

COLLEGE OF ARCHITECTURE, ART, AND PLANNING

ADMINISTRATION

Porus Olpadwala, dean

John E. Zissovici, associate dean

Nasrine Seraji, chair, department of architecture

Buzz Spector, chair, department of art

Pierre Clavel, chair, department of city and regional planning

Cynthia K. Prescott, director, administration and finance

Elizabeth A. Cutter, director, admissions and student services

Walter C. Williams, director, alumni affairs and development

M. Susan Lewis, director, career services

Leon Lawrence, director, multicultural affairs

Margaret N. Webster, director, visual resources facility

Jayne A. Worden, registrar

FACULTY ADVISERS

Architecture students are assigned faculty advisers. Juniors and seniors have one assigned adviser and are also invited to share their concerns with and to seek advice from the most appropriate faculty member or college officer, including the registrar, the department chair, and the dean.

Students in the fine arts department are assigned a faculty adviser for the first year. After the first year, students may select their advisers. Students are required to have an adviser throughout their program in their area of concentration.

Undergraduate students in the Program of Urban and Regional Studies are assigned faculty advisers.

All students in the college are invited to share their concerns and seek advice from the volunteer student advisers at anytime.

DEGREE PROGRAMS

	<i>Degree</i>
Architecture	B.Arch. B.F.A.
Fine Arts	B.F.A.
History of Architecture and Urbanism	B.S.
Urban and Regional Studies	B.S.

The college offers programs leading to the bachelor's degree—the five-year program in architecture leads to the Bachelor of Architecture; four-year programs in art and architecture lead to the Bachelor of Fine Arts. In addition, four-year programs with a concentration in either urban and regional studies or

history of architecture lead to the Bachelor of Science.

Graduate-level programs are offered in art, architectural design and urban design, architectural sciences, history of architecture and urbanism, historic preservation planning, city and regional planning, regional science, and landscape architecture.

Students in each of these programs work in physical proximity to one another and thus gain a broader understanding of their own special area of interest through contact with students and faculty from other disciplines.

Early in its development, the college set a limit on the number of students it would enroll and devised a selective method of admission. There are now more than 650 students and a full-time teaching staff of over sixty, supplemented by visiting professors and critics, part-time lecturers, and assistants. Teachers and students mix freely, and much instruction and criticism is on an individual basis.

The college's courses are integral parts of the professional curricula. Fundamental subjects are taught by faculty members whose experience provides them with professional points of view. The concentration of professional 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 believes that this breadth is an essential element of professional education. This conviction is evident in the form of the curriculum, the methods of teaching, and the extracurricular life of teachers and students.

FACILITIES

The college occupies Sibley Hall, Olive Tjaden Hall, Rand Hall, and the Foundry. Facilities for architecture and city and regional planning, as well as college administrative offices, the Visual Resources Facility, and the Fine Arts Library, are located in Sibley Hall. The Department of Art is housed in Olive Tjaden Hall. Sculpture facilities are in the Foundry and shop facilities in Rand. The Green Dragon Cafe, a student eatery and lounge, is located in the lower level of Sibley Dome. There are darkrooms in the Department of Art that are available for general use by students in the college and are primarily used as laboratories for the photography courses. A darkroom fee must be paid by each user. Information about darkroom rules and regulations, hours, and equipment is available at the darkroom circulation desk.

Through the generosity of the late Lillian P. Heller, the college also owns the Miller-Heller House, 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 Hall serves the College of Architecture, Art, and Planning through its collections on architecture, fine arts, city and regional planning, and landscape architecture. The library, with more than 183,900 books, is capable of supporting undergraduate, graduate, and research programs. Some 1,400 serials are currently received and maintained.

The Visual Resources Facility, made possible through gifts from George and Adelaide Knight, is located in Sibley Hall and contains the F. M. Wells Memorial Slide Collection, which consists of a large and growing collection of slides of architecture, architectural history, and art. The collection now includes approximately 450,000 slides.

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

Museums and Galleries

The Herbert F. Johnson Museum of Art was formally opened in May 1973. Although many of its exhibitions and activities relate directly to academic programs of the university, the museum has no administrative affiliation with any department. In this way, its programs freely cross academic boundaries, stimulating interchange among disciplines. With a strong and varied collection and a continuous series of high-quality exhibitions, it fulfills its mission as a center for the visual arts at Cornell.

Throughout the year, works of students, faculty, and staff in the College of Architecture, Art, and Planning and of guest artists may be viewed in the John Hartell Gallery in Sibley Dome and in the Olive Tjaden Gallery in Olive Tjaden Hall. Art galleries are also maintained in Willard Straight Hall, where loan exhibitions of paintings and graphic work by contemporary artists are held.

Rome Program

The College of Architecture, Art, and Planning's Rome Program was founded in the fall of 1986 to provide instruction in Italy for students seeking excellence in art, architecture, and other disciplines. The program offers an educational experience that draws upon the rich past of Rome, its resources in museums, its art and architecture, and its wide variety of cultural offerings. The school is located in the restored 17th century Palazzo Lazzaroni in the center of the eternal city next to such well-known Roman sights as Piazza Navona, the Pantheon, and Rome's famous outdoor market at the Campo dei Fiori.

The program in Rome offers components for students majoring in architecture, fine arts, planning, and liberal arts. Full course loads are available to all students in a curriculum that stresses the convergence of artistic, cultural, and architectural ideas vital to an understanding of the city. Students are responsible for planning course schedules that

ensure their particular requirements can be met, since course offerings in Rome are limited. For additional information, see individual department listings or contact the Rome Program Office, 149 East Sibley Hall.

COLLEGE ACADEMIC POLICIES

Ownership of Student Work

All drawings, models, paintings, graphic art, and sculpture done in the studios and drafting rooms as a part of the instructional program are the property of the college until they have been graded and released by the instructor. Certain works may be selected by the college for retention for academic purposes.

Exhibitions of Student Work

Exhibitions of student work are held each semester as part of the yearly schedule of the Olive Tjaden Gallery and the John Hartell Gallery in Sibley Dome. These galleries display work from a specific course or exhibit examples of recent work by individual faculty, students, and visitors.

Scholastic Standards

Term by term, a candidate for an undergraduate degree in the college is required to pass all courses in which the student is registered and have an average for the term of not less than C (2.0). The record of each student who falls below the standard will be reviewed by the college Academic Records Committee for appropriate action, as described below:

- 1) Warning means that the student's performance is not up to expectations. Unless improvement is shown in the subsequent term, the student may be placed on final warning or required to take a leave of absence from the college.
- 2) Final Warning indicates that the student's record is unsatisfactory. Unless considerable improvement is shown in the subsequent term, the student shall be required to take a leave of absence from the college.
- 3) Required leave of absence: academic deficiency. The student is dismissed from the college and may not continue studies in the college. A student who has been placed on a required leave of absence may apply for readmission after a leave of absence of at least two semesters. Application for readmission is made by letter addressed to the college Academic Records Committee. The student must submit evidence that the time has been well used and, if employed, must submit a letter from the employer(s). Students on required leave are not allowed to register extramurally at Cornell as the intention of the required leave is to insist upon a break from study at Cornell. If a student chooses to enroll in courses at another institution while on required leave, credit is not granted automatically. Upon receiving permission to return, a student must petition the department to request credit for courses taken. Readmission to the college after a required leave of absence is at the discretion of the college Academic Records Committee. Application for spring-term readmission must be made by November 15, and application for fall-

term readmission must be made by April 15. The second required leave of absence is a de facto dismissal and the student will be permanently **withdrawn** from the college. Refer to the Architecture, Art, & Planning Handbook (whitebook) for further information regarding required leaves of absence.

- 4) Required withdrawal: may not reregister in the College of Architecture, Art, and Planning. The student is dismissed from the college and is permanently prohibited from continuing studies in it. This dismissal does not preclude the possibility of applying for admission to another division of the university.

The above actions are not necessarily sequential. A student who has received a warning may be placed on a required leave of absence for academic deficiency at the end of the next term if performance during that time is deemed to be grossly deficient.

A cumulative average of at least C- (1.7) is required for graduation.

ARCHITECTURE

Chair, Nasrine Seraji; L. Briggs, L. Chi, M. Cruvellier, M. Curry, F. Davis, W. Goehner, D. P. Greenberg, G. Hascup, K. Hubbell, D. M. Lasansky, B. G. MacDougall, A. B. Mackenzie, J. C. Miller, L. Mirin, V. Mulcahy, J. Ochshorn, C. F. Otto, A. Ovaska, C. W. Pearman, H. W. Richardson, M. Schack, A. Simitch, V. K. Warke, J. Wells, M. Woods, J. Zissovici

Professional Degree Program

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

The program is oriented toward 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, are the core of the program. Sequences of studies in the history of architecture and cities, culture and society, architectural theory, visual studies, environmental controls, structures, construction and computer graphics, and applications provide a base for the work in design.

In the first three 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 expand through further detailed studies in these areas. Within the professional program a basis for understanding architecture in its contemporary and historical cultural contexts is established.

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 carefully planning options and electives in the fifth year, it is possible for a qualified student to apply the last year's work for the Bachelor of Architecture degree to one of the graduate programs offered in the department. Some students are then able to complete the requirements for the master's degree in one additional year.

Note on Professional Accreditation

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit U.S. professional degree programs in architecture, recognizes two types of degrees: the Bachelor of Architecture and the Master of Architecture. A program may be granted a five-year, three-year, or two-year term of accreditation, depending on its degree of conformance with established educational standards.

Master's degree programs may consist of a preprofessional undergraduate degree and a professional graduate degree, which, when earned sequentially, comprise an accredited professional education. The preprofessional degree, however, is not, by itself, recognized as an accredited degree.

Rome Program

The program offers the opportunity for students from Cornell and other universities to spend one or two terms of study in Rome. This option is open to fourth- and fifth-year Cornell architecture students; outstanding third-year students are admitted by petition and a review of their design record. Courses offered by this department include design, thesis, thesis introduction, history, theory, architectural science, and visual studies. In addition, courses are offered by other departments in Italian language, Italian culture, and history of art. The program provides a unique urban and architectural experience drawing from the rich past of the city for sources of instruction and inspiration.

Overlap Program

For qualified students the department offers an option that combines the fifth year of the undergraduate program with the first year of the Master of Architecture program. In the fall of the fourth undergraduate year, interested students petition the department to substitute ARCH 601-602 or 603-604 for ARCH 501-502. At the same time, they complete graduate school applications and submit them with fee and portfolio to the graduate field assistant for architecture. Students accepted into the program may not normally begin until the fall of their fifth year and, once enrolled, may not transfer back into the 501-502 sequence.

Following admission into the Overlap Program, students may petition to apply toward the requirements of the master's degree a maximum of 30 credits, including ARCH 601-602 or 603-604 and other advanced courses taken in excess of distribution requirements for the Bachelor of Architecture degree.

Curriculum

First Year

<i>Fall Term</i>	<i>Credits</i>
101 Design I	6
181 History of Architecture I	3
151 Drawing I	2
Math 111 Calculus or Math 106 or out-of-college elective	3-4
Out-of-college elective	3
	<hr/> 17-18

Spring Term

102 Design II	6
182 History of Architecture II	3
152 Drawing II	2
Math 111 or out-of-college elective	3-4
Out-of-college elective (freshman writing seminar suggested)	3
	<hr/> 17-18

Second Year

<i>Fall Term</i>	<i>Credits</i>
201 Design III	6
263 Structural Concepts	4
231 Architectural Analysis I	2
261 Site Planning	3
Out-of-college elective	3
	<hr/> 18

Spring Term

202 Design IV	6
232 Architectural Analysis II	2
262 Building Technology, Materials, and Methods	3
264 Structural Elements	3
College elective	3
	<hr/> 17

Third Year

<i>Fall Term</i>	
301 Design V	6
361 Environmental Controls I— Lighting and Acoustics	3
363 Structural Systems	3
Departmental elective	3
Out-of-college elective	3
	<hr/> 18

Spring Term

302 Design VI	6
342 Architecture as a Cultural System	3
362 Environmental Controls II— Mechanical and Passive Solar Systems	3
Departmental elective	3
College or out-of-college elective	3
	<hr/> 18

Fourth Year

<i>Fall Term</i>	
401 Design VII	6
411 Professional Practice	3
Departmental elective	3

College elective	3
Out-of-college elective	3
	<hr/> 18

Spring Term

402 Design VIII	6
Departmental elective	3
Departmental elective	3
College or out-of-college elective	3
Out-of-college elective	3
	<hr/> 18

Fifth Year

<i>Fall Term</i>	<i>Credits</i>
501 Design IX or 601 or 603 Overlap Program	6
Departmental elective	3
College or out-of-college elective	3
Out-of-college elective	3
Out-of-college elective	3
	<hr/> 18

Spring Term

502 Design X or 602 or 604 Overlap Program	8
Departmental elective	3
College or out-of-college elective	3
College or out-of-college elective	3
	<hr/> 17

Required Departmental Courses

<i>Terms</i>	<i>Course Subject</i>	<i>Numbers</i>	<i>Credits</i>
10	design	101-502	62
1	mathematics	Math 111, Math 106, or approved equivalent	3-4
3	structures	263, 264, 363	10
4	technology	261, 262, 361, 362	12
2	architectural theory	231, 232	4
2	history of architecture	181, 182	6
1	architecture, culture, and society	342	3
1	professional practice	411	3
2	drawing	151, 152	4
			<hr/> 107-108

Electives

<i>Departmental Terms</i>		<i>Credits</i>
3	history of architecture: 300-level	9
1	visual studies	3
2	architectural theory or 600- level design-related course	6
1	architectural structures, construction, or environ- mental controls	3
		<hr/> 21

<i>College Terms</i>		<i>Credits</i>
2	art: any studio courses	6
<i>Out-of-College Terms</i>		<i>Credits</i>
1	computer programming or applications	3
1	freshman seminar	3
1	mathematics, or physical or biological sciences	3
1	humanities	3
		<hr/> 12

Free

Of the electives, 15 credits are to be taken outside the College of Architecture, Art, and Planning, and 15 credits may be taken either in or outside the college.

Total credits

30

Total credits 176

Architecture Concentrations for Majors

The Department of Architecture recognizes any concentration earned within the university but outside of the department (using standards set by those departments) on the transcripts of its students.

It is often advantageous for undergraduates to concentrate in specific sub-disciplines of architecture, especially if they anticipate application to specialized graduate programs, therefore, the following concentrations in architecture are offered within the department for B.Arch. and B.F.A. in Architecture candidates only:

- Architecture, Culture, and Society 342 (or equivalent), plus 9 credits in this area.
 - Architectural Science and Technology 261, 262, 263, 264, 361, 362, 363, distribution requirement (3 credits), plus 6 credits in this area.
 - History of Architecture 181, 182, distribution requirements (9 credits), plus 7 credits (including a 4 credit hour seminar course) in this area.
 - Theory of Architecture 231, 232, distribution requirements (6 credits), plus 6 credits in this area.
 - Visual Studies in Architecture 151, 152, distribution requirement (3 credits), plus 9 credits in this area.
- Students wishing to receive recognition for a concentration, must submit a Concentration Request form to the Architecture Department Office. In order for a course to count toward a concentration, the student must receive a grade of C or better.

Transfer Students

Although the program leading to the Bachelor of Architecture is specifically directed to those who are strongly motivated to begin professional study when entering college, it is sufficiently flexible to allow transfers for students who have not made this decision until after they have been in another program for one or two years. Individuals who have already completed a nonprofessional undergraduate degree must also apply to transfer to the Bachelor of Architecture degree program, since the graduate program in architecture requires the Bachelor of Architecture degree or its equivalent for entrance.

Transfer students are responsible for completing that portion of the curriculum that has not been covered by equivalent work. Applicants who have had no previous work in architectural design must complete the 10-term design sequence. Since this sequence may be accelerated by attending summer terms, seven or eight regular terms and two or three summer terms are typically required.

Admission is offered to a limited number of transfer applicants who have completed a portion of their architecture studies in other schools. Each applicant's case is considered individually. Transfer students must complete a minimum of 70 credits and four terms in residence, taking 35 of the 70 credits (including four terms of design) in the Department of Architecture. Placement in the design sequence is based on a review of a representative portfolio of previous work.

For those who would benefit from an opportunity to explore the field of architecture before deciding on a commitment to professional education, the department offers an introductory summer program that includes an introductory studio in architectural design, lectures, and other experiences designed to acquaint participants with opportunities, issues, and methods in the field of architecture.

Alternative Programs

Bachelor of Fine Arts

After completing the first four years of requirements, the student may choose to receive the degree of Bachelor of Fine Arts (B.F.A.) in architecture, which is not a professional degree.

Bachelor of Science in History of Architecture

The history of architecture major leads to a Bachelor of Science degree, conferred by the College of Architecture, Art, and Planning. The major is intended for transfer students from other programs at Cornell and from colleges and universities outside Cornell. Students in the Department of Architecture and the College of Arts and Sciences may take the major as part of a dual-degree program. The course of study in this major, available to students from a variety of academic backgrounds, offers the opportunity for a vigorous exploration of architecture and its history.

Admission requirements. Two years of undergraduate study, ARCH 181 and 182 or the equivalent. Students transferring from a B.Arch. program must be in good standing in their design sequence.

Procedure. Students from Cornell may transfer to the program at the beginning of the fall term of their third or fourth year of study. They submit a short application as prospective internal transfer students. Before applying, all prospective internal transfer students meet with a history of architecture faculty member to discuss scheduling for the program.

All students who wish to enter the program, either from Cornell or other institutions, must apply by November 15 for spring admission, or by March 31 for fall admission. Applications for both internal and external transfer students are available from the Admissions Office, College of Architecture, Art, and Planning, Cornell University, B-1 West Sibley Hall, Ithaca, NY 14853-6702. Completed applications must be submitted to the Admissions Office.

Curriculum. A student entering the program is assigned an adviser from the history of architecture faculty in the Department of Architecture. Adviser and student together prepare an appropriate two-year course of study according to the following guidelines:

- 1) 24 credits of 300-level courses in architectural history: ARCH 380 through ARCH 399
- 2) 12 credits in 600-level architectural history seminars: ARCH 681 through ARCH 699; or 8 credits in a 600-level seminar plus ARCH 499, offered for honors candidates only
- 3) One 300-, 400-, or 600-level course in architectural theory
- 4) 24 credits in electives selected in consultation with the student's adviser
- 5) Language requirement, to be met in the manner specified for students enrolled in the College of Arts and Sciences

Honors program. Students graduate with honors if, during their two years of study in the program, they have a cumulative average of B or better in all courses, have no grade lower than A- in all history of architecture courses taken at the 300 level, and have completed an honors thesis (ARCH 499) deemed to be of distinguished quality by the history of architecture faculty.

Dual Degree Options

Students can earn both the B.S. and B.Arch. degrees either simultaneously or sequentially. Students who have transferred into the B.Arch. program at Cornell may find this to be a special opportunity for an enlarged and enriched program of study.

