Crump.

A study of the influences of environment on the design of buildings and urban developments. Lectures and problems involving the relation and integration of environmental phenomena and psychophysical factors in the design of control systems.

[666 Human Factors in Architecture Spring term. Credit three hours. Open to upperclass and graduate students and to students in related design fields by permission of instructor. A. Kira. Not offered 1975-76.
Introduction to "Ergonomics" as it relates to problems of architectural design, detailing. Normal and special population groups, applications of anthropometric data, activity space requirements, controls, and hardware. Emphasis on architectural applications from the viewpoint of user requirements.]

667-668 Architecture in its Cultural Context Fall and spring terms. Credit three hours a term. Seminar. Prerequisite: permission of instructor. R. D. MacDougall.

Fall term: theory; spring term: method and problem solving. An examination of the relationship between architecture and other aspects of culture. Emphasis on the motivations for particular architectural forms and on theories of architecture. Examples from Asia and the United States.

671 Introduction to Industrialized Building

Fall term. Three credit hours. Lecture and seminar. Prerequisite: permission of instructor. E. Dluhosch. (B. Kelly 1975)

Definition of terms. Survey of evolution of industrialization of the building industry to present. The influence of natural and man-made resources on building industrialization and systems building. Case studies.

[672 Industrialized Building Spring term.

Credit three hours. Lecture and seminar. Prerequisites: Architecture 671 or permission of instructor. E. Dluhosch. Not offered 1975-76. Conceptual and practical consequences of the industrialization of the building process on the design and production of building systems. Development of user requirements, performance specifications, evaluation criteria, etc. as part of large series building systems.]

Graduate Courses

665 Visual Perception and Architecture

Fall term. Credit three hours. Open primarily to graduate students. Prerequisite: permission of instructor. J. Gibson, R. Crump, E. Messick. A study of the visual perception of space and architecture. Discussions of the theories of perception, of the problem of the nature of visual depth, of the constancy of the characteristics of perceived objects in relation to geometric space and other related topics. The course will be structured towards a group discussion, problem-solving format between architects and perception-oriented psychologists.

761-762 Architectural Science Laboratory

Either term. Credit four to six hours. Open to graduate students only. Projects, exercises, and research in the architectural sciences.

763-764 Thesis or Research in Architectural Science Either term. Credit as arranged. Open to graduate students only.

The Profession of Architecture

Sequence Course

480 (808) The Practice of Architecture

Spring term. Credit two hours. A seminar for fourth-year students. Staff. Devoted to discussion of the organization of the profession of architecture, professional ethics, client relations, and the position of the architect within society. A summary of all the diverse aspects represented within the actual practice of architecture.

Art

Most courses given in the Department of Art are open to students in any college of the University who have fulfilled the prerequisites and who have the consent of the instructor. All such students must register at the department office.

Courses in Theory and Criticism

110 Color, Form, and Space Fall term. Credit three hours. N. Daly. A study of traditional and contemporary ways of drawing and painting. An analysis of color theory and pictorial space.

210 Seminar, Conceptual Intermedia Fall term. Credit three hours. N. Daly. An experimental effort in which each student will correlate two distinct fields of study into the unified presentation of an original project (performance or exhibition).

610 Seminar in Art Criticism Both terms. Credit two hours a term. May be repeated for credit. Four terms required of Master of Fine Arts candidates. Open to other graduate students. J. Selye. A study of critical opinions, historical and modern, and their relation to problems in the theory of art.

Studio Courses in Painting

121-122 Introductory Painting Throughout the year. Credit three hours a term. Staff. An introduction to the problems of artistic expression through the study of pictorial composition; proportion, space, shapes, and color as applied to abstract and representational design.

221-222 Second-Year Painting Throughout the year. Credit three hours a term. Prerequisite: Art 121 or 122 or permission of instructor. Staff. Study of traditional and contemporary media.

321 Third-Year Painting Fall term. Credit four hours. Prerequisite: nine to twelve studio hours depending on major. Staff. Continued study of the principles of painting, the selection and expressive use of materials and media. Group discussions and individual criticism.

322 Third-Year Painting Spring term. Credit four hours. Prerequisite: Art 321. Staff. Continued study of the principles of painting, the selection and expressive use of materials and media. Group discussions and individual criticism.

421 Fourth-Year Painting Fall term. Credit four hours. Prerequisite: Art 322. Staff. Further study of the art of painting through both assigned and independent projects, executed in various media. Instruction through group discussions and individual criticism.

422 Senior Thesis in Painting Spring term. Credit four hours. Prerequisite: Art 421. Staff. Advanced painting project to demonstrate creative ability and technical proficiency.

720 Graduate Painting Either term. Credit as assigned. May be repeated for credit. For Master of Fine Arts students in painting. Staff. Students are responsible, under direction, for planning their own projects and selecting the media in which they are to work. All members of the staff are available for individual consultation, and weekly discussion sessions of works in progress are held.

Studio Courses in Graphic Arts

131 Introduction to the Graphic Arts Either term. Credit three hours a term. A. Singer. Students will explore the techniques of making impressions from the raised surface of the relief print, the lowered surface of the intaglio print, and the flat (planographic) surface of the lithograph.

132 Introductory Silk-Screen Printing Either term. Credit three hours a term. S. Poleskie, P. Thompson. A basic introduction to the various methods used in fine art silk-screen printing. Students will explore the use of lacquer film, paper stencil, tusche and glue, and other commonly used procedures of serigraphy.

230 Advanced Intaglio Printing Either term. Credit three hours a term. Prerequisite: Art 131, 132, or permission of instructor. P. Thompson. Continuation of the study and practice of methods of printing from below the surface with emphasis on engraving, lift ground, experimental techniques, and color.

232 Plate Lithography Spring term. Credit three hours. Prerequisite: Art 131, 132, or permission of instructor. A. Singer. The special problems relating to the use of the aluminum lithographic plate will be studied. Particular importance will be placed upon the role of the plate in color printing.

233 Stone Lithography Fall term. Credit three hours. Prerequisite: Art 131, 132, or permission of instructor. A. Singer. The theory and practice of planography, utilizing limestone block. The basic lithographic techniques of crayon, wash, and transfer will be studied.

330 Advanced Silk-Screen Printing Either term. Credit three hours a term. Prerequisite: Art 132, S. Poleskie.

Continuation of Art 132 including photographic stencils, three-dimensional printing, and printing on metal, plastic, and textiles.

331 Advanced Printmaking Fall term. Credit four hours. Prerequisite: six hours of graphic art courses. P. Thompson.

Study of the art of graphics through both assigned and independent projects. Work may be concentrated in any of the graphic media or in a combination of media.

332 Advanced Printmaking Spring term. Credit four hours. Prerequisite: six hours of graphic art courses. P. Thompson.

Continuation and expansion of fall term Advanced Printmaking.

431 Senior Printmaking Fall term. Credit four hours. Prerequisite: four courses in printmaking. P. Thompson.

Further study of the art of graphics through both assigned and independent projects executed in various media. Instruction through group discussions and individual criticism.

432 Senior Thesis in Printmaking Spring term. Credit four hours. Prerequisite: four courses in printmaking. Staff.

Advanced printmaking project to demonstrate creative ability and technical proficiency.

731-732, 831-832 Graduate Printmaking

Either term. Credit as assigned. May be repeated for credit. For Masters of Fine Arts students in graphic arts. Prerequisite: permission of instructor. Staff.

Students are responsible, under direction, for planning their own projects and selecting the media in which they will work. Members of the staff are available for consultation; discussion sessions of work in progress are held.

Studio Courses in Sculpture

141-142 Introductory Sculpture Throughout the year. Credit three hours a term. Colby, Soley, Squier.

A series of studio problems introducing the student to the basic considerations of artistic expression through three-dimensional design. Modeling in plasteline, building directly in plaster, and casting in plaster.

241-242 Second-Year Sculpture Throughout the year. Credit three hours a term. Prerequisite: nonmajors, none; majors, Art 141-142. Colby, Squier.

Various materials including clay, plaster, wood, and stone will be used for exercises involving figurative modeling, abstract carving, and other aspects of three-dimensional form and design.

341 Third-Year Sculpture Fall term. Credit four hours. Prerequisite: Art 242. Colby, Soley, Squier.

Continued study of the principles of sculpture, the selection and expressive use of materials and media. Group discussions and individual criticism.

342 Third-Year Sculpture Spring term. Credit four hours. Prerequisite: Art 341. Colby, Soley, Squier.

Continuation and expansion of Art 341.

441 Fourth-Year Sculpture Fall term. Credit four hours. Prerequisite: Art 342. Colby, Soley, Squier.

Further study of the art of sculpture through both assigned and independent projects executed in various media. Instruction through group discussions and individual criticism.