Students currently enrolled in the College of Arts and Sciences at Cornell can earn a B.A. in an arts college major and a B.S. in the history of architecture in five years. In this option, students complete a minimum of 150 credits, which includes the B.S. prerequisites and curriculum requirements and 100 credits of the usual distribution and major requirements in the College of Arts and Sciences. Further information about this option is available at the Admissions Office, B-1 West Sibley Hall, and at the Academic Advising Center of the College of Arts and Sciences, 55 Goldwin Smith Hall.

Students may also elect to continue toward a Master of Arts degree in the history of architecture. The M.A. ordinarily requires a minimum of two years of graduate work beyond the bachelor's degree; with this special sequential degree arrangement that time is shortened to one year.

Summer Term in Architecture

The summer term offers students the opportunity of a concentrated period of design work; the term is six to eight weeks in duration.

Undergraduate design sequence courses, excluding 101 and 502, are offered in Ithaca. Normally there is also a design program abroad for third-, fourth-, and fifth-year students.

Students from schools of architecture other than Cornell are welcome to apply to enroll in any summer program.

Other department courses may be offered as elective courses, contingent upon student interest, faculty availability, and departmental approval.

The department offers a Career Explorations in Architecture Program for high school students and college students considering a professional education in architecture.

Concentration in Architecture For Non-Majors

A special concentration has been formulated specifically for those students not enrolled in the Department of Architecture but who are interested in complementing their current academic program with an introduction to various facets of architectural studies. Some students may wish to use the Concentration in Architecture for Non-Majors as a means of investigating possible graduate studies in architecture. Some may wish to develop architectural specialties within other disciplines. Students are admitted to this program through application to the Department of Architecture.

The curriculum for students accepted to the Concentration in Architecture Program totals 15 credit hours. Grades received must be C or better in all courses.

9 credits of required courses, including one semester each of:

ARCH 130, 131, or 132:
Introduction to Architecture 3 credits

ARCH 151: Drawing I 2 credits

ARCH 111: Concentration in
Architecture: Design Studio 4 credits

(ARCH 110: Introduction to Architecture:
Design Studio, offered in the summer only,
may substitute for ARCH 111.)

And 6 credits of elective department courses,
chosen, for example, from among the
following:

ARCH 130, 131, 132: Introduction
to Architecture 3 credits

ARCH 152: Drawing II 2 credits

ARCH 181, 182: History of
Architecture I, II 3 credits
each

ARCH 342: Architecture as
a Cultural System 3 credits

ARCH 231, 232: Architectural
Analysis I, II 2 credits
each

ARCH 263, 264, 363: Structures 3 credits
each

ARCH 261, 361, 362:
Environmental Controls 3 credits
each

ARCH 262: Building Technology 3 credits

ARCH 476: Computer Applications 3 credits

Architectural Design

Courses in brackets are not offered this year.

Each student in the architecture program (undergraduate, graduate, and in the Rome Program) is charged a fee each semester to help defray the continuing costs of refurbishing and replacing equipment.

Sequence Courses**ARCH 101 Design I**

Fall and spring, 6 credits. Limited to department students. Staff.

An introduction to design as a conceptual discipline directed at the analysis, interpretation, synthesis, and transformation of the physical environment. Exercises are aimed at developing an understanding of the issues, elements, and processes of environmental design.

ARCH 102 Design II

Spring, 6 credits. Limited to department students. Prerequisite: ARCH 101 and ARCH 151. A continuation of ARCH 101. Staff.

Human, social, technical, and aesthetic factors related to space and form. Design problems range from those of the immediate environment of the individual to that of small social groups.

ARCH 201-202 Design III and IV

Fall and spring, 6 credits each term. Coregistration in ARCH 231-232 and completion of ARCH 151-152 required. Limited to department students. Prerequisite for ARCH 201 is ARCH 102 and ARCH 152. Prerequisite for ARCH 202 is ARCH 201. Staff.

ARCH 301-302 Design V and VI

Fall and spring, 6 credits each term. Limited to department students. Prerequisite for ARCH 301 is ARCH 202. Prerequisite for ARCH 302 is ARCH 301. Staff.

ARCH 401-402 Design VII and VIII

Fall and spring, 6 credits each term. Limited to department students. Prerequisite for ARCH 401 is ARCH 302. Prerequisite for ARCH 402 is ARCH 401 or ARCH 309. Staff.

Programs in architectural design, urban design, or architectural technology and environmental science, and other topics.

ARCH 501 Design IX

Fall or spring, 6 credits. Limited to department students. Prerequisite: ARCH 402. Staff.

Programs in architectural design, building typology investigations, and research leading to complete development of the student's thesis program. General instruction in the definition, programming, and development of a thesis.

ARCH 502 Design X—Thesis

Fall or spring, 8 credits. Prerequisite: ARCH 501 or ARCH 500 and ARCH 510. Required of B.Arch. candidates who must satisfactorily complete a thesis. Students accepted for admission to the Overlap Program are exempt from the thesis requirement. Staff.

ARCH 601-602 Special Program in Architectural Design

Fall and spring, 9 credits each term. Limited to students who have been accepted into the Overlap Program. Registration by petition only. Staff.

ARCH 603-604 Special Program in Urban Design

Fall and spring, 9 credits each term. Limited to students who have been accepted into the Overlap Program. Registration by petition only. Staff.

Graduate Courses**ARCH 701-702 Problems in Architectural Design**

Fall and spring, 9 credits each term. Staff. Basic first-year design course for graduate students whose major concentration is architectural design.

ARCH 703-704 Problems in Urban Design

Fall and spring, 9 credits each term. Staff. Basic first-year design course for graduate students whose major concentration is urban design.

ARCH 801 Thesis or Research in Architectural Design

Fall or spring, 9 credits. Prerequisite: ARCH 701 and ARCH 702. Staff. Second-year design course for graduate students whose major concentration is architectural design.

ARCH 802 Thesis or Research in Urban Design

Fall or spring, 9 credits. Prerequisite: ARCH 703 and ARCH 704. Staff. Second-year design course for graduate students whose major concentration is urban design.

Elective Design Courses**ARCH 103-104 Elective Design Studio**

103, fall; 104, spring, 6 credits each term. Limited to students from outside the department. Prerequisite for ARCH 103: permission of instructor required. Prerequisite for ARCH 104: ARCH 103 and permission of instructor. Staff.

ARCH 200, 300, 400 Elective Design Studio

Fall or spring, 6 credits. This course is for students who are not architecture majors at Cornell. Prerequisite: permission of department office. Each student is assigned to a class of appropriate level. Staff.

ARCH 309 Elective Design Studio

Fall, spring, or summer, 6 credits. Foreign summer and Rome Programs only. Prerequisite: C or better in ARCH 202. Staff.

ARCH 309 is a design studio that, upon completion, will be credited as an elective design studio. With the successful completion of ARCH 302, ARCH 309 may be used as a substitute for ARCH 401.

ARCH 500 Design IX Alternate Studio

Fall, spring, or summer, 6 credits. Foreign summer and Rome Programs only. Prerequisite: C or better in ARCH 402. Co-requisite: ARCH 510. ARCH 500 will be considered equivalent to ARCH 501 when taken concurrently with ARCH 510. In order to take ARCH 502, one must have a grade of C or better in ARCH 500 and a passing grade in ARCH 510. Staff.

For description, see ARCH 401-402.

ARCH 503 Design IXa

Fall and spring, 6 credits. Limited to department students. Prerequisites: ARCH 402 and a passing, but non-advancing, grade in ARCH 501.

A structured studio for those needing to retake ARCH 501. The course operates within the fourth-year design studios. Only if ARCH 502 is taken in conjunction with ARCH 303 can it be followed by ARCH 502.

ARCH 504 Design Xa

Fall or spring, 6 credits. Limited to department students. Prerequisite: ARCH 503 or a passing, but non-advancing, grade in ARCH 502.

A structured studio for those needing to take an alternative to design thesis. This course operates within the fourth-year design studios.

Related Courses and Seminars**ARCH 110 Introduction to Architecture: Design Studio**

Summer, 3 credits. S-U option. Open to nonarchitectural majors in college, high school students in 11th and 12th grades, and any individuals with a minimum of a high school diploma interested in exploring the field of architecture. Not offered every year. Staff.

A course designed to introduce students to ideas, principles, and methods of solving architectural problems in a studio setting. Through a graduated sequence of exercises culminating in a major term project, students explore the architectural concepts of space, form, function, and technology. Instruction is via highly personalized critiques of individual student work by assigned department faculty, as well as periodic reviews of the group by invited faculty and guest critics. The course grade is based on the overall performance in the studio with special emphasis on the quality of a major studio project.

ARCH 111 Concentration in Architecture: Design Studio

Spring, 4 credits. Not open to architecture majors. Prerequisite: acceptance into the Concentration in Architecture Program. Staff.

A course designed to introduce students to ideas, principles, and methods of solving architectural problems in a studio setting. Through a graduated sequence of exercises culminating in a major term project, students explore the interrelationship of the architectural concepts of space, form, function, and technology. Instruction includes critiques of individual student work by department faculty, as well as, by periodic reviews by guest critics.

ARCH 303 Special Problems in Architectural Design

Fall or spring, Variable credit (maximum 3). Prerequisite: permission of instructor and approved independent study form. Staff.

Independent study. This course does not count for design sequence credit.

ARCH 306 Praxis: Community Design Workshop (also ARCH 606)

Fall or spring, 3 credits. Prerequisites: permission of instructor. Not offered every year. F. Davis.

Praxis is a workshop-based, hands-on course directed to underserved local and global communities who seek to improve the quality of life for all citizens. It is an interdisciplinary, service-learning course that challenges the usual definition and separation of practice and theoretical research. Services are provided collaboratively to not-for-profit agencies, civic and governmental groups, as well as community-action groups to support sustainable design solutions. The course teaches professional work proficiency, and emphasizes teamwork, as well as written, verbal, and graphic communication skills to negotiate the public realm.

ARCH 313.01 Furniture Design (Visual Studies)

Fall or spring. 3 credits. Limited enrollment. Students who wish to earn arch visual studies credit must enroll in this section. Prerequisite: permission of instructor. Not offered every year. G. Hascup.

This course explores the history, design and materiality of furniture. Analysis of materials and joinery-connective systems are developed in parallel with ergonomic restraints. Design transformation occurs through cycles of conceptual alternatives (models and drawings), increasing in scale as the idea evolves. Full-scale prototypes and detailed tectonic drawings are required on three pieces.

ARCH 313.02 Furniture Design (Technology)

Fall or spring. 3 credits. Limited enrollment. Students who wish to earn arch technology credit must enroll in this section. Prerequisite: permission of instructor. Not offered every year. G. Hascup.

For description, see ARCH 313.01.

ARCH 313.03 Furniture Design (Free Elective)

Fall or spring. 3 credits. Limited enrollment. Students who wish to earn in-college elective credit must enroll in this section. Prerequisite: permission of instructor. Not offered every year. G. Hascup.

For description, see ARCH 313.01.

ARCH 317 Contemporary Italian Culture

Fall or spring. Variable credit (maximum 3). For students in the Rome Program only. Staff.

This course provides a broad view of the culture and social structure of Italy, drawing from Italian literature, history, and current events.

ARCH 411 Professional Practice

Fall or spring. 3 credits. M. Schack. An examination of organizational and management theories and practices for delivering professional design services. Included is a historic overview of the profession and a review of the architect's responsibilities from the precontract phase through construction. Application of computer technology in preparing specifications.

ARCH 412 Professional Seminar

Fall or spring. 3 credits. Prerequisite: ARCH 411. M. Schack. Visits to public and private agencies and architectural firms. Discussions relative to the various aspects of each firm's practice and the identification of agency roles.

ARCH 510 Thesis Introduction

Foreign summer programs and Rome program only. 3 credits. Must be taken in conjunction with ARCH 500. Prerequisite for ARCH 500 is ARCH 402. ARCH 500 will be considered equivalent to ARCH 501 when taken concurrently with ARCH 510 during a foreign summer program or in Rome. Staff.

Lectures, seminars, and independent research leading to complete development of the student's thesis program. General instruction in the definition, programming, and development of a thesis.

ARCH 605 Special Problems in Design

Fall and spring. Variable credit (maximum 3). Prerequisite: permission of instructor. Staff.

Independent study. This course does not count for design sequence credit.

ARCH 606 Praxis: Community Design Workshop (also ARCH 306)

Fall or spring. 3 credits. Prerequisites: permission of instructor. Not offered every year. F. Davis.

For description, see ARCH 306.

[ARCH 610 Graduate Design Seminar

Fall. 3 credits. Intended for, but not limited to, graduate students in the Architectural Design and Urban Design Program. Not offered 2002-2003. Staff.

Issues in architectural and urban design.]

[ARCH 611-612 Urban Housing Developments

611, fall; 612, spring. 3 credits each term. Limited to fourth- and fifth-year students in architecture and graduate students. Prerequisite: permission of instructor. Not offered every year. Staff.]

[ARCH 613 Transportation

Fall. 3 credits. Prerequisite: permission of instructor. Not offered 2002-2003. Staff. The affect of various transportation forms on the environment is considered from the perspectives of architects, engineers, planners, and human ecologists. Readings and discussions of past, current, and future transportation modes focus on aesthetic and physical aspects.]

ARCH 614 Low-Cost Housing

Spring. 3 credits. Prerequisite: permission of instructor. Not offered every year. Staff. Aspects of low-cost housing involving engineering technology, architecture, physical planning, economics, and sociology.

[ARCH 618-619 Seminar in Urban and Regional Design

618, fall; 619, spring. 3 credits each term. Limited to fifth-year and graduate students. Not offered 2002-2003. Staff.

A broad range of issues and problems of urban and regional development and the context in which the designer functions are surveyed. Selected case studies are presented by participants and visitors.]

Architectural Theory**ARCH 130 An Introduction to Architecture: Lectures**

Summer. 3 credits. S-U option. Open to nonarchitecture majors in college, high school students in 11th and 12th grades, and any individuals with a minimum of a high school diploma interested in exploring the field of architecture. Not offered every year. Staff.

A survey course that covers the many facets of architecture: history, design principles, preservations, landscape architecture, building technology, and cultural factors. The format of the course comprises lectures, demonstrations, films, and field trips. Course evaluation is based on quizzes and a final examination.

ARCH 131 An Introduction to Architecture

Fall. 3 credits. Open to out-of-department students only. ARCH 131 is not a prerequisite for ARCH 132. Staff.

Intended to familiarize nonarchitecture students with the art and science of architecture. The fundamentals of plan, section, and elevation, the primary elements that comprise an architectural form; basic organizational principles; the ways in which we perceive architectural space; and the various concepts of function in relation to form will be included among the topics to be covered, using examples from numerous times and cultures as well as from the contemporary Cornell campus.

ARCH 132 An Introduction to Architecture

Spring. 3 credits. Open to out-of-department students only. ARCH 131 is not a prerequisite for ARCH 132. Staff.

Nonarchitecture students are initiated into various types of architectural drawings and are exposed to a variety of methods whereby architectural forms communicate both simple and complex meanings. Architecture in its relation to fields such as landscape architecture, urban design, structural design, interior design, set design, architectural history, preservation, and computer graphics will be included in the presentations, which also deal with the various relationships established between an architect and a society. Cross-historical and cross-cultural examples will be used in developing in the student a degree of fluency in the languages of architectural discourse.

ARCH 231 Architectural Analysis I

Fall. 2 credits. Architecture students must register concurrently in ARCH 201. Staff. An introduction to analysis of the object of study in the interest of broadening one's understandings of the ways in which architecture can connote and denote meanings.

ARCH 232 Architectural Analysis II

Spring. 2 credits. Architecture students must register for this course concurrently with ARCH 202. Staff. Advanced analytical studies focusing on complex architectural spaces, objects, images, and representations.

ARCH 334 Column, Wall, Elevation, Facade: A Study of the Vertical Surface in Architecture (also ARCH 634)

Fall or spring. 3 credits. Limited to third-year level students and above. J. Wells. Field and figure relationships (interrelation of parts dominated by the general character of the whole) are the general themes for studying numerous issues relevant to the design of elevations and facades.

The first part of the seminar is a lecture/seminar format. Students are required to research and present a paper for discussion. In the latter part of the semester, students do exercises to demonstrate their understanding of the issues addressed.

[ARCH 335 Theory of Architecture

Fall or spring. 3 credits. Prerequisite: ARCH 231-232 or permission of instructor. Not offered 2002-2003. Staff.]

[ARCH 336 Theory of Architecture

Fall or spring. 3 credits. Limited to third-year students and above. Not offered 2002-2003. Staff. Theories of modern architecture: De Stijl, cubist and purist painting, industrialized architecture, Le Corbusier's architecture and urban theories, architectural sequence, facades, the free plan, and "DOMINO" theory.]

ARCH 337 Special Investigations in the Theory of Architecture I

Fall or spring. Variable credit (maximum 3). Prerequisite: permission of instructor and approved independent study form. Staff.

Independent study.

ARCH 338 Special Topics in the Theory of Architecture I

Fall or spring. 3 credits. Prerequisite: permission of instructor. Not offered every year. Staff.

Topic are announced before preregistration.

ARCH 339 Elements, Principles, and Theories in Japanese Architecture

Spring. 3 credits. Not offered every year. L. Mirin and C. Pearman.

An examination of Japanese architecture (buildings and gardens) and their contexts: landscapes, settlements, and cities. The course is addressed to those interested in Japanese architecture as a manifestation of Japanese culture and as a subject for analysis. Emphasis is on underlying concepts, ordering principles, formal typologies, space and its representation, perceptual phenomena, and symbolic content. Readings focus on theoretical treatments of these aspects by Japanese and western writers.

[ARCH 431 Theory of Architecture

Fall. 3 credits. Prerequisite: third-year status. Not offered 2002–2003. Staff.

Gardening and architecture; urban parks; villas and country houses; and Italian, French, and English landscape gardens. Site planning.]

[ARCH 432 Theory of Architecture

Spring. 3 credits. Prerequisite: third-year status. Not offered 2002–2003. Staff.

The development of urban form, urban intervention, contextualism, ideal cities, historic new towns, streets, piazzas, fortifications, public buildings and social housing types, site planning, and transportation.]

[ARCH 435 Architecture and Representation

Fall. 3 credits. Limited to degree candidates in architecture. Prerequisite: successful completion of ARCH 231–232. Not offered 2002–2003. Staff.

A study of architecture as it functions as a representational art, referring to its past while inferring its present.]

ARCH 634 Column, Wall, Elevation, Facade: A Study of the Vertical Surface in Architecture (also ARCH 334)

Fall or spring. 3 credits. Limited to third-year level students and above. J. Wells.

For description, see ARCH 334.

[ARCH 635 Critical Theory in Architecture

Spring. 3 credits. Prerequisite: permission of instructor. Not offered 2002–2003. Staff.

An inquiry into the fundamental principles of architectural criticism in theory and practice, with emphasis on the structures of criticism in the twentieth century.]

ARCH 637 Special Investigations in the Theory of Architecture II

Fall or spring. Variable credit (maximum 4). Prerequisite: permission of instructor and approved independent study form. Staff.

Independent study.

ARCH 638 Special Topics in the Theory of Architecture II

Fall or spring. 3 credits. Prerequisite: permission of instructor. Not offered every year. Staff.

Topic is announced before preregistration.

Architecture, Culture, and Society**ARCH 342 Architecture as a Cultural System**

Spring. 3 credits. ARCH 445, 446, 447, or 448 can substitute with permission of instructor. B. MacDougall.

What have been the major issues in the theory and practice of architectural design through time and across cultures, and how is aesthetic judgment related to more general systems of ordering within a particular society or group? This course draws on concepts, methods, and findings from the broad field of cultural anthropology to address these questions. Case studies and examples are drawn from a wide range of architectural traditions around the world for which there is significant ethnographic literature, with special emphasis on sub-Saharan Africa, India, and the United States. Topics include the ideational and formal relationships between folk and monumental traditions in complex societies; the structure of the ideal social order and its refraction in the material world; cosmological models and architectural form; geometries of non-Western traditions; and the relationship between indigenization and culture change.

ARCH 349 Undergraduate Investigations in Architecture, Culture, and Society

Fall or spring. Variable credit (maximum 3). Prerequisite: permission of instructor and approved independent study form.

B. MacDougall.

Independent study.

ARCH 441–442 Special Topics in Architecture, Culture, and Society

Fall and spring. 3 credits each term. Prerequisite: permission of instructor.

B. MacDougall.

Topic to be announced before preregistration.

ARCH 445 Architecture and the Mythic Imagination

Fall. 3 credits. Prerequisite: ARCH 342 or permission of instructor. Not offered every year. B. MacDougall.

This course focuses on traditional societies in which beliefs about architectural order are borne out of the mythic and religious imagination. Certain themes that are common to a range of cultures are explored in detail. They include the model of the human body as a source of architectural knowledge, the sacred center, the cosmic mountain, and architectural rituals as enactments of myths. Such themes are traced across cultures, through time, and into contemporary theory.

ARCH 446 Topics in Architecture, Culture, and Society

Fall or spring. 3 credits. Prerequisite: ARCH 342 or permission of instructor.

B. MacDougall.

ARCH 447 Architectural Design and the Utopian Tradition

Fall. 3 credits. Prerequisite: ARCH 342 or permission of instructor. Not offered every year. Staff.

This course explores the relationship between visionary architecture of the late 19th and 20th centuries and the wider utopian literature of

the time. It first explores themes in utopian fiction as well as in anti-utopian tracts and then turns to the attempts of architects, planners, and artists to concretize visions of the ideal world. The course will devote special attention to the ways in which ideals grounded in the utopian tradition have emerged in the social criticism of housing and neighborhood design in the urban setting in recent times.

ARCH 448 The Indian Example and the Visual Tradition in Culture

Spring. 3 credits. Prerequisite: ARCH 342 or permission of instructor. Not offered every year. B. MacDougall.

This course provides a concise chronological summary of the major building traditions of Hindu India and explores the relationship between form and more general beliefs about the power of vision to reveal and transform. Topics include the sculptural program of the Hindu temple as a vehicle for the preservation and transmission of mythic texts, the oculus as an element and the eye as a motif, darshan, the spiritually transforming vision, and the destructive power of vision as revealed in myth and beliefs about "evil eye."

ARCH 647–648 Architecture in Its Cultural Context I and II

647, fall; 648, spring. 4 credits each term. Prerequisite: permission of instructor. Not offered every year. B. MacDougall.

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

ARCH 649 Graduate Investigations in Architecture, Culture, and Society

Fall or spring. Variable credit (maximum 4). Prerequisite: permission of instructor and approved independent study form.

B. MacDougall.

Independent study.

Visual Studies

Darkroom fees are charged for all photography courses.

ARCH 151 Drawing I

Fall. 2 credits. Staff.

Freehand drawing with emphasis on line and perspective representation of form and space.

ARCH 152 Drawing II

Spring. 2 credits. Prerequisite: ARCH 151. Staff.

Freehand drawing as a means of conceiving and expressing spatial form; line weight, shades and shadows, and figure drawing.

ARCH 251 Introductory Photo I (also ART 161)

Fall, spring or summer. 3 credits. Staff. For description see ART 161.

ARCH 351 Photography II (also ART 261)

Fall, spring or summer. 4 credits. Prerequisite: ARCH 251 or ART 161, or permission of instructor. Staff.

For description see ART 261.

ARCH 450 Architectural Publications

Fall and spring. Variable credit (maximum 3). May be repeated for credit. Staff.

Colloquy and practicum on issues related to the production of an architectural journal, as

well as other theoretical and practical production issues related to the exchange of architectural ideas. Exercises cover both theoretical as well as hands-on aspects of architectural publication.

ARCH 457 Special Project in Photography

Fall or spring. Variable credit (maximum 3). Prerequisites: written proposal outlining the special project and permission of instructor. Not offered every year. Staff. Independent study.

ARCH 458 Special Investigations In Visual Studies

Fall or spring. Variable credit (maximum 3). Prerequisites: permission of instructor and approved independent study form. Staff. Independent study.

ARCH 459 Special Topics in Visual Studies I

Fall or spring. 3 credits. Prerequisite: permission of instructor. Staff. Topics announced before preregistration.

ARCH 658 Special Investigations In Visual Studies II

Fall or spring. Variable credit (maximum 4). Prerequisites: permission of instructor and approved independent study form. Staff. Independent study.

ARCH 659 Special Topics in Visual Studies II

Fall or spring. 3 credits. Prerequisite: permission of instructor. Staff. Topics announced before preregistration.

Architectural Science and Technology

Structures

ARCH 263 Structural Concepts

Fall. 4 credits. Prerequisite: MATH 111 or approved equivalent. M. Cruvellier. Fundamental concepts of structural behavior. Statics and strength of materials. Introduction to and analysis of simple structural systems.

ARCH 264 Structural Elements

Spring. 3 credits. Prerequisite: ARCH 263. J. Ochshorn or staff. Concepts and procedures for the design of individual structural components (columns, beams, etc.) in steel, concrete, and timber construction.

ARCH 363 Structural Systems

Fall or spring. 3 credits. Prerequisite: ARCH 264. M. Cruvellier. Concepts and procedures for the design of overall structural framing systems in steel, concrete, and timber construction.

ARCH 364 Vertigo Structures (also ARCH 664)

Fall or spring. 3 credits. Prerequisite: ARCH 363 or equivalent. Limited enrollment. Not offered every year. M. Cruvellier. A course in which students examine and experiment with the design of tall vertical structures, principally in terms of overall structural form and behavior, but also in the context of aesthetic, perceptual, historic, economic, and social considerations. Weekly meetings include lectures, discussion seminars, and studio-type design reviews.

ARCH 365 Bridge Design (also ARCH 665)

Fall or spring. 3 credits. Prerequisite: ARCH 363 or equivalent. Limited enrollment. Not offered every year. M. Cruvellier.

There can be no denying the major visual impact of bridges on the built environment. And yet, during the past century, architects have virtually abandoned the role that they have historically had in the design of these structures. Engineers, on the other hand, have claimed bridge design as their responsibility and have hailed it as evidence of Structural Art. Are the basic principles of bridge design such that this situation makes sense for our society? Or is a rethinking of the manner in which bridges are designed called for? Students in this course examine and experiment with the design of bridge structural forms, not only in terms of what is technically feasible but also, with equal emphasis, in the context of aesthetic, historical, and social considerations. Weekly meetings include lectures, discussion seminars, and studio-type design reviews.

ARCH 366 The Tectonic Articulation of Structure (also ARCH 666)

Fall or spring. 3 credits. Prerequisite: ARCH 363 or equivalent. Limited enrollment. Not offered every year. J. Ochshorn.

Through a series of readings, exercises, and case studies, students investigate ways in which structural forces can be expressed in works of architecture. Both the structural basis of form as well as the formal articulation of structure are considered. Course objectives include: gaining insight into the behavior of structure; investigating the cultural meaning of structure and technology; and exploring the interaction of structure and form.

ARCH 463 Special Topics in Structures

Fall or spring. 3 credits. Limited to 30 students. Prerequisites: ARCH 263, 264, and 363 or permission of instructor. Not offered every year. Staff. Topics announced before preregistration.

ARCH 473 Special Investigations In Structures

Fall or spring. Variable credit (maximum 3). Prerequisite: permission of instructor and approved independent study form. Staff. Independent study.

ARCH 664 Vertigo Structures (also ARCH 364)

Fall or spring. 3 credits. Prerequisite: ARCH 363 or equivalent. Limited enrollment. Not offered every year. Staff. For description, see ARCH 364.

ARCH 665 Bridge Design (also ARCH 365)

Fall or spring. 3 credits. Prerequisite: ARCH 363 or equivalent. Limited enrollment. Not offered every year. Staff. For description, see ARCH 365.

ARCH 666 The Tectonic Articulation of Structure (also ARCH 366)

Fall or spring. 3 credits. Prerequisite: ARCH 363 or equivalent. Limited enrollment. Not offered every year. J. Ochshorn. For description, see ARCH 366.

Construction

ARCH 262 Building Technology, Materials, and Methods

Spring. 3 credits. J. Ochshorn. Properties of materials—their use and application to the design of buildings and building systems. Discussion of various methods of building construction and assembly.

ARCH 367 Working Drawings (also ARCH 667)

Fall or spring. 3 credits. Prerequisite: ARCH 262 or equivalent. Limited enrollment. Not offered every year. J. Ochshorn. Architecture is represented schematically before it is built. Between this initial conceptualization and a building's construction is a process of design development culminating in a set of contractual documents which include drawings and specifications. Through a series of exercises and a final project, this course examines the process of design development and the logical structure of "working drawings." At the same time, the production of working drawings is pursued as a creative design process—one in which a kind of tension emerges between the various "fictions" of the design and the "reality" of the construction.

ARCH 465 Special Topics in Construction

Fall or spring. 3 credits. Limited to 30 students. Prerequisites: ARCH 262 or permission of instructor. Not offered every year. Staff. Topics announced before preregistration.

ARCH 475 Special Investigations in Construction

Fall or spring. Variable credit (maximum 3). Prerequisite: permission of instructor and approved independent study form. Staff. Independent study.

ARCH 667 Working Drawings (also ARCH 367)

Fall or spring. 3 credits. Prerequisite: ARCH 262 or equivalent. Limited enrollment. Not offered every year. J. Ochshorn. For description, see ARCH 367.

Environmental Controls

ARCH 261 Environmental Controls—Site Planning

Fall. 3 credits. Staff. The basic principles involved in design in the outdoor environment. A brief historical perspective. A development of inventory including grading and drainage. Foundations, surfacing, and construction.

ARCH 361 Environmental Controls—Lighting and Acoustics

Fall. 3 credits. Staff. Basic properties and principles of sound and light. Sound phenomena, noise control, absorption, acoustical design; light, color, and form. Natural lighting possibilities and constraints as well as good and bad examples of artificial lighting.

ARCH 362 Environmental Controls—Mechanical and Passive Solar Systems

Spring. 3 credits. Staff. Basic thermal analysis of buildings, human comfort criteria, energy conservation, passive solar design, HVAC distribution systems, overview of mechanical conveying systems, and plumbing.

ARCH 464 Special Topics in Environmental Controls

Fall or spring. 3 credits. Limited to 30 students. Prerequisites: ARCH 261, 361, and 362 or permission of instructor. Not offered every year. Staff.

Topics announced before preregistration.

ARCH 474 Special Investigations in Environmental Controls

Fall or spring. Variable credit (maximum 3). Prerequisite: permission of instructor and approved independent study form. Staff.

Independent study.

Computer Applications**ARCH 372 Imaging and the Electronic Age**

Spring. 3 credits. For undergraduate, non-computer-scientists. 2 lectures. 1 recitation. Not offered every year. D. Greenberg.

Historical technological advances which created major paradigm shifts for communications as well as advances in computer technology are presented. Technical fundamentals of computer graphics capabilities are emphasized. The latter half of the course covers the effect of these scientific advances on many discipline-specific areas including architecture, art and animation, photography and the film industry, medicine, engineering design, the corporate structure, and education. The course is heavily supplemented with pictorial content consisting of slides, movies, and live interactive demonstrations.

ARCH 374 Computer Graphics and Visualization (also COM S 417)

Fall. 3 credits. Prerequisite: COM S/ENGRD 211. Staff.

For description, see COM S 417.

ARCH 375 Practicum in Computer Graphics (also COM S 418)

Fall. 2 credits. Enrollment limited.

Prerequisites: COM S 212 and permission of instructor. Recommended: COM S 314. Corequisite: COM S 417. Staff.

For description, see COM S 418.

[ARCH 378 Microcomputer Applications in Design

Fall. 3 credits. Prerequisites: previous knowledge of PC-based CAD or permission of instructor. Not offered 2002–2003. Staff.

This course covers advanced principles, concepts, and applications of microcomputer-aided design, synthetic imaging, and animations. It combines seminar-style presentation with hands-on laboratory sessions. The course uses IBM PC platforms exclusively.]

ARCH 379 Design by Computer

Spring. 3 credits. Prerequisites: limited to third-year students and above. Not offered every year. Staff.

Exploration of the formalization of the design process for compatibility with the computer, and the role of computers in design. Lecture with CAD lab.

ARCH 476 Special Topics in Computer Applications

Fall or spring. 3 credits. Limited to 30 students. Prerequisites: ARCH 374 or 379 or permission of instructor. Not offered every year. Staff.

Topics announced before preregistration.

ARCH 477–478 Special Projects in Computer Graphics

477, fall; 478, spring. Variable credit (maximum 4). Limited to third-year students and above. Prerequisites: ARCH 374, plus concurrent registration in COM S 314 or equivalent, and permission of instructor. D. Greenberg.

Advanced work in computer graphics input and display techniques, including storage tube, dynamic vector, and color raster displays.

ARCH 479 Micro-Computer Applications in Design (also ARCH 679)

Fall. 3 credits. Prerequisites: an introductory course in computer graphics or computer science, or permission of instructor; upper level undergraduate or graduate status. H. Richardson.

The course explores the role of synthetic imaging and computer graphics in architectural design. The first half of the course is devoted to examining the new possibilities that information technologies offer for multimedia visualization of architecture, from abstract conceptual drawings, to sketching, photorealistic rendering, and multimodal representation, including motion and sound. The second part of the course explores the uses of information technologies to model and simulate the creative design process. These explorations include: developing a library of design ideas as building blocks for design; creating multimodal, multidimensional, immersive, virtual environments; interactive transformation and synthesis of design concepts; and "reverse architecturing" of canonical works. The emphasis of this course is on concepts as well as methods and techniques of computer graphics and their application to simulating the creative design process in architecture.

Graduate Courses**ARCH 679 Micro-Computer Applications in Design (also ARCH 479)**

Fall. 3 credits. Prerequisite: an introductory course in computer graphics or computer science, or permission of instructor; upper level undergraduate or graduate studies. H. Richardson.

For description, see ARCH 479.

ARCH 761–762 Architectural Science Laboratory

761, fall; 762, spring. 6 credits each term.

Open to architectural science graduate students only. D. Greenberg.

Projects, exercises, and research in the architectural sciences.

ARCH 763–764 Thesis or Research in Architectural Science

763, fall; 764, spring. Variable credit (maximum 12). Limited to architectural science graduate students. Staff.

Independent study.

Architectural History

The history of the built domain is an integral part of all aspects of the architecture curriculum, from design and theory to science and technology. Incoming students take ARCH 181–182 in the first year, and three additional courses from the 380–399 series, preferably in the third and fourth years. Seminars are intended for advanced undergraduate and graduate students and do not satisfy undergraduate history requirements. Courses with

the same number may only be taken once to satisfy history of architecture or in-college requirements.

Sequence Courses**ARCH 181 History of Architecture I**

Fall. 3 credits. Required of all first-year students in architecture; open to all students in other colleges with an interest in the history of the built domain. Staff.

The history of the built environment as social and cultural expression from the earliest to more recent times. Themes, theories, and ideas in architecture and urban design are explored, beginning with the earliest written records.

ARCH 182 History of Architecture II

Spring. 3 credits. Required of all first-year students in architecture. Open to all students in other colleges with an interest in the history of the built domain; may be taken independently of ARCH 181. Staff.

The history of the built environment as social and cultural expression from more recent times to the present. Architecture and urban design themes, theories, and ideas are addressed in greater detail leading to the present time.

Directed Electives**ARCH 380 History of Theory**

Fall or spring. 3 credits. Prerequisites:

ARCH 181–182 or permission of instructor. Not offered every year. Staff.

This course, in which classroom discussion and debate play a central role, explores the history of important theoretical issues involving art and architecture. The readings, which span from the Greeks to today, focus on more than just questions of aesthetics and include theories of ethics, origins, imagination, nature, society, and pedagogy.

ARCH 381 From Eutopia to the Ghetto: Renaissance Urban Form

Fall or spring. 3 credits. Prerequisites:

ARCH 181–182 or permission of instructor. Not offered every year. M. Lasansky.

Significant developments in European urban design from 1300–1600. Particular attention will be awarded to Italy and Spain. The course focuses on a series of case studies: entire towns, specific urban spaces, and individual building types. Weekly discussions contextualize the city within a larger cultural framework. We will consider how civic, economic, social, political, legislative, technical, and material concerns have had a significant impact on the form, function, and patronage of these places, spaces, and structures. The relevance of Renaissance theory to contemporary practice is also emphasized through the discussion of several twentieth-century urban plans and built projects.

ARCH 382 Architecture in the Middle Ages (also ART H 332 and RELST 332)

Fall. 4 credits. Prerequisites: ARCH 181–182 or permission of instructor. Not offered every year. Staff.

For description, see ART H 332.

ARCH 383 The Construction of Modern Life: The Politics of Memory and the Commodification of Architecture

Fall or spring. 3 credits. Prerequisites:

ARCH 181–182 or permission of instructor. Not offered every year. M. Lasansky.

This course examines the complex relationship between the built environment, the construction and definition of cultural heritage, collective memory and civic identity, and the commodification or commercial celebration of specific buildings, sites, and urban events. We focus on late eighteenth-, nineteenth-, and twentieth-century Europe. Particular attention is awarded to the discourse surrounding the restoration of buildings (and figures such as Ruskin, Viollet-le-Duc, and Giovannoni); political agendas guiding restoration and urban renewal projects; newly defined venues of modern urban spectacle (such as the world's fair, department stores, morgues, and panoramas); and the role played by tourism in the commodification of local and foreign sites.

ARCH 384 The Urban Landscape of Renaissance Rome: 1450-1600

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. M. Lasansky.

This class is an exploration into the urban morphology, architecture, and civic life of Renaissance Rome. The city was a thriving center for architectural practice. It drew practitioners from throughout the peninsula and served as an important theoretical model for architects elsewhere. We survey the important issues, individuals, and building projects of the city between 1450 and 1600 with particular emphasis on the intellectual and physical rediscovery and re-appropriation of Antiquity; the role of the Vatican with its large population of pilgrims, tourists, resident church officials, foreign bankers, and dignitaries that made specific demands of the built environment; and the unique topography and natural resources of the city's location. The last portion of the course addresses the legacy of the Renaissance during the period of Italian unification and the Fascist regime.

ARCH 385 Magnificent Utility—Architecture and the Arts of Persuasion

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. C. Otto.