442 Senior Thesis in Sculpture Spring term. Credit four hours. Prerequisite: Art 441. Colby, Soley, Squier.

Advanced sculpture project to demonstrate creative ability and technical proficiency.

840 Graduate Sculpture Either term. Credit as assigned. May be repeated for credit. For Master of Fine Arts students in sculpture. Colby, Soley, Squier.

Students are responsible, under direction, for planning their own projects and selecting the media in which they are to work. All members of the staff are available for individual consultation, and weekly discussion sessions of works in progress are held.

Studio Courses in Photography

161 Beginning Photography Fall and spring terms. Credit three hours. S. Bowman.

A lecture-studio course in black and white photography for beginners. Emphasis upon basic camera skill, darkroom techniques, and understanding of photographic imagery. Fee charged.

162 Intermediate Photography Fall and spring terms. Credit three hours. Prerequisite: Art 161 or permission of instructor. S. Bowman, J. Livingston.

A studio course in black and white photography at intermediate level. Emphasis upon expanding camera and darkroom skills, image content, and creative use of black and white photography. Fee charged.

261 Advanced Photography Fall term. Credit three hours. Prerequisite: Art 162 or permission of instructor. S. Bowman, J. Livingston.

A studio course in black and white photography. Emphasis upon advanced camera and darkroom skills, image content, and creative use of black and white photography. Fee charged.

262 Color Photography Spring term. Credit three hours. Prerequisite: Art 161 or permission of instructor. S. Bowman, J. Livingston. A studio course in color photography. Emphasis upon camera skill, basic color darkroom techniques, image content, and creative use of color photography. Fee charged.

263 Photo Processes Fall or spring term. Credit three hours. Prerequisite: Art 161 or permission of instructor. S. Bowman, J. Livingston. A studio course in early photo and non-silver processes. Emphasis upon camera skill, basic techniques and processes, image content, and creative use of photo processes. Fee charged.

361-362 Third-Year Photography Fall and spring terms. Credit four hours. Prerequisite: Art 261 or permission of instructor. S. Bowman, J. Livingston. A studio course for photography majors or other qualified students. Continued study of creative use of photography with emphasis upon specialized individual projects. Fee charged.

461-462 Fourth-Year Photography Fall and spring terms. Credit four hours. Prerequisite: Art 361-362 or permission of instructor. S. Bowman, J. Livingston. A studio course for photography majors or other qualified students. Continued study of creative use of photography leading to thesis exhibition. Fee charged.

Studio Courses in Drawing

151-152 First-Year Drawing Throughout the year. Credit three hours a term. Staff. A basic drawing course in the study of form and techniques. Contemporary and historical examples of figure drawing are analyzed in discussions.

251-252 Second-Year Drawing Throughout the year. Credit three hours a term. Prerequisite: Art 151, 152, or permission of instructor. Staff. A continuation of the basic studies undertaken in Art 151, but with a closer analysis of the structure of the figure and a wider exploitation of its purely pictorial qualities.

Graduate Thesis

712 Graduate Thesis Spring term. Credit as assigned. Staff. For graduate students in their last term in the programs in painting, sculpture, and graphics.

Special Studio Courses

270 Special Studio Either term. Credit as assigned. May be repeated for credit. Per-

mission of instructor required. Staff. For transfer students and others whose standing in the professional sequence is to be determined. May be in painting, sculpture, graphics, or photography.

370 Studio Concentration Either term. Credit as assigned. May be repeated for credit. Permission of instructor is required. Staff. For B.F.A. degree candidates who wish a greater concentration in drawing, painting, sculpture, graphics, or photography in the upperclass years.

City and Regional Planning

Most courses in the Department of City and Regional Planning are open to students in any college of the University who have fulfilled the prerequisites and who have the consent of the instructor.

Urban Regional Theory

410 Introduction to Urban and Regional Theory Fall term. Credit four hours. W. W. Goldsmith.

An eclectic course borrowing theories from economics, sociology, and geography to explain the existence, functioning, and growth of cities. Discussion of why, how, and where people agglomerate, and an attempt to apply theories to currently perceived urban problems, using Marxian concepts to explain the shortcomings of planning.

419 Informal Study in Urban and Regional Theory Either term. Credit as assigned.

710 Introduction to Urban and Regional Theory Fall term. Credit four hours. W. W. Goldsmith.

A first-year graduate course on the growth and structure of cities. Eclectic, borrowing theories from economics, sociology, and geography to explain size, functioning, and location of cities and their components integrated by a Marxist analysis of the shortcomings of planning.

719 Informal Study in Urban and Regional Theory Either term. Credit as assigned.

813 Research Seminar in Urban and Regional Social Structure and Policy Analysis Spring term. Credit three hours. Permission of the instructor is required. P. Clavel.

An advanced research seminar designed to discuss and investigate some of the implications of urban and regional social structure on the initiation, formulation, and outcome of public policy. Students will undertake their own exploratory research projects on this subject.

814 Urban Economics I Fall term. Credit two to four hours. Prerequisite: 710 or Economics 311-312 or equivalent. T. Vietorisz. A series of lectures presenting broad aspects of urban economic development and planning; complemented by original research work carried out in working groups. The groups will report in seminars at approximately three-week intervals. Problems of race, poverty, the dual economy, and the urban ghetto are considered.

815 Urban Economics II Spring term. Credit two to four hours. Prerequisite: 814. T. Vietorisz.

819 Informal Study in Urban and Regional Theory Either term. Credit as assigned.

[914 Metropolitan Land Use: Economic Analysis] Fall term. Credit three hours. Prerequisites: 510, 815, 733, and/or permission of instructor. Not offered 1975-1976.

The housing market, land-use competition, location of retail, service, wholesale, and manufacturing enterprises. The determination of land values and urban structure and form. Public controls, urban redevelopment, and evaluation of social costs and benefits.]

915 Location Theory Fall term. Credit three hours. Prerequisites: 710, 733, and Economics 311-312, or equivalent. W. Isard.

Traditional Weberian location doctrine; transport orientation, labor orientation, agglomeration, and urban rent theory will be examined. Interregional trade and market and supply area analysis will be treated. Particular attention paid to Loschian and Christaller systems of urban places.

916 Advanced Seminar in Urban and Regional Theory I Fall term. Credit two hours. Prerequisite: 710. B. G. Jones.

Seminar in the theory of urban spatial organization. Economic, technological, and social factors leading to urbanization and various kinds of spatial organizations will be explored. Major theoretical contributions to the understanding of intraregional and intraurban distribution of population and economic activity will be reviewed.

917 Advanced Seminar in Urban and Regional Theory II Spring term. Credit two hours. Prerequisite: 916. B. G. Jones.

A continuation of Planning 916 concentrating on recent developments.

919 Informal Study in Urban and Regional Theory Either term. Credit as assigned.

Planning Theory and Policy Analysis

420 Policy Planning and Collective Choice Fall term. Credit four hours. D. F. Williams.

An introductory course in the practical uses of planning theory with specific emphasis on the evolution of planning thought, and the practical implications of the logic of individual and group behavior in collective action and public policymaking.

425 Theories and Strategies of Social Change

Spring term. Credit four hours. C. Hershey. Broadly concerned with social change on both a theoretical and action level. The principal thrust will be to evaluate the possibilities for major social, cultural, and political changes within an emergent postindustrial society, including a critical evaluation of several current change strategies and an articulation of several alternative futures.

429 Informal Study in Planning Theory and Policy Analysis Either term. Credit as assigned.

720 Policy Planning and Collective Choice

Fall term. Credit four hours. D. F. Williams. An introductory course in the practical uses of planning theory with specific emphasis on the evolution of planning thought, and the practical implications of the logic of individual and group behavior in collective action and public policymaking.

721 Planning Theory Spring term. Credit three hours. P. Clavel.

Normative and behavioral models of decision making for the provision of public goods and services. Theories of individual decision and choice are reviewed, followed by applications in institutional context stressing the impact of alternative organizational and political models on social decision processes.

729 Informal Study in Planning Theory and Policy Analysis Either term. Credit as assigned.

820 Planning and Organizational Theory

Fall term. Credit four hours. Prerequisite: second-year standing. P. Clavel. A seminar examining organizational and administrative models relevant to plan formulation and implementation. Applications are made to such programs as community development, regional administration, urban renewal, and land-use control.

821 Politics of the Planning Process

Spring term. Credit four hours. P. Clavel. Analysis of planning and political institutions in selected subjects and policy areas, relating national and subnational levels. Subjects will be drawn from such areas as environmental control and use policy, industrial development, transportation, and community development. Theories of planning and politics are compared for their analytical usefulness on these topics.