Architects put revolutionary attitudes about form, space, light, and the arts into practice during the course of the seventeenth century. Focusing on the urban centers of Rome and Paris and the cultural landscapes of Spain, England, and Central Europe, this course explores how architecture, urban design, and the arts were employed to promote state and church.

ARCH 387 The 19th Century: Tales of the City

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. M. Woods.

Nineteenth-century cities as settings for modernisms and modernities, new visions, and experiences of modern life, are the focus of this course. The relationship between urbanity and creativity that emerges during the 19th century engage us in Berlin, Paris, London, New York, Chicago, New Orleans, and other cities. Issues of center and periphery, nation and locality, and capital and colony also emerge. Urban pleasures and dangers for men, women, and the other as revealed through histories of the built environment but also through literature, painting, photography, and film are examined.

ARCH 388 Modernism

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. C. Otto.

Precursors and proponents of the modern movement from the late nineteenth century into the 1940s are considered in this course. The cultural intents of the modern are examined in architectural and urban design for individuals, groups, and institutions, from Mies van der Rohe, Le Corbusier, and Frank Lloyd Wright to de Stijl, the Bauhaus, and design education. Attention is paid to the politics of design in serving the state during the 1930s.

ARCH 389 Architecture, Revolution, and Tradition

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. C. Otto.

From early eighteenth to early nineteenth century, European society underwent profound change. Political absolutism—the doctrine of unlimited governmental control—was challenged; Enlightenment attitudes—commitments to human reason, science, and education—gained ascendancy. This course considers architectural and urban design in these times of tumult. It begins with efforts to foment architectural revolution within inherited traditions and ends with attempts to establish design traditions within revolutionary settings.

ARCH 390 American Architecture and Building I (also AM ST 390)

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. M. Woods.

A review of architecture, building, and responses to the landscape from the prehistoric period to the Civil War. Architecture and building as social and collaborative arts are emphasized and thus the contributions of artisans, clients, and users as well as professional architects and builders are examined. The architectural expressions of Native Americans, African Americans, women, and others are treated in addition to those of European colonists and settlers.

ARCH 391 American Architecture and Building II (also AM ST 391)

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. M. Woods.

A continuation of Architecture 390 but may be taken independently. An account of American architecture, building, and responses to the environment from the post-Civil War period to the present day. Particular attention is paid to the processes of industrialization, professionalization, and urbanization as well as to the manifestations of gender, class, race, and ethnicity in the built and architectural environments.

ARCH 392 Modern Architecture on Film

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. M. Woods.

An exploration of certain themes deemed critical to modern architecture and urbanism through their representation in both commercial and avant-garde films from the medium's birth until the present day. The focus varies each semester with particular emphases to include the modern house and housing, the modern city, technology and visions of the future, and finally the image of the architect. Representations of these themes in other forms such as painting, photography,

theatre, literature, and advertising also are examined. The course includes selected readings in modern architecture and film, screenings in class, class discussions, presentations, and papers.

ARCH 393 The Cumulative City

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. C. Otto.

Well-established cities were transformed by radical and unimagined change in the nineteenth and twentieth centuries. Politics and economies were recast, populations exploded, and new technologies reshaped transportation, communication, and building. This course explores transformation historically in the cumulative city, focusing on specific cities in America and Europe, Africa and Asia. The cultural context of each city is examined to understand how it changed and how meanings became associated with evolving urban forms.

ARCH 394 Toward the Millennium

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. C. Otto.

Theory and practice in architecture and urbanism are investigated from the 1950s to the present. From the Americanized International Style to the recent internationalism of design attitudes, the immediate past is explored historically to probe the matrix of meanings associated with contemporary form, urbanism, and technology.

ARCH 396 Special Topics in the History of Architecture and Urbanism

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. Staff.

Topics to be announced.

ARCH 397 Special Topics in the History of Architecture and Urbanism

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. Staff.

Topics to be announced.

ARCH 398 Special Topics in the History of Architecture and Urbanism

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. Staff.

Topics to be announced.

ARCH 399 Special Topics in the History of Architecture and Urbanism

Fall or spring. 3 credits. Prerequisites: ARCH 181-182 or permission of instructor. Not offered every year. Staff.

Topics to be announced.

Courses in Preservation

ARCH 583 Measured Drawing (also CRP 567)

Fall. 3 credits. For undergraduate architecture students and graduate students in history and preservation. Prerequisite: permission of instructor. M. Tomlan.

For description, see CRP 567.

ARCH 584 Problems in Contemporary Preservation Practice (also CRP 563)

Spring. Variable credit. M. Tomlan.

For description, see CRP 563.

ARCH 585 Perspectives on Preservation (also CRP 562)

Fall. 3 credits. M. Tomlan.

For description, see CRP 562.

ARCH 586 Documentation for Preservation (also CRP 560)

Fall or spring. 3 credits. M. Tomlan.
For description, see CRP 560.

ARCH 587 Building Materials Conservation (also CRP 564)

Spring. 3 credits. Open to juniors, seniors, and graduate students. M. Tomlan.
For description, see CRP 564.

ARCH 588 Historic Preservation Planning Workshop: Surveys and Analyses (also CRP 561)

Fall or spring. 4 credits. M. Tomlan.
For description, see CRP 561.

Graduate Seminars in the History of Architecture and Urbanism

All topics for ARCH 682 to ARCH 699 will be announced prior to the start of the semester.

ARCH 680 Seminar in Historiography

Fall. 4 credits. Prerequisite: permission of instructor. Staff.
Historiographic and methodological issues are examined in relation to the history of architecture and urbanism. Taught by different faculty members in successive years, the seminar is required of all first- and second-year graduate students in the History of Architecture and Urbanism Program.

ARCH 682 Seminar in Urban History

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year. Staff.

ARCH 683 Seminar in the History of Theory

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year. Staff.

ARCH 684 Seminar in the Italian Renaissance: Architecture, Politics, and Urbanism

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year. M. Lasansky.

ARCH 686 Seminar in Seventeenth- and Eighteenth-Century Architecture and Urbanism

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year. C. Otto.

ARCH 688 Seminar in Twentieth-Century Architecture and Urbanism

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year. C. Otto.

ARCH 689 Seminar in the History of Cities

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year. Staff.

ARCH 690 Seminar in American Architecture, Building, and Urbanism

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year. M. Woods.

ARCH 692 Seminar in Nineteenth-Century Architecture, Building, and Urbanism

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year. M. Woods.

ARCH 696 Seminar in Special Topics in the History of Architecture and Urbanism

Fall or spring. 4 credits. Prerequisites: permission of instructor. Not offered every year. Staff.

ARCH 697 Seminar in Special Topics in the History of Architecture and Urbanism

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year. Staff.

ARCH 698 Seminar in Special Topics in the History of Architecture and Urbanism

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year. Staff.

ARCH 699 Seminar in Special Topics in the History of Architecture and Urbanism

Fall or spring. 4 credits. Prerequisite: permission of instructor. Not offered every year. Staff.

Independent Study, Thesis, Dissertation**ARCH 299 Undergraduate Independent Study in the History of Architecture and Urbanism**

Fall or spring. Variable credit (maximum 3). Prerequisite: permission of instructor. May not be taken by students in design to satisfy undergraduate history requirements. Staff.

Independent study for undergraduate students.

ARCH 499 Undergraduate Thesis in the History of Architecture and Urbanism

Fall or spring. 4 credits. For B.S. honors candidates in history only. Staff.

ARCH 799 Graduate Independent Study in the History of Architecture and Urbanism

Fall or spring. Variable credit (maximum 12). Prerequisite: permission of instructor. Staff.

Independent study for graduate students only.

ARCH 899 M.A. Essay in the History of Architecture and Urbanism

Fall or spring. 4 credits. Staff.
Independent preparation of the M.A. essay, often developed from topics investigated in ARCH 680.

ARCH 999 Ph.D. Dissertation in the History of Architecture and Urbanism

Fall or spring. Variable credit (maximum 12). Staff.
Independent study for the doctoral degree.

ART

Buzz Spector, chair; R. Bertoia, Z. Blum, V. Kord, director of graduate studies; J. Locey, M. Lyons, T. McGrain, E. Meyer, G. Page, B. Perlus, J. L. Squier, W. S. Taft, K. WalkingStick, and visiting critics.

Undergraduate Program

The curriculum in art is a program of study within the College of Architecture, Art, and Planning, as well as other colleges at Cornell.

The undergraduate curriculum in art is an excellent background for a career in the visual arts. Past graduates have found it to be an excellent preparation for a career in applied art, although no specific technical courses are offered in such areas as interior design, fashion, or commercial art.

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 four semesters, all students follow a common course of study designed to provide a broad introduction to the arts and a basis for the intensive studio experience of the last two years. Beginning with the third year, students concentrate in painting, sculpture, photography, printmaking, or combined media.

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

All members of the faculty in the Department of Art are practicing, exhibiting artists, whose work represents a broad range of expression.

A candidate for the B.F.A. degree may also earn a Bachelor of Arts degree from the College of Arts and Sciences or the College of Human Ecology, or a Bachelor of Science degree from the College of Engineering, in a five-year dual degree program. This decision should be made early in the candidate's career (no later than the third semester) so that he or she can apply to be registered in both colleges simultaneously. Each student is assigned an adviser in both colleges of their dual degree program to provide needed guidance. Candidates for two degrees must satisfy all requirements for both degrees. At least 62 of the total credits must come from courses offered in the Department of Art. In addition, all Department of Art requirements for freshman writing seminars, art history, and distribution must be met.

It is expected that a dual degree candidate will complete the pre-thesis and thesis requirements for the B.F.A. degree during the fourth and fifth year.

Bachelor of Fine Arts Degree Requirements**Credits and Distribution**

130 credits are required for the B.F.A. degree. A minimum of 62 are taken in the Department of Art. A minimum of 57 are taken outside the department.

Curriculum

Students are expected to take an average course load of 16 credits per semester during their four years. If a student wishes to take more than three studio courses in any one semester they must file a petition. All students must take at least one studio course a semester unless there are exceptional circumstances expressed in the form of a petition. **Any request to deviate from the standard curriculum must be petitioned to the department prior to the act. No student in the first year of the BFA program will be permitted to deviate from the required curriculum.**

Specific Course Requirements

By the end of the second year, students must have completed an introductory course in each of the areas of painting, sculpture, printmaking, photography, and four drawing courses. By the end of the third year, all students must have completed an additional 12 credits beyond the introductory level in three of the four areas.

Concentration

Students must plan their programs to complete 27 credits in one of the studio areas of painting, sculpture, photography, or printmaking (26 credits). Declaration of the area of concentration must be made by the second semester of the sophomore year. Students concentrating in combined media must also submit an approved projected course plan. B.F.A. students complete a senior thesis in one area of concentration and are required to participate in the Senior Exhibition in the semester the thesis is taken.

Concentration Requirements (27 credits total; 26 in printmaking)

The required courses for each concentration are as follows:

Painting: ART 121, 221, 321, 322, 421, 422 (Senior Thesis)

Sculpture: ART 141, 241, 341, 342, 441, 442 (Senior Thesis)

Printmaking: ART 131/132/133 (2 of 3); 231, 232, 233 (1 of 3); 331, 431, 432 (Senior Thesis)

Photography: ART 161, 261, 263; 264, 265, 361 (1 of 3); 461, 462 (Senior Thesis)

Dual Concentration

If a student is interested in studying in more than one area, they may choose to do a dual concentration. The dual concentration requires a first area, in which the thesis is conducted, and a non-thesis second area. Pre-thesis and thesis must be taken in the first area of concentration. Students take 23 credits in the first area of concentration (22 for printmaking) and 15 credits in the second area of concentration (14 for printmaking). Drawing is only available as a second area of concentration.

The required courses for the dual concentration are:

<i>First Area of Concentration</i>	<i>Total Credits</i>
Painting: ART 121, 221, 321, 421, 422	23
Sculpture: ART 141, 241, 341, 441, 442	23
Printmaking: ART 131/132/133 (2 of 3) 231/232/233 (1 of 3) 431, 432	22
Photography: ART 161, 261, 263/264/265/361 (1 of 4), 461, 462	23
<i>Second Area of Concentration</i>	<i>Total Credits</i>
Drawing: ART 151, 152, 251, 252, independent study	15
Painting: ART 121, 221, 321, 322	15
Sculpture: ART 141, 241, 341, 342	15
Printmaking: ART 131/132/133 (2 of 3) 231/232/233 (1 of 3); 331	14
Photography: ART 161, 261, 263/264 265/361 (2 of 4)	15

Note: The total number of out-of-college elective credits required will be adjusted to allow for the additional credits required of the dual concentration.

Combined Media Concentration

The combined media concentration enables students to fulfill concentration requirements by combining several studio disciplines, including out-of-department studio courses such as those offered in the departments of music, theatre, and dance, etc.

Students must file an approved "Area of Concentration" form. In addition to the courses required of all BFA majors during their first and second year (see BFA curriculum), students must take two studios at a 200 level or 300 level, a minimum of 2 'Out of College' studio electives (OCE Studio) of 3-4 credits each, ART 481/Pre-Thesis Combined Media and ART/482 Thesis Combined Media.

Note: the total number of in/out-of-college elective credits required will be adjusted to allow for additional credits required of the combined media concentration.

Rome Program

Students in good standing who have completed the requirements of the first two years of the curriculum are eligible for participation in the Rome Program. Students are admitted to the program by application and review of their academic record. Applications are submitted to the Rome Program coordinator. Students applying to the Rome Program must meet with their faculty adviser, the Art Department Rome Program adviser, and the department chair to obtain signatures of approval for admission to the program. Students in the department wishing to attend the Rome Program must register for a full semester of credits. The department recommends that students attend the program during the first or second semester of their junior year. (Under special circumstances, seniors may petition to attend the Rome Program.) **Only under special circumstances, and with prior petition and approval, are seniors allowed to attend the Rome program.** Students wishing to spend two consecutive semesters in Rome must petition which should include the proposed course schedule for both semesters and must have appropriate faculty approval.

Rome Curriculum

ART 400	Rome Studio	4
Fulfills 4 credits of concentration		
ART 312*	Modern Art in Italy	3
ART 317	History of Art in Rome: Early Christian to the Baroque Age	4
or		
ART 318	History of Art in Rome: Renaissance in Rome and Florence	4
ITALA 111/112	Italian Language	4
ARCH 317	Contemporary Italian Film	1
16 Total		

Students may petition to take more than 16 credits per semester in the Rome Program. Students may study in Rome for one or two academic semesters.

*Fulfills 300-level Theory and Criticism requirement.

Out-of-College Requirements

A minimum of 57 electives credits must be taken outside of the college. In the first year, students must take two freshman writing seminars. Students are required to take courses from among three groups, which include: Physical and Biological Sciences (minimum of two courses, of at least 3 credits each); Social Sciences (minimum of three courses, of at least 3 credits each); and, Humanities and Expressive Arts (minimum of three courses, of at least 3 credits each). All B.F.A. students are required to take 20 credits in the History of Art. One course must be taken in each of the following areas:

Modern: 260, 265, 270, 360, 361, 362, 364, 365, 366, 367, 370, 376, 464.

Non-Western: 280, 378, 380, 381, 383, 384, 385, 386, 389, 395, 396, 489.

Three electives: any art history elective at the 300 level or above or any architectural history elective. (Note: course offerings may vary each semester. Students are encouraged to consult with their adviser. Students may petition to substitute courses of similar content.)

The university requirement of two 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. No student may study in absentia for more than two terms.

Students who transfer into the undergraduate degree program in art must complete a minimum of four terms in residence at Cornell and a minimum of 60 credits at the university, of which 30 credits must be taken in the Department of Art, including four terms of studio work.

For those students matriculating in fall of 2002:

Students are required to take ART 111, Introductory Art Seminar; ART 121, Introductory Painting; or ART 141, Introductory Sculpture; Art History elective; and a Freshman Writing Seminar during the fall semester of the freshman year. ART 131/132/133, Introductory Printmaking; Art History elective; and an additional Freshman Writing Seminar must be taken during the spring semester of the freshman year. A 300-level course in Theory and Criticism must be taken sometime during the junior or senior year.

Courses that will fulfill Theory and Criticism requirement (note: offerings may change from year to year. Check the current course catalog.):

ART 312
ARCH 447
ART H 370, 377, 464, 494, 594
ENGL 395
GERST 660
GOVT 375
AS&RC 304, 503
ANTHR 320, 322, 453

First Year

<i>Fall Term (Required Curriculum)</i>	<i>Credits</i>
111 Introductory Art Seminar	1
Art History Elective	4
121 Introductory Painting	3
or	
141 Introductory Sculpture	3
151 Drawing I	3
Freshman Writing Seminar	3
In/Out College Electives	3
	<hr/> 17

Spring Term (Required Curriculum)

Art History Elective	4
121 Introductory Painting	3
or	
141 Introductory Sculpture	3
152 Drawing II	3
One of the following:	3
131 Introductory Etching	
132 Introductory Graphics	
133 Introductory Lithography	
Freshman Writing Seminar	3
	<hr/> 16

Second Year*Fall Term (Required Curriculum)*

161 Introductory Photography	3
171 Electronic Imaging in Art	3
251 Drawing III	3
Out-College Elective (OCE)/Art History	4
OCE	3
	<hr/> 16

Spring Term

200 Level Studio	4
200 Level Studio	4
252 Drawing IV	3
OCE/Art History	4
OCE	3
	<hr/> 18

Third Year*Fall Term*

200 Level Studio	4
Art Studio concentration	4
300-level course in Theory and Criticism	3
OCE	3
In/OCE	3
	<hr/> 17

Spring Term

	<i>Credits</i>
Art Studio concentration	4
OCE/Art History	4
In/OCE's	7
	<hr/> 15

Fourth Year*Fall Term*

Pre-Thesis	6
In/OCE's	10
	<hr/> 16

Spring Term

Thesis	6
In/OCE's	9
	<hr/> 15

The M.F.A. Program

The Master of Fine Arts program requires four terms of full-time study, equal to a minimum of 60 credits. Graduate work done elsewhere or in the summer session is not applicable to the M.F.A. degree. The curriculum leading to the master's degree is flexible to accommodate the needs of the individual student and to enable the student to partake of the greater Cornell community. The ratio of graduate faculty to students allows an exceptional opportunity for individual mentoring. Graduate students are provided individual studios and have 24-hour access to studios and labs.

Graduate students in art may enroll in introductory or advanced courses in any field of study offered at the university. Fifteen credits are required in each term; of these, nine credits are in studio work, and three credits are in Graduate Seminar (ART 611, 612, 613, 614). Students are required to take at least twelve credits of academic work outside the Department of Art during their four terms in residence. Candidates for the Master of Fine Arts degree must have completed eighteen credits in the history of art in the course of their graduate and/or undergraduate study. Every M.F.A. candidate must prepare a written statement, offer a thesis exhibition of studio work completed during residency, and give an oral defense of the written statement and visual thesis. Gallery space is provided for a one-week solo thesis exhibition during the final spring semester.

Course Information

Most courses in the Department of Art are open to students in any college of the university who have fulfilled the prerequisites or have permission of the instructor.

Fees are charged for all studio courses. See the specific course description for course fees.

To take advantage of the special opportunities afforded by summer study, there are several course offerings during summer session.

Guidelines for Independent Study

A student who wishes to undertake an Independent Study must be a junior and in good academic standing. Fine Arts students must have completed two years of the curriculum, **including all first- and second-year studios and four semesters of drawing.** Students must have prior approval to have an independent study count as a drawing requirement. All students must have taken a minimum of one Cornell Art Department course in the area of the proposed independent study. It is recommended that the student take the independent study with a professor with whom they have previously studied. Out-of-department students may be exempt from the studio sequence requirement

at the discretion of the supervising professor. Independent studies must be petitioned to count toward required studio courses. Credit hours are variable up to a maximum of four.

Courses in Theory and Criticism**ART 111 Introductory Art Seminar**

Fall. 1 credit. S-U only. Limited to B.F.A. students. Staff.

Students meet each week with a different member of the faculty. The varying artistic interests of the faculty are presented and discussed. A maximum of two absences are allowed except by permission of chairman.

ART 214 Art and the Multicultural Experience

Fall. 3 credits. R. Dalton.

This course will investigate selected topics related to art and the multicultural experience. Students will study the basic vocabulary and tools used in the expression of art. Students question the nature of the visual arts as a discipline and survey art created by under-represented American minority cultural groups.

ART 312 Modern Art in Italy

Fall or spring. 3 credits. Rome Program only. Staff.

This course is designed to introduce students to contemporary developments in Italian art and to major issues concerning the art world. Significant movements of the twentieth century, including Futurism, Metaphysical painting, and Magic Realism will be discussed. Post-war painting and sculpture will be emphasized. Visits with artists in studios, galleries, and museums introduce students to the exchange between artists, dealers, and critics. Fulfills 300-level Theory and Criticism requirement for Fine Arts majors.

[ART 317 History of Art in Rome: Early Christian to the Baroque Age

Fall. 4 credits. Rome Program only. Not offered 2002–2003. Staff.

This course is a general survey of the early Christian period to the fantastic vision of Piranesi in the eighteenth century. Special emphasis is placed on the developments of the Renaissance and Baroque periods. Weekly lecture and field trips.]

ART 318 History of Art in Rome: Renaissance in Rome and Florence

Fall. 4 credits. Rome Program only. Not offered every year. Staff.

A direct knowledge of art in its historical context is the aim of this course. This course is open both to students interested in history and to those concentrating on the visual impact of art. Included are lectures and field trips.

ART 419 Independent Study/Supervised Readings in Art

Fall, spring, or summer. Credits variable (maximum 4). Prerequisite: student must be a junior in good academic standing and have the written permission of the instructor. Staff.

Independent reading and research allows a student the opportunity to investigate special interests that are not treated in regularly scheduled courses. The student develops a plan of study to pursue under the supervision of a faculty member.

ART 611 Professional Skills for the Visual Artist

Fall. 3 credits. Limited to M.F.A. students. Staff.

This seminar will help fine arts graduate students build professional skills that will assist them in their careers as practicing artists and in their work at art-related employment. Students will complete a resource notebook that will be useful to them in the years after they graduate. Topics include: funding resources, exhibition opportunities, employment options, documentation of work, health, safety, and legal issues.

ART 612 Recent Practice in the Visual Arts

Spring. 3 credits. Limited to M.F.A. students. Staff.

This seminar is designed to provide graduate students with an overview of recent visual artwork. Students will study work from a wide range of artists who have received significant recognition within the visual arts community. Reviews of major exhibitions such as Documenta, La Biennale di Venezia, and the Whitney Biennial are discussed. Students will be encouraged to travel to nearby cities to look at contemporary work.

ART 613 On-Line Publication for the Visual Artist

Fall. 3 credits. Limited to M.F.A. students. Staff.

This seminar is designed to introduce graduate students to the basic principles of electronic imaging. As a major project, each student interviews a contemporary visual artist. These interviews are illustrated with digital images of each artist's work and combined in an on-line magazine. Additionally each student learns to create a home page on the web.

ART 614 Contemporary Theory in the Visual Arts

Spring. 3 credits. Limited to M.F.A. students. Staff.

This seminar explores selected writings on the current issues represented within the visual arts. It is designed to introduce graduate students to several approaches to critical inquiry and analysis of contemporary visual practice. Topics vary but may include related criticism in areas such as visual culture, semiotics, identity politics, and institutional frames.

Studio Courses in Painting

Fees for painting courses: 121, 221, 321, 322, 421, 422, 429: \$40

ART 121 Introductory Painting

Fall, spring, or summer. 3 credits. Staff. This course studies the language of painting through color, form, materials, and techniques. Aspects of traditional and modern pictorial composition are studied including proportion, space, and color theory through the representation of a variety of subjects.

ART 221 Painting II

Fall or spring. 4 credits. Prerequisite: ART 121 or permission of instructor. Staff. This course is a continuation of the study of aspects of pictorial composition initiated in ART 121, focusing on problems relating to the depiction of the figure, space, and light. Topics are explored within the context of historical and contemporary artistic expression.

ART 321 Painting III

Fall or spring. 4 credits. Prerequisite: ART 221 or permission of instructor. Staff.

This course is an intensive study of painting materials and techniques to express pictorial ideas. A variety of traditional painting techniques are explored including egg tempera, fresco, gouache, encaustic, and oil. In addition, paints and associated techniques developed in the twentieth century are used as well as developing technologies applicable to the painting process.

ART 322 Painting IV

Fall or spring. 4 credits. Prerequisite: ART 321 or permission of instructor. Staff.

This course is an advanced course centered on issues of artistic expression. A variety of painting media are used to address conceptual issues through representation as well as abstraction.

ART 421 Pre-Thesis in Painting

Fall or spring. 6 credits. Prerequisite: ART 322. Staff.

This course is an advanced study of painting through assigned and independent projects using a variety of materials leading to the formulation of a thesis project.

ART 422 Thesis in Painting

Fall or spring. 6 credits. Prerequisite: ART 421. Staff.

This course is a focussed independent project demonstrating creative ability and technical proficiency. Projects are exhibited in an appropriate space at the end of the term.

ART 429 Independent Studio in Painting

Fall, spring, or summer. 4 credits variable. Prerequisite: student must be a junior in good academic standing and have the written permission of the instructor. Staff.

This course is an independent studio in painting that allows students the opportunity to pursue special interests not treated in regularly scheduled courses. The student plans study and projects under the supervision of a faculty member selected to guide their progress and evaluate their results.

ART 721-722, 821-822 Graduate Painting

721, fall; 722, spring; first-year M.F.A. students. 9 credits. 821, fall; 822, spring; second-year M.F.A. students. 9 credits. Staff.

Students are responsible, under faculty direction, for planning their own projects and selecting the media in which they are to work. All members of the faculty are available for individual consultation.

Studio Courses in Printmaking

Fees for printmaking courses:

Intaglio: 131, 231, 431.1, 432.1, 439.1: \$95
Lithography: 133, 233, 431.2, 432.2, 439.2: \$95
Screenprinting: 132, 232, 431.3, 432.3, 439.3: \$45

ART 131 Introductory Intaglio

Fall and spring. 3 credits. Staff. This course is a basic introduction to etching techniques, with emphasis on engraving, lift ground, relief printing, monotypes, and experimental techniques.

[ART 132 Introductory Graphics

Fall and spring. 3 credits. Not offered 2002-2003. Staff.

This course is an introduction to the two-dimensional thought process and the language

of vision. Students will explore design projects and the use of graphic materials, including collage, pochir, and screen printing.]

ART 133 Introductory Lithography

Fall and spring. 3 credits. Staff. This course studies the theory and practice of lithographic printing, using limestone block and aluminum plate. Basic lithographic techniques of crayon, wash, and transfer drawing are studied.

ART 231 Intaglio II

Spring. 4 credits. Prerequisite: ART 131. Staff.

A studio course in advanced etching techniques. Refinement of processes and ideas through the uses of aquatint, spit bite, lift ground, soft ground, and dry point in black and white with an introduction to multiple plate color printmaking.

[ART 232 Advanced Screen Printing

Fall. 4 credits. Prerequisite: ART 132. Not offered 2002-2003. Staff.

This course is an exploration of the screen printing process as it applies to the fine arts. Students develop skills in multicolor printing using transparent inks and additives. Stencils are made by the handcut and the photo process.]

ART 233 Lithography II

Spring. 4 credits. Prerequisite: ART 133. Staff.

The theory and practice of lithographic printing using lithographic stones and aluminum plates. Traditional techniques in crayon, tusche wash, and color printing as well as photolithography using kodolith and computer-generated transparencies.

ART 331 Printmaking III

Fall or spring. 4 credits. Prerequisite: ART 231, 232, or 233 or permission of instructor. Staff.

The course is the study of the art of graphics through both assigned and independent projects. Work may concentrate in any one of the graphic media or in a combination of media.

ART 332 Printmaking IV

Fall. 4 credits. Prerequisite: ART 331 or permission of instructor. Staff. This course is a continuation and expansion of ART 331.

ART 431 Pre-Thesis in Printmaking

Fall or spring. 6 credits. Prerequisite: ART 332. Staff.

This course is a further study of the art of graphics through both assigned and independent projects executed in various media. Instruction through group discussions and individual criticism.

ART 432 Thesis in Printmaking

Fall or spring. 6 credits. Prerequisite: ART 431. Staff.

Advanced printmaking project to demonstrate creative ability and technical proficiency.

ART 439 Independent Studio in Printmaking

Fall, spring, or summer. 4 credits variable. Prerequisite: student must be a junior in good academic standing and have the written permission of the instructor. Staff.

This course is an independent studio in printmaking that allows the student the opportunity to pursue special interests not treated in regularly scheduled courses. The student plans study and projects under the

supervision of a faculty member selected to guide their progress and evaluate their results.

ART 731-732, 831-832 Graduate Printmaking

731, fall; 732, spring; first-year M.F.A. students. 9 credits. 831, fall; 832, spring; second-year M.F.A. students. 9 credits. Staff.

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

Studio Courses in Sculpture

Fees for sculpture courses:

141:	\$50
241, 341, 342, 343, 441, 442:	\$75

ART 141 Introductory Sculpture

Fall, spring, or summer. 3 credits. Staff. A series of studio problems introduce the student to the basic principles of artistic expression in three-dimensionals, i.e., clay modeling, direct plaster, plaster casting, and construction in wood, metal, and other materials.

ART 241 Sculpture II

Fall or spring. 4 credits. Prerequisites: ART 141, or an architecture design studio, or permission of instructor. Staff.

Various materials, including clay, plaster, wood, stone, and metal, are used for exercises involving figurative modeling, abstract carving, and other aspects of three-dimensional form and design. Beginning in the second year, students are encouraged to explore bronze/metal casting processes. The sculpture program, which is housed in its own building, contains a fully equipped bronze casting foundry.

ART 341 Sculpture III

Fall or spring. 4 credits. Prerequisite: ART 241 or permission of instructor. Staff.

This course is a continued study of the principles of sculpture and conceptual development. Each student explores the selection and expressive use of materials, media, scale and content. Group discussions and individual criticism. Experimentation is encouraged.

ART 342 Sculpture IV

Fall or spring. 4 credits. Prerequisite: ART 341 or permission of instructor. Staff.

This course is a continuation and expansion of ART 341. Special projects may include site-specific and/or large-scale installations.

ART 343 Sculpture V

Fall or spring. 4 credits. Prerequisite: ART 342 or permission of instructor. Staff.

This course is a continued study of the principles of sculpture and the selection and expressive use of materials and media. Group discussions and individual criticism.

ART 441 Pre-Thesis in Sculpture

Fall or spring. 6 credits. Prerequisite: ART 343. Staff.

This course is a further study of the art of sculpture through both assigned and independent projects executed in various media. Instruction through bi-monthly group discussions and individual criticism. Students complete a body of work through an approved statement of purpose and proposed schedule.

ART 442 Thesis in Sculpture

Fall or spring. 6 credits. Prerequisite: ART 441. Staff.

Advanced sculpture project to demonstrate creative ability and technical proficiency culminating in a cohesive B.F.A. thesis exhibition.

ART 449 Independent Studio in Sculpture

Fall, spring, or summer. 4 credits variable. Prerequisite: student must be a junior in good academic standing and have the written permission of the instructor. Staff.

This course is an independent studio in sculpture that allows the student the opportunity to pursue special interests not treated in regularly scheduled courses. The student plans study and projects under the supervision of a faculty member selected to guide their progress and evaluate their results.

ART 741-742, 841-842 Graduate Sculpture

741, fall; 742, spring; first-year M.F.A. students. 9 credits. 841, fall; 842, spring; second-year M.F.A. students. 9 credits. Staff.

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

Studio Courses in Photography

Darkroom fees for photography courses:

Fee for B & W courses:	\$135
Fee for color courses:	\$215
Fee for an additional B & W course taken the same term:	\$55
Fee for an additional color course taken the same term:	\$135

ART 161 Photography I (also ARCH 251)

Fall, spring, or summer. 3 credits. Staff.

This course is a basic lecture-studio course in black and white photography for beginners. Emphasis is on basic camera skills, darkroom techniques, and understanding of photographic imagery.

ART 168 Black-and-White Photography

Summer. 3 credits. 3-week session only. Staff.

This course is intended for students at all levels, from introductory to advanced. Emphasis is on camera skills, darkroom techniques, and the content of black-and-white photographic imagery.

ART 169 Color Photography

Summer. 3 credits. 3-week session only. Staff.

This course is intended for students at all levels, from introductory to advanced. Emphasis is on camera skills, darkroom techniques, and the content of color photographic imagery.

ART 261 Photography II (also ARCH 351)

Fall, spring, or summer. 4 credits. Prerequisite: ART 161 or ARCH 251, or permission of instructor. Staff.

This course is a continuation of Photography I concentrating on black and white photographic processes, history and theory of creative practice, and individual projects.

ART 263 Color Photography

Fall, spring, or summer. 4 credits. Prerequisite: ART 161 or ARCH 251, or permission of instructor. Staff.

This course is a studio course in color photography with emphasis on camera skills, darkroom techniques, and the content of color photography.

ART 264 Photo Processes

Fall, spring, or summer. 4 credits. Prerequisite: ART 161 or ARCH 251, or permission of instructor. Staff.

This is a studio course in alternative and nonsilver photographic processes. Emphasis is on camera skill, basic techniques and processes, image content, and creative use of photo processes.

ART 265 Studio Photography

Fall or spring. 4 credits. Prerequisite: ART 161 or ARCH 251, or permission of instructor. Staff.

A course in the use of medium- and large-format cameras that explores technique, lighting, and the use of larger-format cameras for personal expression both in the studio and outdoors.

ART 361 Photography III

Fall, spring, or summer. 4 credits. Prerequisite: ART 161, 261, or permission of instructor. Staff.

This course is the continued study of creative use of photography, with emphasis on specialized individual projects.

ART 461 Pre-Thesis in Photography

Fall or spring. 6 credits. Prerequisite: ART 261, 263. Staff.

This is a studio course intended for photography majors and other qualified students.

ART 462 Thesis in Photography

Fall or spring. 6 credits. Prerequisite: ART 461. Staff.

This is a studio course intended for photography majors and other qualified students. Advanced photography project to demonstrate creative ability and technical proficiency.

ART 469 Independent Studio in Photography

Fall, spring, or summer. 4 credits variable. Prerequisite: student must be a junior in good academic standing and have the written permission of the instructor. Staff.

This course is an independent studio in photography that allows the student the opportunity to pursue special interests not treated in regularly scheduled courses. The student plans study and projects under the supervision of a faculty member selected to guide their progress and evaluate their results.

ART 761-762, 861-862 Graduate Photography

761, fall; 762, spring; first-year M.F.A. students. 9 credits. 861, fall; 862, spring; second-year M.F.A. students. 9 credits. Staff.

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

Studio Courses in Drawing

Fees for all drawing courses: \$25

ART 151 Drawing I

Fall, spring, or summer. 3 credits. Staff.
This course is general in nature and introduces students to principles and techniques of representation. Emphasis is on creating the illusion of space and form through line, the rendering of light and shade, and studies in perspective. In addition, students have the opportunity to explore various media such as charcoal, chalk, pencil, pen, ink and wash, etc.

ART 152 Drawing II

Spring. 3 credits. Prerequisite: ART 151. Staff.
This is a general course in drawing that emphasizes figure study and life drawing. This course builds on the foundation of ART 151 and concentrates on the analytical study of the figure. Students explore a variety of materials, traditional and contemporary.

ART 158 Conceptual Drawing

Summer. 3 credits. 6-week session only. Staff.
This course puts emphasis on drawing from the imagination. The generation of ideas and their development in sketches is stressed. The intent is not to produce finished art but rather to experience a series of problems that require image and design concepts different from those of the artist working directly from nature.

ART 159 Life and Still-Life Drawing

Summer. 3 credits. 6-week session only. Staff.
In this course the human figure and still life are studied both as isolated phenomena and in relation to their environment. Focuses are on helping the student observe and discover.

ART 251 Drawing III

Fall. 3 credits. Prerequisite: ART 152. Staff.
This course is an intermediate drawing course where students study composition, the articulation of form, and the illusion of space in a variety of materials. Expressive content, conceptualization, and the exploration of materials are stressed.

ART 252 Drawing IV

Spring. 3 credits. Prerequisite: ART 251. Staff.
An advanced drawing course with emphasis on life drawing and figure composition. Individual expression is encouraged along with creative investigation of materials and processes.

ART 459 Independent Studio in Drawing

Fall, spring, or summer. 4 credits variable. Prerequisite: student must be a junior in good academic standing and have the written permission of the instructor. Staff.
This course is an independent studio in drawing that allows the student the opportunity to pursue special interests not treated in regularly scheduled courses. The student plans study and projects under the supervision of a faculty member selected to guide their progress and evaluate their results.

Special Studio Courses

Course fees:

171, 372, 479	\$250
271, 272	\$105
391, 392	\$ 50
481, 482, 489	\$ 70

ART 171 Electronic Imaging in Art

Fall or spring. 3 credits. Staff.
This course is an introductory studio course using the computer as a tool for making art. Students explore various approaches to 2- and 3-D webart using software programs and various functions. This course is an introduction to the web.

ART 271 Electronic 3-D Modeling and Animation

Fall or spring. 4 credits. Prerequisite: ART 171. Not offered every year. Staff.
This is a studio course in creating 2- and 3-D still and animated visualizations using computers and 3-D software for object modeling, animation, and rendering. This course concentrates on the web.

ART 272 Digital Video and Sound

Fall or spring. 4 credits. Prerequisite: ART 171. Not offered every year. Staff.
This is a studio course that introduces students to digital video including capture stills, animation, video, and sound with an introduction to interactive presentation and CD ROM production. This course concentrates on the web.

ART 372 Special Topics in Art Studio

Fall, spring, or summer. 4 credits variable. Staff.
This course is an exploration of a particular theme or project.

ART 372.20 Special Topics in Art History

Fall or spring. 4 credits variable. Rome Program only. Staff.
Topic to be announced.