823 Regional Development Administration

Spring term. Credit four hours. P. Clavel. A seminar on administrative institutions relevant to regional development policies, with attention to the United States, Western Europe, and Third World countries. Approaches to theory, measurement, and spatial distribution of institutions are covered with reference to the design of effective programs.

824 Organizational Change and Public Service Delivery Systems

Fall term. Credit three hours. C. Hershey. An examination of the operation of the urban political system and policymaking process with particular emphasis on the service outcomes of local public bureaucracies in the education, health, welfare, manpower, social service, and police fields.

829 Informal Study in Planning Theory and Policy Analysis

Either term. Credit as assigned.

920 Seminar in Planning Theory

Fall term. Credit two hours. Prerequisite: 820 or 821. B. G. Jones.

A survey of the works of scholars who have contributed to current thinking about planning theory. The course deals with alternative assumptions concerning models of man and theoretical concepts concerning the nature of planning today.

929 Informal Study in Planning Theory and Policy Analysis

Either term. Credit as assigned.

Methods for Planning Analysis

430 Mathematical Concepts for Planning

Fall term. Credit one, two, or three hours. Prerequisite: permission of instructor. An introductory course for students having little or no background in college mathematics. Basic concepts in matrix algebra, calculus, and probability will be covered in self-contained units of one credit hour each. Students may register for any or all of these topics.

431 Statistical Analysis for Planning

Spring term. Credit three hours. Prerequisites: 430 or equivalent and permission of instructor. An introduction to basic methods of statistical analysis with an emphasis on their use in the decision-making process in planning. Material in decision theory, sampling, estimation, hypothesis testing, and prediction will be introduced.

433 Planning Analysis

Spring term. Credit four hours. B. G. Jones.

Development of techniques for measuring population distributions and migrations, location of economic activity, and the development of spatial models.

436 Introduction to Computers in Planning

Fall term. Credit three hours. S. Saltzman. An introduction to the use of computers in urban problem solving and planning process.

439 Informal Study in Planning Analysis

Either term. Credit as assigned.

730 Mathematical Concepts for Planning

Fall term. Credit one, two, or three hours. Prerequisite: permission of instructor. An introductory course for students having little or no background in college mathematics. Basic concepts in matrix algebra, calculus, and probability will be covered in self-contained units of one credit hour each. Students may register for any or all of these topics. Mathematics 201, Mathematics for the Social Sciences, is an acceptable substitute.

731 Statistical Analysis for Planning

Spring term. Credit three hours. Prerequisites: 730 or equivalent and permission of instructor. An introduction to basic methods of statistical analysis with an emphasis on their use in the decision-making process in planning. Material in decision theory, sampling, estimation, hypothesis testing, and prediction will be introduced.

733 Planning Analysis

Spring term. Credit four hours. Prerequisite: 731. B. G. Jones.

City planning applications of general analytical economic and spatial models.

736 Introduction to Computers in Planning

Fall term. Credit three hours. S. Saltzman. An introduction to the use of computers in the problem-solving and planning processes. Students will run programs on the Cornell computer using PL/I or another appropriate programming language. Brief introduction to computer systems and the use of library routines. Advantages and limitations of using computers will be considered.

739 Informal Study in Planning Analysis

Either term. Credit as assigned.

830 Quantitative Techniques for Policy Analysis

Fall term. Credit four hours. D. Lewis. An examination of selected analytical techniques used in the planning and evaluation of public policy and public investments. Topics covered include: simulation modeling, benefit/cost and cost effectiveness analysis (including capital budgeting), and optimization strategies.

832 Simulation in Planning and Policy Analysis

Fall term. Credit three hours. Prerequisites: 731 and 736 or equivalent. S. Saltzman.

The design and use of simulation models in planning and policy analysis. Alternative approaches such as discrete stochastic simula-

tion, econometric simulation, and urban dynamics, will be evaluated. Applications in design, land use, regional development, social policy, will be considered. Students will run their own programs on the Cornell computer.

839 Informal Study in Planning Analysis

Either term. Credit as assigned.

930 Seminar in Methods for Planning and Policy Analysis

Fall term. Credit two hours. Prerequisite: permission of instructor. S. Saltzman.

A review and critical analysis of various analytical and computer methods of actual and potential use in planning and in the analysis of public policy. The material covered will vary each semester depending upon the interests of the members of the seminar.

[932 Techniques of Regional Accounting

Fall term. Credit three hours. Prerequisites: 733 and Economics 312 or equivalent. Not offered 1975-76.

Methods of construction of the regional, social accounts and their application to regional planning. Measuring levels of activity within regions such as income and product accounts are emphasized as well as methods of estimating flows between regions such as balance of payment accounts.]

933 Methods of Regional Analysis

Spring term. Credit three hours. W. Isard.

Advanced applications of interregional and regional input-output and linear programming techniques to development problems. Applications of spatial interaction and growth (intertemporal) models to the analysis of urban and multiregional systems, with particular reference to environmental quality management.

939 Informal Study in Planning Analysis

Either term. Credit as assigned.

Planning Institutions, Programs, and Practice

440 Introduction to Urban Planning Theory and Practice

Fall term. Credit three hours.

B. G. Jones.

An undergraduate course designed to introduce the student to the practice of urban planning within the context of the major bodies of theory utilized in planning. Urban and regional theory and planning theory will be examined. Their usefulness and applications to planning activities and urban problems will be highlighted within the context of the process of urban growth and development.

441 Field Studies in Urban Policy Planning

Spring term. Credit three hours.

The student is offered the opportunity to apply

theories and techniques of analysis and planning to real problem situations.

442 Internship in Urban Studies and Policy Planning

Summer term. Credit three to six hours.

740 Introduction to Planning Institutions

Fall term. Credit three hours. P. Clavel.

A survey of contemporary organizational forms and political forces facilitating and inhibiting the development of the planning profession at the city, state, and regional level. The focus is on subnational planning in the United States, but the national context and other nations are dealt with where appropriate.

741 Planning Practice

Spring term. Credit three hours. B. Swift.

Application of planning principles and techniques to community situations including working with town and county governments and planning officials to analyze and evaluate community conditions, problems, goals, priorities, resources, and activities. Development of comparative frameworks for policy analysis.

742 Internship in Planning and Policy Analysis

Summer term. Credit three to six hours. Prerequisite: second-year standing.

840 Field Problem in Planning Methods

Fall term. Credit three hours. Prerequisite: second-year standing.

An opportunity to apply theories and techniques of analysis and planning to real problem situations. Much of the work will be carried out in cities and towns convenient to Ithaca. Projects vary from year to year.

841 Field Problem in Planning Methods

Spring term. Credit three hours. Prerequisite: second-year standing.

The follow-up work begun in PPRA 840 to provide continuous planning services to client groups. PPRA 840 is not prerequisite.

842 Seminar on Nonmetropolitan Planning

Fall term. Credit three hours. B. Swift.

A generalist view of planning in nonmetropolitan areas including the following topics: politics of planning, the failure of planning, planning strategies, measuring the impact of development on nonmetropolitan areas, and various case studies.

844 Design and Conservation (also Architecture 545)

Fall term. Credit two hours.

B. G. Jones, S. W. Jacobs.

The rationale for and methods of utilizing existing cultural and aesthetic resources in the planning and design of regions and cities.

845 Documentation for Preservation Planning (also Architecture 546) Spring term. Credit two hours. S. W. Jacobs, staff, and visiting lecturers. Methods of collecting, recording, processing, and analyzing architectural and cultural survey materials.

849 Informal Study in Planning Practice Either term. Credit as assigned.

949 Informal Study in Planning Practice Either term. Credit as assigned.

Urban and Environmental Systems Planning

452 Introduction to Environmental Health Policy Fall term. Credit three hours.

An examination of some of the concepts and issues in environmental health planning such as housing quality, occupational health and safety, and environmental protection.

[457 The Public Economy of Urban Areas]

Spring term. Credit three hours. D. F. Williams. Not offered 1975-76.

An examination of the structure, function, and impact of the public sector of the metropolitan area economic system with specific emphasis on the planning and policy implications of fiscal externalities and other spatial spillovers].

751 Planning Information Systems Spring term. Credit three hours. Prerequisite: 736 or equivalent. S. Saltzman.

Considers the design and use of computer-based information systems for planning and policy analysis including conventional data processing and advanced data base systems. Technical aspects in the design and structure of such information systems are introduced along with a variety of applications.