ART 379 Independent Studio in Rome

Fall and spring. 4 credits variable. Prerequisite: student must be a junior in good academic standing, and have the written permission of the instructor. Rome Program only. Staff.
This course is an independent studio in Rome that allows non-art majors the opportunity to pursue special interests in fine arts not treated in regularly scheduled courses. The student plans a course of study or projects that meet the approval of the faculty member selected to guide their progress and evaluate the results.

[ART 391 Media Arts Studio I

Fall. 3 credits. Prerequisite: one of the following courses: ART 171, THETR 277, 377, MUSIC 120, or equivalent; and student must be a junior and have permission of the instructor. Lab fee \$50. Not offered 2002-2003. Staff.
This course is a collaborative interdisciplinary studio course in a variety of digital and electronic media, including art, architecture, music, film and video, and dance. Group projects and discussions also investigate the artistic and interactive potential of a high-speed Intranet connecting arts spaces on campus, including virtual and performative events.]

[ART 392 Media Arts Studio II

Spring. 3 credits. Prerequisite: one of the following courses: ART 171, THETR 277, THETR 377, MUSIC 120, or equivalent. Also student must be a junior and have permission of instructor. Lab fee \$50. Not offered 2002-2003. Staff.
This course is a continuation of ART 391. A collaborative interdisciplinary studio course in a variety of digital and electronic media, including art, architecture, music, dance, film, and video. Group projects and discussions also investigate the artistic and interactive potential of a high-speed Intranet connecting arts spaces on campus, including virtual and performative events.]

ART 400 Rome Studio

Fall or spring. 4 credits. Rome Program only. Content for the Rome studio is determined by the instructor. Prerequisite: permission of instructor. Fee: \$60. Additional fees apply for photography and printmaking. Staff.
Emphasis is divided between work accomplished in the studio and work executed outdoors in the environs of Rome. Media consist primarily of painting, drawing, sculpture, and photography, or those assigned by the instructor. ART 400 fulfills four credits of the concentration requirement.

ART 479 Independent Studio in Electronic Imaging

Fall, spring, or summer. 4 credits variable. Prerequisite: student must be a junior in good academic standing and have the written permission of the instructor. Staff.
This course is an independent studio in electronic imaging that allows the student the opportunity to pursue special interests not treated in regularly scheduled courses. The student plans study and projects under the supervision of a faculty member selected to guide their progress and evaluate their results.

ART 481 Pre-Thesis in Combined Media

Fall or spring. 6 credits. Prerequisite: written permission of instructor on a combined media thesis form must be received in the art department prior to enrollment in the course. Staff.
In this course students are responsible, under faculty direction, for planning their own projects and selecting the media in which they will work. Projects should reflect experiences gained by exploring and combining various media including those taken in studio courses outside the department. Students select a faculty member from the area of concentration most appropriate to their area of combined media.

ART 482 Thesis in Combined Media

Fall or spring. 6 credits. Prerequisite: ART 481 and written permission of instructor on a combined media thesis form must be received in the art department prior to enrollment in this course. Staff.
In this course students are responsible, under faculty direction, for planning their own projects and selecting the media in which they will work. The projects should reflect experiences gained by exploring and combining various media including those taken in studio courses outside the department. Students select a faculty member from the area of concentration most appropriate to their area of combined media.

ART 489 Independent Studio in Combined Media

Fall, spring, or summer. Credits variable (maximum 4). Prerequisite: student must be a junior in good academic standing and have the written permission of the instructor. Staff.

This course is an independent studio in combined media that allows the student the opportunity to pursue special interests not treated in regularly scheduled courses. The student plans study and projects under the supervision of a faculty member selected to guide their progress and evaluate their results.

CITY AND REGIONAL PLANNING

P. Clavel, chair; I. Azis (visiting), S. Baugher, L. Beneria, R. S. Booth, S. Christopherson, S. Czamanski (emeritus), M. Drennan, A. M. Esnard, J. F. Forester, W. W. Goldsmith, director, URS; W. Isard (emeritus), N. Kudva, D. Lewis, J. Lobo, B. Lynch, P. Olpadwala, R. Pendall, K. Reardon, J. W. Reys (emeritus), S. Saltzman, S. W. Stein (emeritus), M. A. Tomlan, R. T. Trancik, T. Victorisz (visiting), M. Warner.

The department offers several programs of study at both the undergraduate and graduate levels.

The Undergraduate Program in Urban and Regional Studies

The Program in Urban and Regional Studies (URS) is a four-year academic program aimed at assessing the problems of human communities and regions. Students who graduate from the program receive a Bachelor of Science degree. The program provides both an excellent liberal arts education and a strong concentration of studies respecting urban and regional issues. The urban and regional studies courses in the program provide students with a broad understanding of relevant issues, the ability to assess those issues, and technical analysis skills. The URS Program is truly interdisciplinary. Students learn to evaluate urban and regional problems by using a wide range of analytic tools and disciplinary perspectives.

Basic Degree Requirements

Requirements for Graduation: URS requirements include: (1) eight semesters of residence; (2) 120 credits; (3) two freshman seminars; (4) qualification in one foreign language; (5) four groups of distribution requirements; (6) required courses for major; (7) area requirements for major; (8) free electives; (9) a minimum of 34 courses; and (10) completion of the university requirement of two one-credit nonacademic courses in physical education. Please note that physical education credit does not count toward graduation or toward the 12-credit minimum required for good academic standing each semester. Please note that no course may satisfy more than one requirement.

1. General education

- Freshman writing seminars: 2 courses
- Foreign language: 3 courses or qualification in one foreign language
- Distribution Requirements: 9 courses

Students must take a total of nine courses for the distribution requirement: four courses (of

three or more credits each) from Groups 1 and 2, at least two of which are from Group 1, and at least one of which is from Group 2; five courses from Groups 3 and 4, with at least two in each group and two in the same department. No single course may satisfy more than one distribution requirement. URS students must follow the College of Arts and Sciences guidelines specifying courses that meet the requirements for groups 1-4.

Group 1: Physical and biological sciences (2-3 courses required)

Group 2: Quantitative and formal reasoning (1-2 courses required)

Group 3: Social sciences and history (2-3 courses required)

Group 4: Humanities and the arts (2-3 courses required)

Advanced Placement Credit

Students may apply up to two courses of approved advanced placement credit in calculus, computer science, and science toward satisfaction of the distribution requirement in Groups 1 and 2 above, if they complete at least one science course during their undergraduate career. They may apply no advanced placement credit toward the distribution requirement in Groups 3 and 4. Grades of S-U courses cannot be applied to the distribution requirements.

2. Required Courses for the Major in Urban and Regional Studies: 5 courses

CRP 100: The American City

CRP 101: The Global City: People, Production, and Planning in the Third World

Statistics (at least 3 credits from approved list below)

AEM 210: Introduction to Statistics

BTRY 261: Statistical Methods

ECON 219: Introduction to Statistics and Probability

ILRST 210: Statistical Reasoning I

MATH 171: Statistical Theory and Application in the Real World

SOC 301: Evaluating Statistical Evidence (II)

Microeconomics course (at least 3 credits, from approved list)

Architecture course (at least 3 credits, from approved list)

Approved List of Microeconomics and Architecture Courses

Micro Economics:

ARME 250: Introduction to Statistics

PAM 200: Intermediate Microeconomics

ECON 101: Introduction to Microeconomics

ECON 301: Microeconomics

ARCH 131: An Introduction to Architecture I

ARCH 132: An Introduction to Architecture II

ARCH 181: History of Architecture I

ARCH 182: History of Architecture II

ARCH 399: Special Topics: Architectural History (Rome)

3. Area Requirements for the Major in Urban and Regional Studies: 11 courses

A. Students must take one listed CRP course in each of the following 6 areas: Design, Economics, Environment, History, Politics/Policy, Quantitative Analysis

a. Design

CRP 343: Affordable Housing Policy and Programs

CRP 381: Principles of Spatial Design and Aesthetics

CRP 491: Rome Wasn't Built in a Day

b. Economics

CRP 370: Regional Question: The Case of Italy (Rome)

CRP 401: Seminar in Urban Political Economy

CRP 404: Urban Economics

CRP 417: Industrial Restructuring: Implications for State and Local Policy

c. Environment

CRP 354: Introduction to Environmental Planning

CRP 378: Recycling Resource Management

CRP 380: Environmental Politics

CRP 384: Green Cities

CRP 443: Emerging Global Environmental Trends

*CRP 444: Resource Management & Environmental Law

*CRP 451: Environmental Law

*CRP 453: Environmental Aspects of International Planning

*Meets requirement only with instructor's permission.

d. History

CRP 261: Urban Archaeology

CRP 360: Pre-Industrial Cities and Towns of North America

CRP 361: Seminar in American Urban History

ARCH 399: Special Topics: Architectural History (Rome)

ART 317.20: Art History: Early Christian, Romanesque, and Gothic Art in Rome and Central Italy (Rome)

ART 318.20: Art History: Renaissance in Rome (Rome)

ART H 371: The History of Washington Architecture (Cornell-in-Washington)

HIST 419: Seminar in American Social History: Race, Class, and the American City (Cornell-in-Washington)

e. Politics/Policy

CRP 293: Inequality, Diversity, and Justice

CRP 314: Planning, Power, and Decision Making

CRP 318: Politics of Community Development

CRP 363: American Indians, Planners, and Public Policy

CRP 371: Cuba: The Search for Developing Alternatives

CRP 376: Latin American Cities

CRP 412: Devolution, Privatization, and the New Public Management

CRP 416: European City-Urban Political Economy (Rome)

CRP 418: Government Policy Workshop

CRP 448: Social Policy and Social Welfare (also Cornell-in-Washington)

CRP 474: The Third World Urbanization

GOVT 500: Politics/Policy: Theory, Research, and Practice (Cornell-in-Washington)

(4 credits of the 8-credit course—see B below)

f. Quantitative Analysis

CRP 321: Introduction to Quantitative Methods for the Analysis of Public Policy

CRP 328: Overview: Quantitative Methods Policy Analysis

CRP 408: Introduction to Geographic Information Systems (seniors only)

CRP 529: Mathematics for Planners

ILRST 211: Quantitative Reasoning II

- B. Students must take any additional 5 CRP courses (of at least 3 credits each, letter grade only)

NOTE: Cornell-in-Washington Program: GOVT 500: Politics/Policy: Theory, Research, and Practice can be used to fulfill four credits.

4. Free Electives: 6-9 courses

5. Physical Education (2 terms of PE)

Required courses for graduation: 34

Required credits: 120

Honors Program

Each year a few well-qualified juniors may join the honors program. Each honors student develops and writes an honors thesis under the guidance of his or her faculty adviser.

Concentrations

The department recognizes concentrations earned within the university (accepting standards set by various colleges). Students may apply for concentrations in any college (e.g. Africana Studies, Architecture, Latino Studies, Southeast Asian Studies, Women's Studies, etc.). When a student satisfies the requirements for a concentration, and formal notification is received by the AAP Registrar, the concentration will be recorded on the student's official transcript.

Off-Campus Opportunities

Cornell-in-Washington Program. Students in good standing may earn degree credits in the Cornell-in-Washington program through course work and an urban-oriented externship

in Washington, D.C. Students may work as externs with congressional offices, executive-branch agencies, interest groups, research institutions, and other organizations involved in the political process and public policy. Students also select one or two other seminars from such fields as government, history, economics, human development, architectural history, natural resources, and social policy. Cornell faculty members teach these seminars, which provide credit toward fulfillment of major, distribution, and other academic requirements.

Cornell Abroad. Qualified undergraduates are encouraged to study abroad because exposure to foreign cultures can be an eye-opening aspect of a university education. In an increasingly interdependent world, the experience of living and learning in a foreign country is invaluable. Study abroad opportunities are continually being developed. Current programs are available in Great Britain, Spain, and Germany. Opportunities in Asia, the Mideast, and France should be forthcoming. We encourage URS students to explore these opportunities.

Cornell-in-Rome Program. The College of Architecture, Art, and Planning has a teaching facility in Rome located in the sixteenth-century Palazzo Massimo. Students in good standing can earn degree credits through courses taken with Cornell faculty assigned to Rome and with accredited instructors. Courses are available in areas of urban development, regional development, and architecture and art.

Research and fieldwork. Students are welcome to work with department faculty members on research or other opportunities that are appropriate to their particular interests. Fieldwork and community-service options also exist for students in the Urban and Regional Studies Program.

Additional Degree Options

Linked degree options. Urban and regional studies students may earn both a Bachelor of Science degree and a Master of Regional Planning (M.R.P.) degree in a fifth year of study. Ordinarily the professional M.R.P. degree requires two years of work beyond that for the bachelor's degree. Under this option, a minimum of 30 credits and a master's thesis or thesis project are required for the M.R.P. degree. Interested students apply to the Graduate School, usually in the senior year.

Dual degree option. A student accepted in the Cornell College of Arts and Sciences may earn both a B.A. in a College of Arts and Sciences major and a B.S. in urban and regional studies in a total of five years. Special requirements have been established for this dual degree program. Cornell students interested in pursuing the dual degree program should contact either the director of the Urban and Regional Studies Program or the appropriate dean of the College of Arts and Sciences for further information.

Admissions Requirements and Procedures

Among the most important criteria for admission to the Urban and Regional Studies Program are intellectual potential and commitment—a combination of ability, achievement, motivation, diligence, and use of educational and social opportunities. Nonacademic qualifications are important as

well. The department encourages students with outstanding personal qualities, initiative, and leadership ability. Above all, the department seeks students with a high level of enthusiasm and depth of interest in the study of urban and regional issues. Applicants must complete a university admission application.

Transfer Students

In most cases, transfer applicants should no longer be affiliated with a high school and should have completed no fewer than 12 credits of college or university work at the time of application. High school students who have completed graduation requirements at midyear and are taking college courses for the rest of the academic year should apply as freshmen. Prospective candidates who believe that their circumstances are exceptional should consult with the Director of Admissions in the Cornell division of interest to them before filing an application.

Forms for transfer application and financial aid are available from the Cornell University Office of Admissions, 410 Thurston Avenue, Ithaca, NY 14850-2488. Official transcripts of all high school and college work must be submitted along with SAT or ACT scores and letters of recommendation.

Prospective transfers should have taken at least 6 credits in English. In addition, students should have taken basic college-level courses distributed across the natural and social sciences, humanities, and mathematics. Applicants whose previous course work closely parallels the "General Education" requirements of the Urban and Regional Studies curriculum will have relative ease in transferring. Nevertheless, students with other academic backgrounds, such as engineering, architecture, fine arts, management, and agriculture, are eligible to apply.

Although an interview is not required, applicants are urged to visit the campus. Applicants who want further information regarding the Urban and Regional Studies Program, may contact Professor William W. Goldsmith, Program Director, Urban and Regional Studies, Cornell University, 106 West Sibley Hall, Ithaca, NY 14853-6701 (telephone: 607-255-4613).

The Graduate Program in City and Regional Planning

There are five graduate degree programs in the city and regional planning department. The Master of Regional Planning program stresses skills basic to professional planning practice and responds to individual needs and interests. The faculty strongly recommends that students concentrate in one of three areas of planning. The Land Use and Environmental Planning concentration focuses on the forces and actions that directly affect the physical character, transformation, rehabilitation, and preservation of cities and regions. Economic Development Planning: Communities and Regions focuses on the economies of neighborhoods, cities, and regions with the intent of producing more informed and effective economic development policy. International Studies in Planning (ISP) focuses on urban, regional, and international development processes and their implications for people's lives and livelihoods in diverse international contexts.

The Master of Professional Studies in International Development (MPS/ID) degree is

administered jointly with the Cornell International Institute for Food, Agriculture, and Development (CIIFAD). Is it intended to meet the specific training needs of experienced planners or mid-career professionals in related fields.

The 60-credit Master of Arts (MA) in Historic Preservation Planning prepares students for professional work in the creative preservation and utilization of our physical heritage.

The Master of Science (MS) or Master of Arts (MA) in Regional Science is the study of regional economies and their interactions with each other. Central issues include capital flows, trade, location of economic activity, growth, and regional conflicts. Graduates are positioned for careers as researchers and policy analysts at the highest levels in national governments, corporations, and international organizations.

The Doctor of Philosophy (PhD) program is for those who seek advanced, specialized education for a career in teaching, research, or policy making.

Off-Campus Opportunities

Rome Program. Graduate students have the opportunity to spend one or two semesters in Rome, studying at Cornell's center at the Palazzo Massimo. Instruction is given by Cornell professors-in-residence and by other faculty. The program is structured to include work assignments in one of the international development organizations headquartered in Rome.

Course Information

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 have the permission of the instructor.

The department attempts to offer courses according to the information that follows. However, students should check with the department at the beginning of each semester for late changes.

Undergraduate Program in Urban and Regional Studies

CRP 100 The American City

Fall. 3 credits. S-U grades optional for out-of-department students only.
W. W. Goldsmith.

An introductory course on the evolution of urban problems and opportunities facing the majority of this country's population as we enter the first decade of the twentieth-first century. Readings, discussions, and brief papers explore topics ranging from suburban development to central city poverty, from environmental threats to downtown revitalization, and from municipal finance to the new position of women in the urban economy.

CRP 101 The Global City: People, Production, and Planning in the Third World

Spring. 3 credits. S-U grades optional for out-of-department students only. N. Kudva.
A critical look at the physical and social development of giant cities in the Third World. Their origins, roles, contributions, and shortcomings are examined. Their place in world political economy is evaluated. Policy prescriptions for their principal problems are discussed.

CRP 261 Fieldwork in Urban Archaeology

Fall. 3 credits. Not offered 2002-2003.
For description, see LA 261.]

CRP 293 Inequality, Diversity and Justice (also GOVT 293, PHIL 193, SOC 293)

Fall. 4 credits. R. Miller.
For description, see PHIL 193.

CRP 309 Community Development Seminar (also CRP 509)

Spring. 3 credits. Letter grade. K. Reardon.
The seminar provides an introduction to the theory, method, and practice of contemporary community development. Topics examined include: the role community-based organizations are playing in promoting sustainable development in distressed communities; the contribution planners are making to enhancing the organizational capacity of community-based organizations; and the interplay between neighborhood-based community development activities and regional economic development policy-making.

CRP 314 Planning, Power, and Decision Making

Fall. 3 credits. Staff.
This seminar examines various bases of political and professional power. What do professionals who want to serve the public need to know about power and decision-making processes in the institutional settings in which they operate? How and why can professionals make a difference when facing problems characterized by great complexity and severe inequalities among affected groups? The course addresses these questions and many others.

CRP 318 Politics of Community Development (also CRP 518)

Spring. 3 credits. Letter grade. P. Clavel.
A seminar on city economic development and community institutions. Attention to issues of local politics, planning, housing, and economics. Term papers on field investigations are encouraged. Topics vary from year to year.

CRP 321 Introduction to Quantitative Methods for the Analysis of Public Policy

Spring. 3 credits. Not offered every year.
Staff.

An introduction to the role and use of quantitative methods in the study of urban and regional issues. This course focuses on various types of models commonly used to analyze urban and regional policy, including regression models, cost-benefit analysis, simulation, and others. Strengths and weaknesses of those methods are also be considered.