852 Environmental Health Planning Fall term. Credit two hours. Prerequisite: second-year standing.

Introduction to concepts and issues in environmental health planning. Topics covered include the planning problems involved in the control of water quality, liquid and solid waste disposal, air quality, and housing quality.

853 Planning and Evaluation of Environmental Health Programs and Projects Spring term. Credit three hours. Prerequisite: second-year standing.

The major focus is an examination of the use of quantitative methods and economic analysis as aids to social decision making with regard to action in the area of environmental health. Applications of these methods to the study of particular problems of environmental health.

[855 Systems Analysis in Urban Policy Planning] Spring term. Credit three hours. Pre-

requisite: permission of instructor. S. Saltzman, D. F. Williams. Not offered 1975-76.

An examination of the uses of systems analysis in policy planning issues. Advantages and limitations of the uses of systems analysis methodology in public policy planning will be explored.]

856 Urban Public Service Planning I Fall term. Credit three hours. D. F. Williams.

An examination of the function, distribution, and impact of urban public services. The major focus will be the problems and analytics of planning and resource allocation in nonmarket systems.

857 Urban Public Service Planning II

Spring term. Credit three hours. Prerequisite: PPRA 856. D. F. Williams.

A seminar on application of selected methods of urban public service planning and analysis with specific emphasis on case analyses of local public service planning, redistribution, and delivery.

859 Informal Study in Urban Systems Planning Either term. Credit as assigned.

959 Informal Study in Environmental Health Planning Either term. Credit as assigned.

Regional Economics and Development Planning

[860 Regional Economic Development Fall term. Credit four hours. W. W. Goldsmith. Not offered 1975-76.

A focus on problems of and theories about development of lagging, underdeveloped, or poor regions in industrial nations with emphasis on planning implementation.]

469 Informal Study in Development Planning Either term. Credit as assigned.

[860 Introduction to Regional Development Planning] Fall term. Credit four hours. Prerequisite: second-year standing. W. W. Goldsmith. Not offered 1975-76.

Theories about development of lagging, underdeveloped, or poor regions of industrial nations. Readings survey various theoretical works upon which regional development planning is, or ought to be, based. Course will deal with difficult transition from theory to planning recommendations and policy. Brief case studies will be used.]

862 Seminar on Science and Technology Policy in Developing Nations Spring term. Credit four hours. D. Lewis.

An examination of the issues facing developing countries as they endeavor to use technology in the pursuit of their national goals. Topics covered include: alternative choices of

technology and the associated impacts, the role of multinational corporations, government policymaking institutions, manpower development and utilization strategies, and policy instruments.

[863 Regional Planning and Development in Developing Countries Spring term. Credit four hours. Prerequisite: second-year standing. W. W. Goldsmith. Not offered 1975-76.

Selected problems from PPRA 860 will be elaborated and applied. Extensive case studies of development planning will be analyzed. Focus will be on the process of regional development through urbanization and in particular the concepts of equity and efficiency, external economies, export linkages, and internal self-sufficiency and integration. Resource development, national integration, human development, and migration problems will be discussed.]

865 Seminar in Policy Planning in Developing Nations: Technology Transfer and Adaptation Fall term. Two credit hours.

D. Lewis.

An exploration of the international transfer of technology to developing nations, and the policies used to guide this process. Topics covered include: role of foreign aid and multinational corporations, economic rationale for choice of appropriate technology, and social benefit-cost analysis. Case studies emphasized.

869 Informal Study in Comparative Planning Either term. Credit as assigned.

[963 Planning Techniques for Developing Regions and Small Nations Spring term. Credit four hours. Prerequisite: 860 or 863. W. W. Goldsmith. Not offered 1975-76.

Simulation of the work of a consulting team's proposals and analyses of policies for development of various sectors and problem areas, e.g., manufacturing, agriculture, health, education and services, infrastructure, urbanization, exports. The final product will be a set of plans. Requirements include minimal reading, extensive research on a topic of interest, an interim and a written final report.]

969 Informal Study in Regional Planning Either term. Credit as assigned.

Social Planning, Health Systems, and Housing

470 Introduction to Social Policy Planning

Fall term. Credit four hours. C. Hershey, D. F. Williams.

An introduction to theories, methods, and processes of social policy planning. Recent social policies will be examined within the context of the evolution of the welfare state and the development of social science methodologies for policy analysis.

770 Introduction to Social Policy Planning

Fall term. Credit four hours. C. Hershey, D. F. Williams.

An introduction to theories, methods, and processes of social policy planning. Recent social policies will be examined within the context of the evolution of the welfare state and the development of social science methodologies for policy analysis.

777 Low Cost Housing for Developing Nations

Spring term. Credit three hours. D. F. Williams.

A course on dimensions of the practice and problems of production, location, delivery, and use of shelter for low-income population groups in urban centers, peri-urban squatter settlements, and rural regions of developing nations.

779 Informal Study in Housing Plans and Programs Either term. Credit as assigned.

871 Seminar in Social Policy Research and Analysis Spring term. Credit four hours.

C. Hershey.

The focus will be on examining contemporary methods of social policy analysis, especially their ideological implications, and developing multidisciplinary approaches to selected social policy issues. The dilemmas of action research and of implementing research findings will be explored.

872 Housing and Community Development I

Fall term. Credit three hours. D. F. Williams. Examination of methods and strategies for policy formation and resource allocation in the urban housing sector with specific emphasis on the uses of the housing sector as a variable in the community development process.

873 Housing and Community Development II

Spring term. Credit three hours. Prerequisite: PPRA 872. D. F. Williams. Intensive concentration on selected problems and methods of housing analysis, empirical housing research, and national and subnational housing policy analysis.

877 Health Systems Planning

Spring term. Credit three hours. B. Swift.

This seminar is intended to increase understanding of issues, institutions, politics, economics, and social elements involved with planning and administration of health problems. Special emphasis will be placed on planning techniques and methodologies. Visiting practitioners in the field will be invited to make certain presentations.

879 Informal Studies in Social Planning

Either term. Credit as assigned.

970 Colloquium in Social Policy Theory and Practice

Fall term. Credit three hours. Pre-

requisite: second-year standing and permission of instructor. C. Hershey. A graduate- and faculty-level seminar in social policy planning. Each year a major area or issue in social policy will be explored from many perspectives: theoretical, empirical, political, professional, ethical, and moral. Discussion papers and presentations will be sought from faculty, students, and campus visitors.

979 Informal Study in Health Systems Planning Either term. Credit as assigned.

Planning Research

490 Undergraduate Honors Research Either term. Credit as assigned.

890 Professional Planning Colloquium

Either term. Credit one hour.

Presentation of current professional and research problems in planning by visitors, faculty, and students.

898 Thesis Research in City and Regional Planning Fall term. Credit as assigned.

899 Thesis Research in City and Regional Planning Spring term. Credit as assigned.

990 Planning Research Seminar Either term. Credit one hour.

Registration limited to doctoral candidates in CRP. Presentation and discussion of current research by advanced doctoral students and faculty.

999 Dissertation in City and Regional Planning Either term. Credit as assigned. Advanced independent research by candidates for the Ph.D. degree.

Historical Development of Urban Areas

[400 Historical Development of the World's Cities I] Fall term. Credit four hours. M. Hugo-Brunt. Not offered 1975-76.

Historical methods and research techniques, case studies and aesthetic evaluation, the urban revolution, Classical societies, medieval urbanism, the Renaissance and the baroque in Europe, colonization and North America.]

[401 Historical Development of the World's Cities II] Spring term. Credit three hours. Prerequisite: permission of instructor. M. Hugo-Brunt. Not offered 1975-76.

The social, philanthropic, and planning movements from the eighteenth century to World War II; Industrial Revolution and technological change; reform, public health, housing, model industrialists; research techniques; planning pioneers and theorists; garden and leinle cities.]

[403 Architecture and Planning in the Orient (also Architecture 345)] Fall term. Credit four hours. Prerequisite: permission of instructor. M. Hugo-Brunt. Not offered 1975-76. The evolution of urbanization and architecture in India, China, Cambodia, Japan, and Thailand.]

404 Methods of Archival Research (also Architecture 542) Spring term. Credit three hours. K. C. Parsons.

Examination of methods of using archival materials for research in the history of architecture and urban development, using manuscripts, drawings, correspondence, and documents in the Cornell University archives and regional history collections.

[405 History of Colonial Planning] Fall term. Credit four hours. Prerequisite: permission of instructor. M. Hugo-Brunt. Not offered 1975-76. Colonial city planning and civic design in Africa, America, Asia, and Australia.]

[406 Introduction to the History of Landscape Architecture and Design] Alternate spring terms. Credit four hours. Prerequisite: permission of instructor. M. Hugo-Brunt. Not offered 1975-76.

Classical landscape in the Mediterranean and Middle East; Islamic Byzantine tradition; medieval cityscape and the agrarian system; Renaissance; gardens in Persia, India, China, Thailand, and Japan. The Victorians; North America; colonial, twentieth century; horticulture and techniques; contemporary planning and architecture.]

504 Seminar in the History of American City Planning Spring term. Credit three hours. Prerequisite: UPD 400 or permission of instructor. J. W. Reps.

602 Seminar in American Urban History Spring term. Credit three hours. Prerequisite: permission of instructor. I. R. Stewart. Seminar in the historical evolution of the American city. Emphasis on factors in urban growth, the process of urbanization, urban reform movement, intellectual and social responses to the city.

709 Special Problems in the Historical Development of Urban Areas Either term. Credit as assigned. Staff.

809 Informal Study in the Historical Development of Urban Areas Either term. Credit as assigned. Staff.

Urban Planning Principles, Theory, and Process

110 Introduction to Urban Planning Spring term. Credit one hour. May not be taken for credit by those who have taken UPD 510. Staff.

A concise survey of urban planning and development for students seeking an introduction to the field. Consists of lectures given by various members of the staff and visitors.

510 Introduction to Concepts and Principles of Urban Planning and Development Fall term. Credit four hours. Upperclass undergraduates admitted by permission of instructors. J. W. Reps, I. R. Stewart.

A survey of the history of American planning, major problems of city development, and solutions advanced to improve the urban condition. Major emphasis is on physical development and related social, political, economic, and legal matters.

[512 Urban Economic Analysis] Fall term. Credit four hours. Prerequisites: UPD 520 and an introductory course in microeconomics. Staff. Not offered 1975-1976.

Examination of the city as an economic entity with spatial characteristics. Urban phenomena are analyzed from an economic point of view, using economic analysis tools, and include: patterns and determinants of urbanization, urban structure and location of activities, urban land and housing markets, the role of urban transportation and urban public policy.]

513 Introduction to Human Ecology Fall term. Credit four hours. Lectures and discussions. H. Hammerman.

An examination of man-environment relationships (including the resource, energy, food, population, and pollution crises) will be examined from sociological and systems analysis points of view. Solutions (in terms of social organization) will be suggested.

612 The Urban Development Process Spring term. Credit two hours. Prerequisite: UPD 510 or permission of instructor. Enrollment limited. J. W. Reps.

Examination of the goals, strategies, methods, and achievements of major participants in the urban land and building market; land owners, speculators, real estate brokers, developers, bankers, lawyers, nonprofit builders, and government agencies.

614 Neighborhood Theory Spring term. Credit three hours. Open to graduate students and upperclassmen. Seminar course. H. Hammerman.

The role of neighborhoods and small communities in urban society from a sociological perspective. The social, design, and cultural determinants of "sense of community" will be applied to planning in cities and new towns.

718 Special Problems in Urban Planning Principles, Theory, and Process Either term. Credit as assigned. Staff.

619 Informal Study in Urban Planning Principles, Theory, and Process Either term. Credit as assigned. Staff.

Methods and Techniques of Planning Analysis

520 Introduction to Quantitative Techniques in Urban Planning Fall term. Credit four hours. S. Czamanski.

Basic coverage of population and migration studies, regional social accounting, theories and methods of forecasting urban growth, land use, and transportation models. Prior knowledge of mathematics is not assumed.

522 Urban Land-Use Planning Spring term. Credit three hours. S. Stein.

Surveys, analyses, and plan-making techniques for guiding physical expansion and renewal of urban areas; location requirements, space needs, interrelationships of land uses. Emphasis on residential, commercial, industrial activities and community facilities; housing and neighborhood conditions.

523 Urban Land-Use Planning—Special Topics Fall term. Credit three hours. Prerequisite: UPD 522 or permission of instructor. S. Stein.

Detailed exploration of some or all of the following: the neighborhood, central business district, shorelines and waterfronts, new towns, planned-unit developments, high-density housing, highway-oriented uses, flood plains, and others. Lectures, seminars and field exercises.

524 Gaming Simulation Workshop Fall term. Credit two hours. H. Hammerman.

An eight-week course covering the major urban planning and social policy training games available. Fundamentals of game design and administration. Students will design original games or modifications of existing operational games around their own interests.

[525 Data Interpretation and Presentation in Urban Planning] Fall term. Credit three hours. H. Hammerman. Not offered 1975-1976.

The technique of making cogent arguments in applied statistical analysis. The process of assembling and computer analyzing social and planning data. Simple statistical procedures and tabular presentation. Lectures and workshop.]

526 Introduction to Survey Research Spring term. Credit three hours. H. Hammerman.

The techniques of conducting a scientific social survey. Sampling, questionnaire writing, interviewing, and analysis of results. Students will conduct survey in local area. The course will qualify students to conduct professional surveys. Workshop.

723 Seminar in Optimization Techniques in Urban Planning Spring term. Credit three hours. Prerequisite: basic economics, elements of matrix algebra. S. Czamanski. Regional applications of linear programming, activity analysis, game theory, some search techniques, nonlinear and integer programming, saturation level models and dynamic optimization.

722 Seminar in Economics of Industrial Agglomerations and Urban Size Spring term. Credit three hours. Prerequisite: basic economics, some calculus and elementary statistics. S. Czamanski. Classical plant location and spatial price theories will be reviewed, and central place and growth pole theories, methods of inter-industry analysis, study of clustering of industries and formation of spatial complexes, their impact upon urbanization trends and policies analyzed.

825 Seminar in Regional Development Models Fall term. Credit three hours. Prerequisites: Basic economics, some calculus, and statistics. S. Czamanski. Problems of formulation and testing of scientific hypotheses will be explored. Some time will be spent discussing past or current work of participants, or their dissertations. Topics covered include construction of models, main estimating techniques, applied regional models.

728 Special Problems in Urban Planning and Development Methods and Techniques Either term. Credit as assigned. Staff.

629 Informal Study in Methods and Techniques of Planning Analysis Either term. Credit as assigned. Staff.

Planning and Development Controls and Implementation

131 Controls and the Designer Fall term. Credit three hours. B. Kelly. Broad survey of public and private codes, regulations, and organizations influencing the design of urban areas, intended to give understanding of basic characteristics and to suggest innovations that encourage design advances while protecting public interests.

432 Transportation and the Urban Environment (also Architecture 613) Spring term. Credit two hours. S. Stein, P. Cohen (Architecture), A. Meyburg (Engineering). Nontechnical seminar on problems in United States urban transportation. Includes historic, current, and future modes; aesthetic and environmental conditions; linkage with inter-city systems; mass transit versus the private car; the pedestrian; etc.

434 The Impact and Control of Technological Change (Cosponsored by Science, Technology, and Society). Spring term. Credit four hours. Visiting speakers and sections. J. Milch. Social, environmental, and economic implications of technological change in the context of present policies and strategies of control. Several specific cases will be considered in detail followed by investigation of the problems of a modern technological society. Alternative political-economic solutions will be explored.

[530 Urban and Regional Transportation Planning] Fall term. Credit three hours. Staff. Not offered 1975-1976. An examination of the transportation planning process and its interrelationship with comprehensive urban and regional planning; to communicate the increasingly systematic knowledge about travel, land use, and transportation networks; examine implications of transportation planning processes in metropolitan and regional planning.]

531 Suburbanization and New Communities Fall term. Credit three hours. Prerequisite: permission of instructor. I. R. Stewart. Seminar concentrates on the major issues in suburban development and role of new communities in accommodating expected future population. New towns programs examined, and current and proposed state and federal legislation is reviewed.

[532 Socioeconomic Impacts of Transportation Investments] Spring term. Credit three hours. Staff. Not offered 1975-1976. Development of a comprehensive framework for the monitoring and evaluation of transportation programs, and their social and economic impacts upon the immediate environments and the region as a whole. Seminar sessions deal with the construction/application of this frame to the evaluation of transportation impacts at the regional and community level.]

533 The Politics of Technical Decisions Fall term. Credit four hours. J. Milch. Political aspects of decision making in areas traditionally regarded as technical. Focus on site selection process of large-scale projects; airports, power plants. Political nature of expert decision making and rise of citizen opposition to technology.

631 Urban Land Policy and Programs Fall term. Credit three hours. Prerequisite: UPD 632 or permission of instructor. J. W. Reps. Consideration of major problems of urban land control and management and possible solutions. Subjects for discussion include taxation, compensation and betterment, large-scale public land acquisition, subsidies and incentives, and acquisition of developmental rights.