CRP 328 Overview: Quantitative Methods in Policy Planning (also CRP 528)

Fall. 3 credits. S-U grades optional.
P. Stein.

This course introduces students to the basic tools that are used in policy analysis. Its goal is to set the context for the techniques presented, to understand the questions that each addresses, to be aware of their potential and limitations, their range of applicability, and the pitfalls to be avoided.

CRP 330 Neighborhood Planning Workshop (also CRP 530)

Fall. 4 credits. Letter grade. K. Reardon.
This workshop offers students the opportunity to collaborate with local residents, leaders and officials in the development of revitalization plans that address the critical environmental, economic, and social challenges confronting their neighborhoods. A participatory action research approach is used to co-produce professional-quality development plans with local stakeholder groups. Significant fieldwork required.

CRP 343 Affordable Housing Policy and Programs (also CRP 643)

Spring. 3 credits. S-U grades optional.
R. Pendall.
An overview of federal, state, and local policies and programs to deliver affordable housing to low-income people, public housing, vouchers, inclusionary zoning, rent control, and much more. Lectures, debates, short papers, and term paper.

CRP 354 Introduction to Environmental Planning (also CRP 554)

Spring. 3 credits. S-U grades optional.
A-M. Esnard.
An introduction to problems facing planners and decision makers as they attempt to manage and preserve environmental quality in urban and rural settings. Case studies are used to discuss issues related to sustainability, quality of life, environmental hazards and environmental justice. Students are also introduced to the basic regulatory and institutional aspects of environmental planning and tools and techniques for environmental impact assessment, inventorying and risk analysis.

CRP 360 Pre-Industrial Cities and Towns of North America (also LA 260/LA 666 and CRP 666)

Fall. 3 credits. S-U grades optional. Not offered 2002-2003.
For description, see LA 260.]

CRP 361 Seminar in American Urban History (also CRP 661)

Fall or spring. 3 credits. Prerequisite: permission of instructor. M. Tomlan.
Seminar in the historical evolution of the American city. Emphasis on factors in urban growth, the process of urbanization, the urban reform movement, and intellectual and social responses to the city.

CRP 363 American Indians, Planners, and Public Policy (also CRP 547 and LA 263/LA 547)

Spring. 3 credits. S. Baugher.
For description, see LA 263.

CRP 368 The History of Urban Form in America (also CRP 668)

Fall. 3 credits. Letter grades. M. Tomlan.
This course covers the history of city planning in America from colonial times to the early 20th century including brief reviews of European influences on urban form. Lectures, discussions, and short papers.

CRP 370 The Regional Question: The Case of Italy

Spring. 4 credits. For majors in urban and regional studies only. Rome Program only.
Staff.

The "regional problem" in Italy has long interested regional planners, economists, sociologists, and political scientists. This course makes use of field trips to the Italian Mezzogiorno and the North to explore

theoretical and practical aspects of regional inequality. The question of how Italy's integration into the European Union affects and is affected by its regional issues will be considered.

CRP 371 Cuba: The Search for Development Alternatives

Fall. 3 credits. Open to sophomores, juniors, seniors. Not offered every year. B. Lynch.

Cuba is a symbol; it is also a society. This course looks beyond the symbol to Cuban society, environment, and political economy in a Caribbean context. The 1959 Revolution was a defining moment in Cuban history and a central element in Cuban culture. Students learn about the experiences that shaped the revolution, altered its course in the 1970s and 1980s, and led to the special period of the 1990s.

CRP 376 Latin American Cities (also CRP 676)

Fall. 3 credits. Not offered every year. B. Lynch.

This course offers students an opportunity to understand urban dynamics in a rapidly changing region of the world. We ask how colonial powers, the nation-state, and global economic forces have shaped Latin American urban landscapes and the patterns of daily life in the city. The first part of this course explores the social, political, and spatial dimensions of these processes. Topics include rural-urban flows, sociospatial segregation, housing environment and employment. The second half of the course focuses on responses to these social and economic transformations: violence and repression, coping strategies, social movements, and transmigration.

CRP 378 Recycling and Resource Management (also CRP 578)

Spring. 3 credits. S-U grades optional. Not offered every year. R. Young.

Advanced resource recycling and management systems are critical to the development of a sustainable society. This course reviews the political, technological, and economic strategies necessary for cities and communities to achieve a closed loop resource management system. Drawing from readings, speakers, and field trips that examine the cutting edge of recycling program development, the course provides students with comprehensive exposure to leading practitioners and best practices in the recycling field. Open to undergraduate and graduate students. Graduate students have additional research requirements.

CRP 380 Environmental Politics

Fall. 4 credits. Letter grade. R. Booth.

Examines the politics of public decisions affecting the environment. Focuses on the roles played by different political actors, the powers of various interest groups, methods for influencing environmental decisions, and the political and social impacts of those decisions.

CRP 381 Principles of Spatial Design and Aesthetics (also CRP 581)

Fall. 3 credits. Course enrollment is limited to 30 students. R. Trancik.

A lecture course that introduces the spatial and visual design vocabularies of cities. Aesthetic principles and theories of design are investigated for different types of urban spaces drawn from a variety of international examples, historic and modern. Included in the course are design methods and applica-

tions in the contemporary urban context of Europe and North America.

CRP 384 Green Cities (also CRP 584 and LA 495)

Fall. 4 credits. S-U grades optional. Not offered every year. R. Young.

For the first time in history, a majority of human beings live in cities. As a result, any realistic solution to the global ecological crisis will need to include strategies for urban life that are ecologically sound. This course examines the history and future of urbanecology and the technology and politics that shape it. Alternative transportation, renewable energy, urban design, recycling and resource management, and sustainable economics are explored as means toward transforming cities to become the basis of a new, ecological society. Open to both graduate and undergraduate students. Graduate students have additional research requirements.

CRP 395 Special Topics

Fall, spring, summer. 4 credits variable. Hours to be arranged. Staff.

For description, see department coordinator, 106 West Sibley.

CRP 395.03 Wilderness and Wildlands: Issues in Policy and Planning (also CRP 679.03)

Fall. 2-3 credits variable. Graduate seminar open to juniors and seniors. Not offered every year. L. Thorndike.

Wilderness and Wildland resources have been under assault by the Congress, the "Wise Use" movement, property rights activists, pollutants and the actual users. This seminar will consider historical and philosophical foundations and political factors that impact decisions about wilderness policies, planning, acquisition, protection and management. The role of government, professional planners and managers, organized special interests, legal system, citizens, and user groups will be examined. Practical exposure to planning and policy development through readings, discussions, guest practitioners and field trip to Finger Lakes National Forest. Optional weekend trip to Adirondack Park Wilderness area.

[CRP 400 Introduction to Urban and Regional Theory

Fall. 4 credits. Not offered 2002-2003. Staff.]

[CRP 401 Seminar in Urban Political Economy

Spring. 4 credits. Not offered 2002-2003. Staff.]

CRP 404 Urban Economics (also CRP 504)

Spring. 4 credits. Prerequisite: microeconomics. M. Drennan.

Urban phenomena are analyzed from an economic point of view. Areas examined include economic aspects of urbanization processes and policies, determinants of urban growth and decline, urban land and housing markets, urban transportation, and urban public services. Some time is spent in discussing problems of cities in developing countries.

CRP 408 Introduction to Geographic Information Systems (GIS) (also CRP 508)

Spring. 4 credits. Letter grade. A-M. Esnard.

Geographic Information Systems (GIS) have revolutionized the way we manage, analyze, and present spatial information. This course focuses on GIS in the social sciences. Many of the exercises and examples are based on planning issues, but the concepts can be applied to many other disciplines such as government, economics, natural resources, and sociology. Some of the issues covered include: fundamentals of spatial analysis; overview of GIS technology and applications; designing a GIS project; gathering and analyzing data; and creating thematic maps.

CRP 412 Devolution, Privatization, and the New Public Management (also CRP 612, AEM 443/633, and WOMNS 411/611)

Fall. 3 credits. S-U grades optional. M. Warner.

This course addresses devolution and decentralization of government services in a national and international context and then focuses on the local public sector response in the United States. Privatization, intermunicipal cooperation, and internal restructuring are reviewed including changing roles for the private sector, nonprofit sector; and unions. Implications for policy, program design, public advocacy, and citizen involvement are addressed. A special topic may include welfare reform. Graduate students are expected to write a major research paper in addition to short papers throughout the term.

CRP 416 European City: The Public Sphere and Public Space

Spring. 2-4 credits variable. Open to all juniors and seniors. S-U option available to non-majors. Enrollment may be limited by the instructor. Rome Program only. Staff.

An examination of the social, economic, and political life of the European city, particularly Italian cities, especially Rome. Study of the socio-economic underpinnings of the city. How are cities organized, and how do citizens relate to the state, the city to the nation, the nation to the global market? How and where do different groups of people live? How do they travel, inside the city and from city to city? How are new parts of the city developed and old ones preserved, transformed, or destroyed? What public services do people expect, and how are they delivered? What is the role of private business? How do Italians/Europeans confront problems of the urban environment, poor neighborhood services, and impoverished immigrants? In all these cases, how do Italian (or European) conditions and policies differ from those in the United States (or elsewhere)? All of these questions are covered.

CRP 417 Industrial Restructuring: Implications for State and Local Policy (also CRP 517)

Spring. 4 credits. S. Christopherson.

A basic introduction to new issues arising from the way in which national and international economic shifts are affecting diverse United States localities. The course focuses on intra-industry restructuring, the location of economic activities, and state and local economic policy. Cases are drawn from a variety of industries and national situations, with specific application to New York and other Northeast locations.

CRP 418 Government Policy Workshop (also CRP 618, AEM 434/634 and WOMNS 420/620)

Spring. 4 credits. S-U grade optional. M. Warner.

Students undertake research requested by clients (associations of local government, unions, non-profits, and state, federal, and international agencies) to analyze and identify alternative approaches to restructuring government service delivery. The course requires teamwork and includes qualitative and quantitative methods of analysis in collaboration with clients.

CRP 443 Emerging Global Environmental Trends (also CRP 543)

Spring. 3 credits. Letter grade only. Limited to 20 students. Open to juniors, seniors, and graduate students, and by permission of instructor. R. Booth.

This seminar focuses on the emergence of broad trends that suggest human society is facing a global environmental crisis. It examines the factual grounds on which concern about these trends is founded, their implications, and the types of steps human society might take in order to reverse or otherwise alter these trends before they generate enormous and irreversible problems.

CRP 444 Resource Management and Environmental Law (also CRP 544 and NTRES 444)

Spring. 4 credits. Letter grade. Open to juniors, seniors, and graduate students, and by permission of instructor. R. Booth.

This course introduces the application of legal concepts and processes to the management of natural resources and natural resource areas. It explores the role of the common law, statutory law, administrative regulations, and judicial decisions in managing these resources. Particular focus is given to the management of wildlife, wetlands, and critical resources on public lands, and to the conflicts inherent in government attempts to regulate important natural resources on private lands.

CRP 448 Social Policy and Social Welfare (also CRP 548)

Spring. 4 credits. S. Christopherson.

This course addresses conceptual issues underlying social policy and the provision of social welfare and analyzes how different positions are reflected in a set of current social welfare controversies. The first part of the course introduces principles that guide the development of social policy including fairness and justice. Various conceptions of society are examined with reference to their influence on the nature and extent of social welfare provision, comparing the United States with other industrialized countries. The second part of the course examines how economic change and government policy affect social provision in the United States.

CRP 451 Environmental Law (also CRP 551)

Fall. 4 credits. Letter grade. R. Booth.

An introduction to how the legal system handles environmental problems. Study of federal environmental statutes (e.g. the National Environmental Policy Act, the Clean Air Act, and the Clean Water Act) and important judicial decisions that have been handed down under those statutes and federal regulations. Discussions cover environmental law topics from a policy management perspective. This course is designed for undergraduate and graduate students

interested in urban issues, planning, natural resources, government, environmental engineering, law, business, architecture, landscape architecture, and other topics. Course assignments for graduate students differ in some aspects from those for undergraduates.

CRP 453 Environmental Aspects of International Planning (also CRP 683)

Fall. 4 credits. Open to advanced undergraduate and graduate students in planning, environmental studies, and related social and natural sciences. B. Lynch.

This seminar examines the ways in which roles of diverse environmental actors—international organizations, national bureaucracies, scientific communities, NGOs, and social movement organizations—formulate environmental debates and design conservation and remediation programs and policies in the Third World.

CRP 457 Community Service Fieldwork

Fall or spring. 4 credits variable. Permission of instructor required. Staff.

Undergraduate students work under the direction of a faculty member in the CRP department on a project that assists a public or nonprofit organization. Projects involve urban and regional issues as defined by a client and agreed upon by the faculty member.

CRP 474 Third World Urbanization (also CRP 674)

Spring. 4 credits. S-U grades optional. B. Lynch.

Colonialism and economic globalization have profoundly affected urban Third World societies and landscapes often by relegating everyday urban life to the margins and shrouding it in illegality. This course explores social, political, and spatial dimensions of these processes. Covered are rural-urban dynamics and their implications for the structure of urban space and for concepts of state and citizenship. The position of Third World cities in the global economy and implications for employment are assessed, with special attention to women workers and urban environment. The second half of the course focuses on responses to these massive changes: violence and repression, social movements, and transmigration.

CRP 477 Issues in African Development (also CRP 677)

Fall and spring. 1 credit. S-U grades only. M. Ndulo.

This course examines a broad range of critical concerns in contemporary Africa including food production, human resource development, migration, urbanization, environmental resource management, economic growth, and policy guidance. The weekly presentations are made by invited specialists. Students are required to write a term paper.

CRP 490 Student-Faculty Research

Fall or spring. 1-4 credits. Limited to undergraduate students in the Urban and Regional Studies Program. S-U grades only. Staff.

Research, reading and/or writing project in which a student and faculty member choose a topic related to urban and regional studies.

CRP 491 Rome Wasn't Built in a Day

Spring. 3 credits. Letter grade. Not offered every year. R. Trancik.

In this electronic course, students learn about how the form and spatial structure of the city of Rome has evolved through time. Using the interactive CD-ROM, *Layers of Rome* as a digital text, the course engages participants in the investigations of urban design in Rome both as a case study and as a vehicle for exploring concepts applicable to many contemporary cities worldwide. The material focuses on the intersection between historical studies of urban space, architectural geography, urban landscape formation, and the design of cities. Lectures, research, readings, and exercises are developed using the *Layers of Rome* CD, web searches, digital networking, and various interactive learning technologies geared toward urban analysis and visual design media.

CRP 492 Honors Thesis Research

Fall or spring. 4 credits. Limited to Urban and Regional Studies Program majors who have been selected as honor students by the department faculty. Staff.

Each selected student works with his or her thesis adviser.

CRP 493 Honors Thesis Writing

Fall or spring. 4 credits. Prerequisite: completion of CRP 492. Staff.

Each selected student works with his or her thesis adviser.

CRP 497 Supervised Readings

Fall or spring. Variable 4 credits. Limited to juniors and seniors. Prerequisite: permission of instructor. Staff.

Graduate Courses and Seminars

Courses numbered from 500 to 599 and 600 to 699 are generally considered introductory or first-year courses; those numbered from 700 to 799 and 800 to 899 are generally considered more advanced. Upperclass undergraduate courses are numbered from 300 to 499. (Undergraduate students with the necessary prerequisites and permission of the instructor may enroll in courses numbered 500 and above.)

CRP 504 Urban Economics (also CRP 404)

Spring. 4 credits. Prerequisite: microeconomics. M. Drennan.

For description, see CRP 404.

CRP 508 Introduction to Geographic Information Systems (GIS) (also CRP 408)

Spring. 4 credits. Letter grade. A-M. Esnard.

For description, see CRP 408.

CRP 509 Community Development Seminar (also CRP 309)

Spring. 3 credits. Letter grade. K. Reardon.

For description, see CRP 309.

CRP 512 Public and Spatial Economics for Planners

Fall. 3 credits. Letter grade. No prior knowledge of economics necessary. M. Drennan.

Covers basic microeconomic theory and some topics in macroeconomics. What distinguishes it from foundation courses in economics is that the context of every topic is both spatial and public. The concept of space is central to city and regional planning. The perspective of the public and nonprofit sectors is the same as that of city and regional planning. Both space and the public-nonprofit sectors are peripheral to (or absent from) the usual graduate foundations courses in economics. The course

also covers the economic theory necessary to understand the many applications of economics presented in subsequent courses in city and regional planning.

CRP 513 Introduction to Planning Practice and History

Fall. 4 credits. P. Clavel and N. Kudva. An introductory graduate seminar on the theory and history of planning, administration, and related public intervention in urban affairs. Topics are analyzed from the perspective of the political economy of the growth and development of cities. Students improve their understanding of the planning process and of the urban application of the social sciences, get practice in writing, and explore one research topic in depth.

CRP 517 Industrial Restructuring: Implications for State and Local Policy (also CRP 417)

Spring. 4 credits. S. Christopherson. For description, see CRP 417.

CRP 518 Politics of Community Development (also CRP 318)

Spring. 3 credits. Letter grade. P. Clavel. For description, see CRP 318.

CRP 519 Urban Theory and Spatial Development

Spring. 3 credits. Letter grade. W. W. Goldsmith. This course surveys theories on the existence, size, location, and functioning of cities and their metropolitan areas in rich and poor regions of the world. We consider orthodox/conservative treatments as well as critical/left-wing perspectives of planners, geographers, economists, sociologists, and political economists. These theories are indispensable for understanding the origins of cities, the persistence of urban and regional spatial patterns, and the distinctive nature of urban problems.

CRP 520 Statistical and Mathematical Concepts for Planning

Fall. 3 or 4 credits. Not offered every year. Staff.

An introduction to statistical and mathematical concepts and methods of importance in planning and policy analysis. Topics include matrix algebra, probability, sampling, estimation, and regression, and the use of a microcomputer statistical package.

CRP 521 Mathematical Foundation for Planning Analysis.

Fall. 1 credit. S-U grades only. Meets for two hours, once each week, for approximately half the semester. Not offered every year. Staff.

Review of mathematical foundations for planning analysis. Topics include probability statistics, mathematical functions, and matrix algebra. Intended for students with prior course work as a refresher course in preparation for higher-level courses in planning analysis. Departmental permission required.

CRP 525 Introductory Methods of Planning Analysis

Fall. 4 credits. Letter grade. R. Pendall. A course on quantitative and qualitative analysis of neighborhoods, cities, and regions. Focus is on data from various regions of the United States, but tools are applicable throughout the world. They include: descriptive and inferential statistics, mapping, and observation. Required lab exposes students to essential microcomputer applications and builds skills in writing and analysis.

CRP 528 Overview: Quantitative Methods in Policy Planning (also CRP 328)

Fall. 3 credits. S-U grades optional. P. Stein.

For description, see CRP 328.

CRP 529 Mathematics for Planners

Fall. 4 credits variable. S-U grades optional. Staff.

The course covers basic mathematical concepts and techniques—with an emphasis on calculus—needed by the student who wishes to take intermediate-level courses in economics, urban and regional analysis, quantitative methods for the social sciences, and policy analysis. Topics include: matrix algebra, set theory, functions, differentiation, and integration.