632 Legal Aspects of Land Use Planning

Spring term. Credit three hours. Prerequisite: UPD 510 or permission of instructor. B. Kelly. Survey of leading cases and legal concepts in land-use planning, with particular attention to zoning, subdivision control, condemnation, growth control, and environmental issues.

738 Special Problems in Urban Land Policy and Programs Either term. Credit as assigned. Staff.**639 Informal Study in Planning and Development Controls and Implementation** Either term. Credit as assigned. Staff.**Physical and Aesthetic Aspects of the Urban Environment****540 Introduction to Environmental Planning and Design** Fall term. Credit three hours.

For graduate planning students; others by permission of instructor. K. Grey.

Planning and design of built environments as an aesthetic reflection of comparative values and needs. Lectures, seminars, and readings will explore basic concepts and issues related to architecture, landscape, urban design and urban planning.

541 Environmental Planning and Design Workshop Spring term. Credit four hours.

Prerequisite: UPD 540 or by permission of instructor. K. Grey.

Studio, lecture course examining planning and design problems related to the built environment. An understanding of the design process will be developed and graphic communication techniques explored. No previous graphics experience required.

542 Planning Design Spring term. Credit four hours. Prerequisite: UPD 541 or background in design with permission of instructor. K. Grey or S. Stein.

Studio course to explore in detail typical urban planning problems. Projects will be related to urban land-use activities. Field surveys, program development, design solutions, implementation programs, report preparation and presentation techniques will be emphasized.

[543 Advanced Planning Design] Fall term. Credit four hours. K. Grey or S. Stein. Not offered 1975-1976.

Continuation of the exploration of physical planning problems found in urban settings, building on the work begun in 542 Planning Design Studio. Increasingly more complex problems will be undertaken to develop greater design skills.]

640 Seminar in Urban Design Fall term.

Credit three hours. S. Stein.

Investigation of historical and current thought

on the visual aspects of cities, including evaluation of technological and cultural influences on urban design, perception of urban form, and relationships between contemporary city planning process and visual form in cities.

749 Special Problems in Planning Design Either term. Credit as assigned. Staff.**649 Informal Study in Physical and Aesthetic Aspects of the Urban Environment** Either term. Credit as assigned. Staff.**Housing, Renewal, and Development****550 Seminar in Housing and Urban Development** Fall term. Credit three hours. I. R. Stewart.

An introductory course reviewing the evolution of governmental policy and programs in the area of housing, urban renewal, and development. Subjects will include both theory and case study analysis of recent American experience in these fields.

551 Social Facilities for Large-Scale Housing Developments Fall term. Credit three hours. B. Kelly.

Study of the need for a full range of community social facilities in large-scale housing developments and the procedures by which these needs may be met. Illustrations from experience in United States and Europe.

650 Urban Politics and Planning Spring term. Credit three hours. I. R. Stewart. A consideration of the political dimension of planning and renewal activities. Emphasis on governmental mandate and structure, as well as interest group and power relationships as they are related to developmental decision-making processes. Theory and case study analyses.**759 Special Problems in Housing, Renewal, and Development** Either term. Credit as assigned. Staff.**659 Informal Study in Housing, Renewal, and Development** Either term. Credit as assigned. Staff.**Institutional and Public Facilities Planning****561 College and University Planning** Spring term. Credit three hours. Prerequisite: permission of instructor. M. Toomey, K. C. Parsons. An analysis of interactive elements in the planning process for colleges and universities. Topics include organizational and administrative theory, management objectives, evaluation, accountability/quantity and quality budgeting, program planning. Governmental constraints will be stressed.

569 Special Problems in Institutional and Public Facilities Planning Either term. Credit as assigned. Staff.

569 Informal Study in Institutional and Public Facilities Planning Either term. Credit as assigned. Staff.

Urban Planning Fieldwork and Practice

Fieldwork in urban planning and development problems may be taken upon completion of appropriate academic course and approval of the instructor of that course. In certain cases the appropriate course may be taken at the same time as the fieldwork. If the proposed fieldwork is not part of a regularly organized fieldwork course, arrangements for faculty supervision and evaluation of the fieldwork must also be approved in advance.

570 Urban Planning and Development Workshop Either term. Credit four hours. Prerequisite: UPD 510. S. Stein.

Research and analysis in an urban, suburban, or rural community leading to the preparation of special studies, plans, and programs. Individual and group reports. Fieldwork emphasized, working with real "clients".

571 Housing and Urban Renewal Workshop

Either term. Credit four hours. S. Stein. Surveys and analyses of housing and urban renewal problems in specific communities and urban areas. Preparation of plans based upon existing public legislation and funding mechanisms and the development of new programs. Fieldwork emphasized.

572 Fieldwork in Community Social Facilities

Spring term. Credit as assigned. Prerequisite: UPD 551. B. Kelly. Fieldwork follow-up to UPD 551.

575 Historic Preservation Planning Workshop

Either term. Credit four hours. S. Stein. Preparation of surveys, analyses, plans, and programs for preservation of historic areas of small or large communities. Fieldwork emphasized, working with real "clients" in their communities.

579 Special Problems in Fieldwork Either term or summer. Credit four to six hours. Staff. Arrangements for enrollment and credit must be made with the agreement of a faculty member and the approval of the entire urban planning and development faculty.

670 Planning Practice Seminar Spring term. Credit one hour. S. Stein.

Visiting lecturers and seminar discussions focusing on various roles and responsibilities for urban planners in society.

771 Internship Program in Urban Planning and Development Summer term. Instruction limited to July and August. Credit three hours. Graduate students in planning and others by permission. S. Stein, staff, and visiting lecturers.

Summer internship in the New York metropolitan area. Full-time work at current salaries supplemented with evening lectures and discussions two evenings a week and field trips. Program offering dependent on economic conditions and availability of internship jobs in New York City.

679 Informal Study in Urban Planning Fieldwork and Practice Either term. Credit as assigned. Staff.

Landscape Architecture Graduate Program

481 Contemporary Issues in Landscape Architecture Fall term. Credit one hour. J. Gentili, staff, and visitors. Recent technological, methodological, and legislative developments are assessed in terms of their likely impact on the practice of landscape architecture.

581 Landscape Planning and Design Workshop I Fall term. Credit six hours. J. Gentili. The planning and design of environmental modifications that optimize relationships with ecological systems.

582 Landscape Planning and Design Workshop II Spring term. Credit six hours. J. Gentili, L. Mirin.

581 Landscape Planning and Design Workshop III Fall term. Credit six hours. L. Mirin.

583 Urban Landscape Planning and Design Fall term. Credit four hours. L. Mirin. Planning and design of urban open spaces at various scales, including vest pocket parks, playgrounds, squares, recreational parks, and park systems. Design based upon appropriate research.

584 Landscape Recreation Planning and Design Spring term. Credit four hours. Staff. Planning and design of general and specialized recreation facilities for state and regional service areas. Design based upon appropriate research.

585 Historic Development of Modern Landscape Architecture Spring term. Credit three hours. L. Mirin.

A survey of man's arrangement of outdoor space to meet his varied needs, Italian Renaissance, Versailles and LeNotre, English naturalistic movement, Olmsted and Central Park, urban public space.

682 Social Factors in Landscape Design

Spring term. Credit four hours. J. Gentili.
An introduction to the use of social science findings, structured observational techniques, and social survey techniques for formulation of design criteria and/or evaluation of landscape architectural projects.

683 State and Regional Landscape Planning

Fall term. Credit three hours. J. Gentili.
Case studies of land-use policies and programs that various states and localities have designed to protect environmental quality. Examination and evaluation of larger scale land-use planning methodologies.

689 Informal Study in Landscape Planning and Design Either term. Credit as assigned. Staff.

889 Thesis Research and Preparation in Landscape Architecture Either term. Credit six hours. Staff.

Urban Planning and Development Research

490 Undergraduate Honors Research Either term. Credit as assigned. Staff.

890 Professional Planning Colloquium

Either term. Credit one hour.
Presentation of current professional and research problems in planning by visitors, faculty, and students.

898 Thesis in City and Regional Planning

Fall term. Credit variable to maximum of ten hours. Staff.

899 Thesis in City and Regional Planning
Spring term. Credit variable. Staff.

998 Dissertation in the History of Urban Development Either term. Credit variable to maximum of ten hours. Staff.

999 Dissertation in Urban Planning and Development Either term. Credit as assigned. Staff.



Cornell University

Register

University Administration

Dale R. Corson, President of the University
David C. Knapp, University Provost
Mark Barlow, Jr., Vice Provost
W. Donald Cooke, Vice President for Research
June M. Fessenden-Raden, Vice Provost
William D. Guowitz, Vice President for Campus Affairs
Robert T. Horn, Vice President and Chief Investment Officer
Samuel A. Lawrence, Vice President for Administration
E. Hugh Luckey, Vice President for Medical Affairs
Robert M. Matyas, Vice President for Planning and Facilities
Paul L. McKeegan, Vice Provost
Arthur H. Peterson, University Treasurer and Chief Fiscal Officer
Richard M. Ramin, Vice President for Public Affairs
Byron W. Saunders, Dean of the University Faculty
Neal R. Stamp, University Counsel and Secretary of the Corporation

College Administration

Kermit C. Parsons, B.Arch., M.R.P., Dean of the College
Charles W. Pearman, B.Arch., Associate Dean of the College
Robert D. McDougall, B.Arch., Ph.D., Assistant Dean
Henry W. Richardson, B.Arch., M.Arch., M.R.P., Assistant to the Dean for Minority Student Affairs
Allan A. Lentini, B.E.E., M.B.A., M.A., Ed.D., Director of Administrative Services
Howard E. Bullock, Clerk of the Works
M. Sophie Newhart, Registrar
Geraldine Patterson, College Bookkeeper
Margaret Webster, Slide Curator

College Council

Earl Flansburgh, Chairman	Robert P. Madison
Thomas Armstrong	Robert Mayers
Edmund N. Bacon	Richard A. Meier
Noland Blass	Nathaniel Owings
Goldie Feigert	Robert Piper
Robert J. Gatje	Elsie Popkin
M. Arthur Gensler, Jr.	Michael Rapuano
Jonathan King	Erik A. Svenson
Jerome W. Lindsey	Ervin H. Zube

Faculty

Architecture

Mario Schack, Dipl.Arch., M.Arch., Professor of Architecture, Chairman
Stuart M. Barnette, B.S. in Arch., Professor of Architecture, Emeritus
Hubert E. Baxter, B.Arch., Professor of Architecture, Emeritus
Stanley Bowman, B.A., B.Arch., M.F.A., Assistant Professor of Architecture
Ludlow D. Brown, M.Arch., Professor of Architecture, Emeritus
Thomas H. Canfield, B.S. in Arch., Professor of Architecture
Gilmore D. Clarke, B.S., L.H.D., Professor of Landscape Architecture, Emeritus
Peter M. Cohen, B.A., M.Arch., Adjunct Associate Professor
Ralph Crump, B.Arch., Associate Professor of Architecture
W. Wilson Cummer, B.A., M.A., Ph.D., Assistant Professor of Architecture
Michael D. Dennis, B.Arch., Adjunct Associate Professor of Architecture
Eric Dluhosch, B.Arch., M.Arch., Ph.D., Assistant Professor of Architecture
Joseph Gentili, A.B., M.L.A., Assistant Professor of Architecture
Donald P. Greenberg, B.C.E., Ph.D., Professor of Architecture

- Keith H. Grey, B.Arch., L.Arch., M.U.D., Assistant Professor of Architecture and Planning
 Martin Harms, B.Arch., A.R.I.B.A., Assistant Professor of Architecture
 John A. Hartell, B.Arch., Professor of Architecture, Emeritus
 George Hascup, B.Arch., Assistant Professor of Architecture
 Lee H. Hodgden, B.S.Arch.Eng., M.Arch., Adjunct Associate Professor
 Stephen W. Jacobs, A.B., M.Arch., M.F.A., Ph.D., Professor of Architecture
 Burnham Kelly, A.B., M.C.P., J.D., Professor of Planning
 Alexander Kira, B.Arch., M.R.P., Professor of Architecture
 Urszula Lesnikowski, B.Arch., M.A., M.U. in Arch., Assistant Professor of Architecture
 Wojciech G. Lesnikowski, M.A., M.U. in Arch., Associate Professor of Architecture
 Jacqueline Livingston, B.A., M.A., Assistant Professor
 Robert D. MacDougall, B.Arch., Ph.D., Assistant Professor of Architecture
 Archie Mackenzie, B.Arch., Assistant Professor of Architecture
 R. Eugene Messick, B.Prod.Design, Assistant Professor of Architecture
 Leonard Mirin, A.B., M.L.A., Assistant Professor of Landscape Architecture
 Christian Otto, B.A., M.A., Ph.D., Associate Professor of Architecture
 Charles W. Pearman, B.Arch., Professor of Architecture; Associate Dean of the College of Architecture, Art, and Planning
 Henry W. Richardson, B.Arch., M.Arch., M.R.P., Assistant Professor of Architecture
 Colin Rowe, B.Arch., M.A., Professor of Architecture
 Francis W. Saul, B.S., M.S., P.E., Associate Professor of Architecture
 Werner Seligmann, B.Arch., Associate Professor of Architecture
 John P. Shaw, B.Arch., M.Arch., Professor of Architecture
 David M. Simons, B.S.C.E., M.Arch., Associate Professor of Architecture
 Stuart Stein, B.Arch., M.C.P., Professor of Urban Planning and Design
 O. Mattias Ungers, Dipl.Ing. (Berlin), Professor of Architecture
 Frederick M. Wells, B.Arch., Andrew Dickson White Professor of Architecture, Emeritus
 J. Alan Wells, B.Arch., Adjunct Associate Professor of Architecture

Art

- Kenneth Evett, A.B., M.A., Professor of Art, Chairman
 Eric Berendt, B.F.A., M.F.A., Instructor of Art
 Zevi Blum, B.Arch., Assistant Professor of Art
 Stanley Bowman, B.A., B.Arch., M.F.A., Assistant Professor of Art

- Victor Colby, A.B., M.F.A., Professor of Art
 Norman D. Daly, B.F.A., M.A., Professor of Art
 John A. Hartell, B.Arch., Professor of Art, Emeritus
 Jacqueline Livingston, B.A., M.A., Assistant Professor of Art
 James O. Mahoney, A.B., B.F.A., F.A.A.R., Professor of Art, Emeritus
 Gillian Pederson-Krag, B.F.A., M.F.A., Associate Professor of Art
 Steve Poleskie, B.S., Associate Professor of Art
 Jason Seley, B.A., Professor of Art
 Arnold Singer, Associate Professor of Art
 Jack L. Squier, B.S., M.F.A., Professor of Art
 Richard Savini, B.F.A., M.F.A., Assistant Professor of Art
 Phyllis Thompson, B.F.A., M.F.A., Assistant Professor of Art
 Visiting Critics

City and Regional Planning

- Sidney Saltzman, B.S., M.S., Ph.D., Professor of Planning, Chairman
 Pierre Clavel, A.B., M.R.P., Ph.D., Associate Professor of City and Regional Planning and Rural Sociology
 Stanislaw Czamanski, Lic. es Sc. Comm., Ph.D., Professor of City and Regional Planning
 Joseph Gentili, A.B., M.L.A., Assistant Professor of Landscape Architecture
 William W. Goldsmith, B.S.C.E., Ph.D., Associate Professor of City and Regional Planning, Graduate Faculty Representative
 Keith H. Grey, B.Arch., M.U.D., Assistant Professor of Architecture
 Howard H. Hammerman, B.A., M.S.W., (Ph.D. pending), Instructor in Urban Planning and Development
 Cary Hershey, A.B., M.P.A., Ph.D., Assistant Professor of City and Regional Planning
 Michael Hugo-Brunt, B.Arch., M.C.D., M.Arch., Associate Professor of City and Regional Planning
 Walter Isard, B.A., M.A., Ph.D., Visiting Professor of Regional Science, Economics, and Planning
 Barclay Jones, B.A., B.Arch., M.R.P., Ph.D., Chairman; Professor of City and Regional Planning; Associate Director for Training
 Burnham Kelly, A.B., M.C.P., J.D., Professor of City and Regional Planning
 David B. Lewis, B.S., M.S., Ph.D., Assistant Professor of City and Regional Planning
 Thomas W. Mackesey, B.Arch., M.C.P., Professor of Regional Planning, Emeritus
 Leonard Mirin, A.B., M.L.A., Assistant Professor of Landscape Architecture
 Dorothy W. Nelkin, B.A., Associate Professor of Planning
 Kermit C. Parsons, B.Arch., M.R.P., Professor of City and Regional Planning; Dean of the College of Architecture, Art and Planning

John W. Reps, A.B., M.R.P., Professor of City and Regional Planning

Stuart W. Stein, B.Arch., M.C.P., Chairman; Professor of Urban Planning and Design

Ian R. Stewart, B.A., M.R.P., Ph.D., Assistant Professor of City and Regional Planning

Bert Swift, B.A., M.P.A., Ph.D., Assistant Professor of City and Regional Planning; Assistant Professor of Agriculture Extension

Thomas Vietorisz, S.M., Ph.D., Visiting Professor of City and Regional Planning

Darrell F. Williams, B.A., M.A., M.U.P., Ph.D., Assistant Professor of City and Regional Planning

Elected Members of the Faculty

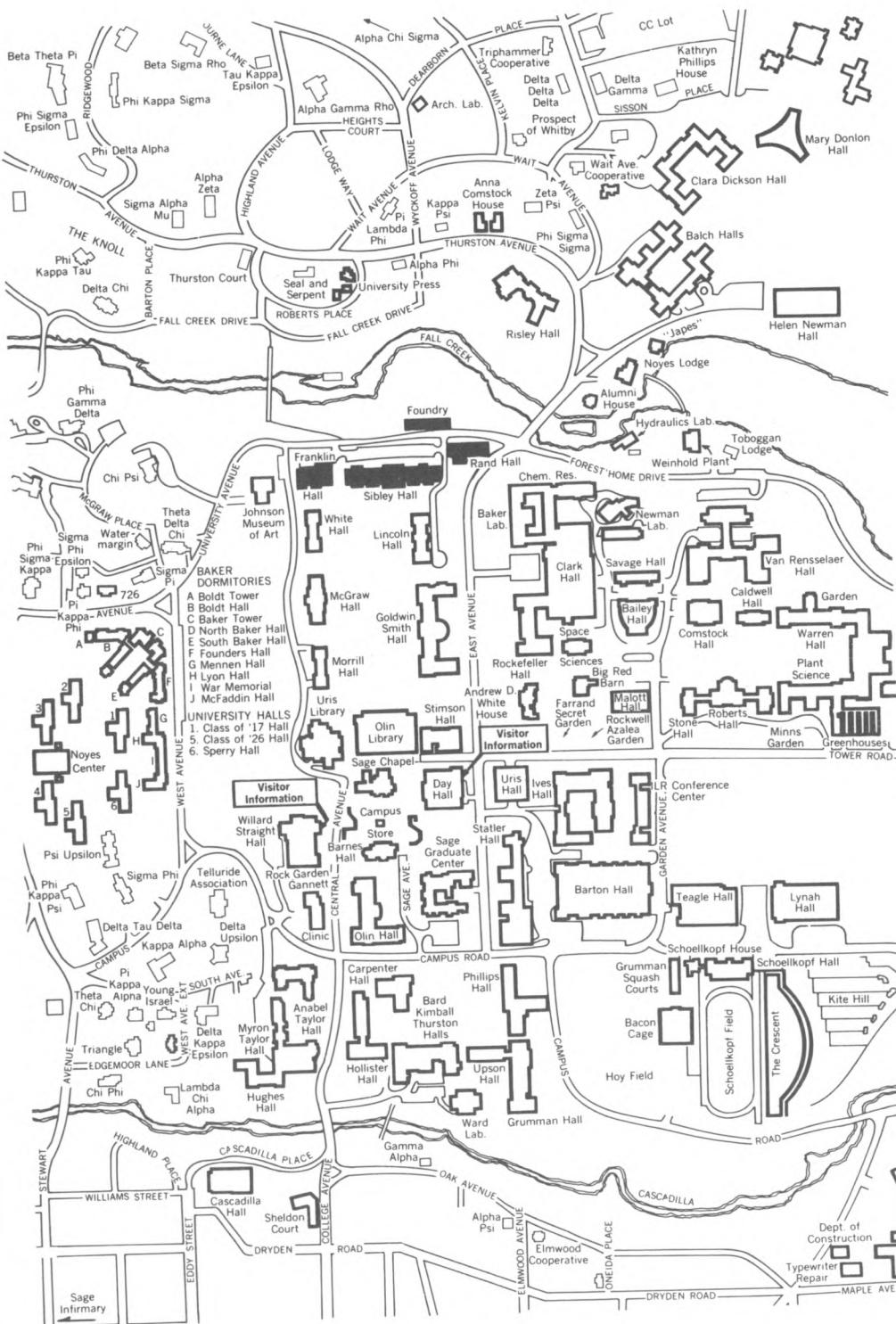
Marvin I. Adelman, B.S., M.S., Associate Professor in Landscape Architecture

Joseph A. Carreiro, B.S. in Ed., Professor, Chairman, Design and Environmental Analysis

Irving Lazar, B.A., M.A., Ph.D., Chairman and Professor, Community Service Education
Martie W. Young, A.B., M.A., Ph.D., Professor, History of Art

Estimated Enrollment, Fall 1975

Total Enrollment	670
Undergraduates	475
Architecture	375
Art	100
Men	300
Women	175
Graduates	195
Architecture	40
Art	12
Planning	130
Landscape Architecture	13
Men	120
Women	75



Cornell University

Index

- Administration, 57
Admissions: foreign students, 27; graduate, 25; special students, 27; transfer students, 25; undergraduate, 24. *See also* individual departments
Advisers, 33
Announcements, list of, 62
Architecture, 6; courses of instruction, 35; graduate programs, 12; nonprofessional program alternatives, 9; professional degree program, 7; summer term, 14; transfer students, 7; undergraduate curriculum, 7; undergraduate distribution requirements, 7
Art, 14; courses of instruction, 42; graduate program, 17; undergraduate program, 14; undergraduate curriculum and distribution requirements, 15
Buildings, 32
Calendar, 2
City and regional planning: admissions, 21; courses of instruction, 44; curriculum and requirements, 21; Doctor of Philosophy, 18; faculty, 58; faculty interests, 20; master's degrees, 18; objectives and facilities, 17; regional development planning, 20; social policy planning, 19; urban planning and development, 19
College Council, 57
Courses of instruction: architecture, 35; art, 42; city and regional planning, 44
Degree programs: Bachelor of Architecture, 7; Bachelor of Fine Arts, 8, 14; Doctor of Philosophy, 13, 18; Master of Architecture, 12; Master of Architectural History, 13; Master of Arts, 14; Master of Fine Arts, 17; Master of Landscape Architecture, 14; Master of Regional Planning, 12, 18; Master of Science, 13; joint programs, 23
Exhibitions, 32
Expenses, 30
Extracurricular activities, 33
Facilities, 32
Faculty, 57
Fellowships: graduate, 29; traveling, 29
Financial aid: graduate fellowships, 29; loans, 29; prizes, 28; traveling fellowships, 29; undergraduate scholarships, 27
Foreign students, 33; admission to the graduate school, 27
General admissions: foreign, 33; graduate, 25; undergraduate, 24
General information, 30
Graduate programs. *See* department in which study is to be undertaken
Health requirements, 31
Health services, 31
History of the College, 5
Housing, 32
Landscape architecture: admission, 25; courses of instruction, 54; description, 23; requirements, 23
Libraries, 32
Loans, 30
Medals and prizes, 29
Medical care, 30
Military training, 31
Museums and galleries, 32
Nonprofessional alternative programs: city and regional planning, 11; design communication, 10; history of architecture and urban development, 9
Physical education, 31
Planning: objectives and facilities, 17. *See also* City and regional planning
Policy planning and regional analysis. *See* City and regional planning
Regional development planning, 20
Residence halls. *See* Housing
Scholarships: undergraduate, 27
Special students, 27
Summer Session, 32
Summer term in architecture, 14
Swim test, 31
Transfer students, 25; in architecture, 9
Undergraduate program. *See* department in which study is to be undertaken
University privileges, 33
Urban planning and development, 19

List of Announcements

Following is a list of *Announcements* published by Cornell University to provide information on programs, faculty, facilities, curricula, and courses of the various academic units.

Agriculture and Life Sciences at Cornell
New York State College of Agriculture and

Life Sciences: Courses

College of Architecture, Art, and Planning

College of Arts and Sciences: Courses of Study

College of Arts and Sciences: Introduction

Department of Asian Studies

Graduate School of Business and Public
Administration

College of Engineering

Engineering at Cornell

Graduate Study in Engineering and Applied
Sciences

General Information*

Graduate School

Graduate School: Course Descriptions

School of Hotel Administration

New York State College of Human Ecology

New York State School of Industrial and Labor
Relations

Law School

Medical College (New York City)

Graduate School of Medical Sciences
(New York City)

Cornell University-New York Hospital

School of Nursing (New York City)

Officer Education (ROTC)

Summer Session

New York State College of Veterinary Medicine

* The *Announcement of General Information* is designed to give prospective students pertinent information about all aspects and academic units of the University.

Requests for the publications listed above
should be addressed to

Cornell University Announcements

Edmund Ezra Day Hall

Ithaca, New York 14853.