CRP 530 Neighborhood Planning Workshop (also CRP 330)

Fall. 4 credits. Letter grade. K. Reardon. For description, see CRP 330.

CRP 532 Real Estate Development Process

Fall. 3 credits. Letter grade. B. Olson. Examination of various forms of development as well as the role of major participants in the processes. Reviews issues in residential, retail, industrial, office, and low-income housing projects. Guest speakers and case studies included.

CRP 533 Real Estate Marketing and Management

Fall. 3 credits. R. Abrams. The course focuses on the tenant or user as the basic source of the value of real estate. Students explore the characteristics and needs of tenants, and how the ownership and management of buildings respond to these needs. Office buildings are considered in detail while key elements common to the operation and marketing of all types of property are reviewed. Topics include examination of tenant types, factors creating preferred locations, building services and operations, negotiation of lease agreements, marketing campaigns, and governmental regulations. Guest speakers and case studies included.

CRP 537 Real Estate Seminar Series

Fall and spring. 1/2 credit per term. S-U grades only. Restricted to MPS/RE students. B. Olson.

A one-credit course designed to bring students weekly into direct contact with real estate professionals mainly through the use of videoconferences originating from locations around the world.

CRP 543 Emerging Global Environmental Trends (also CRP 443)

Spring. 3 credits. Letter grade. Limited to 20 students. R. Booth.

For description, see CRP 443.

CRP 544 Resource Management and Environmental Law (also CRP 444 and NTRES 444)

Spring. 4 credits. Letter grade. R. Booth. For description, see CRP 444.

CRP 545 Introduction to Quantitative Methods for the Analysis of Public Policy

Spring. 3 credits. Basic statistics is a prerequisite for this course. Not offered every year. M. Drennan.

An introduction to econometrics, covering bivariate and multivariate regression.

Applications include population, employment, and tax revenue forecasting for sub-national economies. Probit and logit models explained. Lectures and plan-making exercises included.

CRP 546 Introduction to Community and Environmental Dispute Resolution

Fall. 3 credits. J. Forester. This course explores the theories and techniques of dispute resolution as they apply to community, environmental, and related public policy disputes. Analysis complements skill-building. Issues of power, participation, and strategy are central to our examinations of negotiation and mediation practice.

CRP 547 American Indians, Planners, and Public Policy (also CRP 363 and LA 263/LA 547)

Spring. 3 credits. S. Baugher. For description, see LA 263.

CRP 548 Social Policy and Social Welfare (also CRP 448)

Spring. 4 credits. S. Christopherson. For description, see CRP 448.

[CRP 549 Ethics and Practical Judgment in Planning

Spring. 4 credits variable. Not offered 2002-2003. Staff.

An introduction to problems of practical judgment and ethics as they arise in planning and public-serving professional practice. Issues such as consent, interests, deliberation, and legitimacy are central concerns.]

CRP 551 Environmental Law (also CRP 451)

Fall. 4 credits. Letter grade. R. Booth. For description, see CRP 451.

CRP 552 Urban Land-Use Planning I

Fall. 3 credits. Letter grade. A-M. Esnard. Course covers surveys, analyses, and plan-making techniques for guiding physical development of urban areas, location requirements, space needs, and interrelations of land uses. Emphasis is on residential, commercial, and industrial activities and community facilities, and housing and neighborhood conditions. Lectures, seminars, and field exercises.

CRP 553 Land-Use Regulations

Spring. 3 credits. R. Pendall. Seminar covers the essentials of "smart growth", zoning, and subdivision, and the main tools for implementing a land-use plan. Also covers agriculture and open space preservation, infrastructure timing controls, redevelopment, planned unit development, and more.

CRP 554 Introduction to Environmental Planning (also CRP 354)

Spring. 3 credit. S-U grades optional. A-M. Esnard.

For description, see CRP 354.

CRP 555 Urban Systems Studio (also LA 701)

Fall. 5 credits. Prerequisite: permission of instructor. R. Trancik. Application of urban design and town planning techniques to specific contemporary problems of city environments. Issues of urbanism are investigated and applied to physical design interventions involving the street, square, block, garden, and park systems. Topics covered in the studio include urban land-use development, spatial systems and aesthetics, and public and private implementation of urban-design plans.

Computer modeling and digital design media are introduced as tools for urban design. This is a specially arranged collaborative studio with the Landscape Architecture Program.

CRP 556 Design in Real Estate Development

Spring. 3 credits. S-U grades optional. M. Schack.

This course provides a basic understanding of the importance of design in real estate development. The role of the architect and other design professionals is considered from the initial needs assessment through project implementation. Fundamentals involved in defining, stimulating and recognizing quality in design are addressed. The analysis of case study presentations by guest speakers examine the methods and procedures employed to achieve quality design and how this can create added value to development.

CRP 557 City Planning Design Studio

Spring. 4 credits. Prerequisite: previous design courses or permission of instructor. Not offered every year. Staff.

A series of individual and team small area design projects at district, neighborhood, and project scale. The course objective is to develop an understanding of the spatial issues, knowledge, and skills needed to design for the functional, aesthetic, social, and cost needs of urban communities. Studio projects, field trips, and reading.

CRP 558 City and Regional Planning Workshop

Fall or spring. 4 credits variable. S-U grades optional. R. Pendall.

Students work on urban issues, such as housing, traffic and parking, economic development, zoning, and related planning issues with public or non-profit organizations in New York State. Projects are undertaken on a community-service basis for "clients" who specifically request planning assistance. Students work individually or in teams.

CRP 560 Documentation for Preservation (also ARCH 586)

Fall or spring. 3 credits. Letter grade. M. Tomlan.

Methods of identifying, recording, collecting, processing, and analyzing information dealing with historic and architecturally significant structures, sites, and objects.

CRP 561 Historic Preservation Planning Workshop: Surveys and Analyses (also ARCH 588)

Fall or spring. 4 credits. Letter grade. M. Tomlan.

Course covers techniques for the preparation of surveys of historic structures and districts; identification of American architectural styles, focusing on upstate New York; and explorations of local historical resources, funding sources, and organizational structures. Lectures and training sessions. Emphasis on fieldwork with individuals and community organizations.

CRP 562 Perspectives on Preservation (also ARCH 585)

Fall. 3 credits. Letter grade. M. Tomlan.

Introductory course for preservationists. A survey of the historical development of preservation activity in Europe and America leading to a contemporary comparative overview. Field trips to notable sites and districts.

CRP 563 Problems in Contemporary Preservation Practice (also ARCH 584)

Spring. Variable credit. M. Tomlan.

A review and critique of ongoing preservation projects and an investigation of areas of expertise currently being developed. Presented by staff and guest lecturers.

CRP 564 Building Materials Conservation (also ARCH 587)

Spring. 3 credits. Letter grade. Open to juniors, seniors, and graduate students. M. Tomlan.

A survey of the development of building materials in the United States, chiefly during the nineteenth and early twentieth centuries, and a review of the measures that might be taken to conserve them.

CRP 565 Fieldwork or Workshop in History and Preservation

Fall or spring. Variable credit. M. Tomlan. Work on applied problems in history and preservation planning in a field or laboratory setting or both.

CRP 566 Planning and Preservation Practice

Fall. 1 credit. S-U grades only. Prerequisite: graduate standing in CRP programs or MPS/RE or permission of instructors.

R. Pendall and M. Tomlan.

Students participate in field study of city planning, historic preservation, economic and community development, and real estate issues in large Eastern U.S. cities.

CRP 567 Measured Drawing (also ARCH 583)

Fall. 3 credits. For undergraduate architecture students and graduate students in history and preservation. Prerequisite: permission of instructor. M. Tomlan.

Combines study of architectural drawing as historical documents with exercises in preparing measured drawings of small buildings. Presents the basic techniques of studying, sketching, and measuring a building and the preparation of a finished drawing for publication.

CRP 569 Archaeology in Preservation Planning and Site Design (also LA 569)

Spring. 3 credits.

For description, see LA 569.

CRP 578 Recycling and Resource Management (also CRP 378)

Spring. 3 credits. S-U grades optional.

R. Young.

For description, see CRP 378.

CRP 581 Principles of Spatial Design and Aesthetics (also CRP 381)

Fall. 3 credits. Course enrollment limited to 30 students. R. Trancik.

For description, see CRP 381.

CRP 584 Green Cities (also CRP 384 and LA 495)

Fall. 4 credits. S-U grades optional.

R. Young.

For description, see CRP 384.

CRP 605 Urban Public Finance

Fall. 4 credits. Letter grade. Prerequisite: prior exposure to microeconomics. M. Drennan.

An overview of neoclassical public economics theory, particularly those aspects of the theory that are central to urban public finance. The unusual three-tiered fiscal system of the

United States is described along with the evolving fiscal and economic role of large municipal governments. Also presented is the public finance theory of taxation. Major taxes and other revenue sources used by large municipalities are described and analyzed. The heart of the matter is the measurement and analysis of the fiscal condition of cities.

CRP 607 GIS Applications Workshop

Fall. 4 credits. Letter grade. Prerequisites: an introductory GIS course or permission of instructor. A-M. Esnard.

This course is an advanced GIS class that focuses upon GIS applications and projects for one or more clients. During some semesters students will work on their own projects. Contact the instructor directly to learn about project options for the current semester.]

CRP 612 Devolution, Privatization, and the New Public Management (also CRP 412, AEM 433/633 and WOMNS 411/611)

Fall. 3 credits S-U grades optional. M. Warner.

For description, see CRP 412.

CRP 614 Gender and International Development (also WOMNS 614)

Spring. 3 credits. L. Beneria.

This course has four main objectives: (1) to provide an analysis of the location of women in development processes and to understand the centrality of gender in each case; (2) to examine theoretical and conceptual frameworks for the analysis, including an understanding of gender divisions and their interaction with other forms of inequality such as class, race, and ethnicity; (3) to reflect upon the linkages between the global economy and the macro and micro processes of development from a gender perspective; and (4) to provide a basis for research, practical action, and policy formulation and for evaluating directions and strategies for social change.

[CRP 616 Globalization and Development

Spring. 3 credits. Letter grade only. Not offered 2002-2003. L. Beneria.

This course concentrates on the current dynamics of national and international development, the globalization of national economies, and the forces and trends that are shaping this process. Beginning with an analysis of economic restructuring taking place since the late 1960s, the emphasis is on the factors affecting the new international division of labor and production, the labor market, consumption, trade and finance, and the distribution of resources. This includes the analysis of processes through which the current neoliberal model has been built, such as trade liberalization, labor market flexibility, the erosion of nation states as economic units, and the formation of trade blocks and global institutions, and the discussion of current debates about future directions.]

CRP 618 Government Policy Workshop (also CRP 418, AEM 434/634 and WOMNS 420/620)

Spring. 4 credits. S-U grade optional. M. Warner.

For description, see CRP 418.

CRP 621 Quantitative Techniques for Policy Analysis and Program Management

Spring. 4 credits. D. Lewis.

Selected analytical techniques used in the planning and evaluation of public policy and public investments are examined. Topics

include simulation modeling, benefit-cost and cost-effectiveness analysis (including capital budgeting), and optimization strategies.

[CRP 631 Local Economic Policy—Field Workshop]

Fall. 4 credits. Not offered 2002–2003. P. Clavel.]

CRP 632 Methods of Regional Science and Planning I

Spring. 4 credits variable. Staff. An introduction to some of the major methods and models used in regional science and planning. This course is half of a two-semester sequence (see CRP 731). Either course may be taken first. Both courses cover topics related to the structure and assumptions of the models, model development, and their applications in regional science and planning. Where appropriate, computer implementation are considered. CRP 730 emphasizes statistical and econometric models.

[CRP 633 Methods of Regional Science and Planning II]

Fall. 4 credits. Not offered 2002–2003. Staff. See CRP 632. CRP 633 will provide an introduction to deterministic methods and models such as input/output models, social accounting models, and optimization models.]

CRP 635 Workshop: State Economic Development Strategies

Fall. 4 credits. S-U grades optional. S. Christopherson.

The purpose of this workshop is twofold: (1) to provide students with research tools useful in developing state-level economic development strategies; and (2) to provide a critical understanding of the primary economic development strategy used by U.S. state policymakers: firm-specific subsidies. The course consists of lecture and discussion meetings. The workshop sessions include exercises in qualitative information gathering on economic development topics; use of the census in combination with geographic information systems for analysis and presentation; and shift-share analysis.

CRP 637 Regional Development Planning: An International Perspective

Fall. 4 credits variable. S-U grades optional. T. Vietorisz.

This course develops a broad historical and theoretical context within which urban and regional planning problems across the world are embedded; addresses aspects of the global information economy affecting economic development and cultural identity; and demonstrates how such a broad perspective can make for more viable local plans. From the perspective of commitment to an open society, the course also examines the tension between planning oriented to social equity and the polarizing forces of market fundamentalism.

CRP 638 Planning and the Global Knowledge Economy: Sustainability Issues

Spring. 4 credits variable. S-U grades optional. T. Vietorisz.

The course analyzes the current sustainability crisis in terms of major changes in the social organization of production, emphasizing the worldwide economic and cultural shocks created by the emerging knowledge economy. Insight into the dynamics of this transition, in the light of similarly dramatic transitions in the past, can guide attempts to move toward

sustainability and high-quality urban and regional living environments.

CRP 642 The Micro-Politics of Participatory Planning Practices

Spring. 4 credits variable. Letter grade. J. Forester.

This seminar explores issues of "practice" (rhetoric and negotiation, interpretation and judgment, narrative and recognition) as they influence democratic deliberations involving questions of ethics and argument, participation and identity, historical trauma and working-through, and more. The approach we take can be called a "critical pragmatism." We use practitioners' oral histories to investigate the challenges of participatory planning practices.

CRP 643 Affordable Housing Policy and Programs (also CRP 343)

Spring. 3 credits. S-U grades optional. R. Pendall.

For description, see CRP 343.

CRP 653 Legal Aspects of Land-Use Planning

Spring. 3 credits. Letter grade. R. Booth. Survey of leading cases and legal concepts in land-use planning, with particular attention to zoning, subdivision control, condemnation, and growth-control issues.

CRP 655 Real Estate Project Workshop

Spring. 4 credits. Permission of instructor required. R. Abrams and M. Schack. Students are asked to undertake the preparation of reports analyzing various aspects of real estate activity. Individual and team working relationships are required. A range of types of problems that may be encountered in the real estate field are addressed, including project feasibility, marketing, planning and design, legal constraints and concerns, and others. Projects focus on real world case studies and require professional level reports suitable for oral and written presentations.

CRP 657 Real Estate Law

Spring. 3 credits. Letter grade. R. Booth. Examination of major legal concepts pertaining to acquisition, use, management, and transfer of real estate. Particular focus is on important legal considerations pertaining to property rights, contracts, and public controls on the use of land. Consideration of important case law, statutory law, and rules and regulations. Current legal issues affecting the real estate industry are discussed.

CRP 658 Residential Development

Spring. 3 credits. Letter grade. B. Olson. The course explores the residential development process from site acquisition through delivery and servicing of the finished product. Topics covered include: market feasibility, land planning and acquisition, product selection and design considerations, project financing and feasibility, schedule and budgetary controls, contracting and construction issues, marketing and sales activities, and customer service. Current issues in providing competitive housing products in today's markets are also explored. Composition of the residential development project team is discussed, and classes are supplemented by presentations from visiting professionals as well as at least one visit to an actual project.

CRP 661 Seminar in American Urban History (also CRP 361)

Fall or spring. 3 credits. Prerequisite: permission of instructor. M. Tomlan. For description, see CRP 361.

CRP 662 Historic Preservation Planning Workshop: Plans and Programs

Fall or spring. 1–4 credits. Prerequisite: CRP 561. M. Tomlan.

Preparation of elements of historic preservation plans, designs, legislation, and special studies. Individual or group projects are selected by students. Fieldwork is emphasized.

CRP 663 Historic Preservation Law

Spring. 3 credits. Offered alternate years. R. Booth.

The course covers: law of historic district and landmark designation; tools for preservation (such as police power, taxation, eminent domain); and recent developments in state and federal historic preservation.

CRP 664 Economics and Financing of Neighborhood Conservation and Preservation

Spring. 3 credits. Letter grade. M. Tomlan. The economic and financial aspects of historic preservation and neighborhood conservation. Topics include public finance, selected issues in urban economics, real estate economics, and private financing of real estate projects.

CRP 665 Preservation Planning and Urban Change

Fall. 3 credits. Letter grade. M. Tomlan. An examination of fundamental planning concepts and issues as they relate to historic preservation. Neighborhood revitalization, federal housing programs, the role of public and private institutions, displacement, and other social issues are among the primary topics.

[CRP 666 Pre-Industrial Cities and Towns of North America (also LA 666)]

Fall. 3 credits. S-U grades optional. Not offered 2002–2003. For description, see LA 666.]

CRP 668 The History of Urban Form in America (also CRP 368)

Fall. 3 credits. Letter grade. M. Tomlan. For description, see CRP 368.

[CRP 670 Regional Planning and Development in Developing Nations]

Fall or spring. 4 credits. Prerequisite: second-year graduate standing. Not offered 2002–2003. Staff.

Extensive case studies of development planning are analyzed. Focus is on the political economy of the process of regional development through urbanization and in particular on 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 are discussed.]

CRP 671 Seminar in International Planning

Spring. 1 credit. S-U grades only. B. Lynch. The international planning lecture series sponsors lectures by visiting scholars or professionals in the field of international development and planning. The only formal requirement for the course is a brief evaluation of the series at the end of the semester.

CRP 672 International Institutions

Spring. 3 credits. Letter grade. L. Beneria. The course focuses on the growth and transformation of international institutions since World War II. The first part includes a discussion of the Bretton Woods institutions and of the UN system up to the early 1970s, how these function and have evolved over time. The second part examines some of the crises and tensions within the international system since the 1980s and how these have affected institutional change and current debates on reform and global governance.

CRP 674 Third World Urbanization (also CRP 474)

Spring. 4 credits. S-U grades optional. B. Lynch.
For description, see CRP 474.

CRP 675 Seminar in Project Planning in Developing Countries

Fall. 4 credits. D. Lewis. An examination of the problems and issues involved in preparing project proposals for presentation to funding agencies. Topics include technical design, financial feasibility, social impact analysis, and policy relevance, as well as techniques for effective presentation of proposals. The course is organized as a seminar-workshop providing both an analysis of the critical elements of effective proposals and an opportunity to use those elements in the preparation of proposals. A multidisciplinary perspective is emphasized.

CRP 676 Latin American Cities (also CRP 376)

Fall. 3 credits. B. Lynch.
For description, see CRP 376.

CRP 677 Issues in African Development (also CRP 477)

Fall or spring. 1 credit. S-U only. M. Ndulo.
For description, see CRP 477.

CRP 679.03 Wilderness and Wildlands: Issues in Policy and Planning (also CRP 395.03)

Fall. 2-3 credits variable. Graduate seminar open to juniors and seniors. Not offered every year. L. Thorndike.
For description, see CRP 395.03.

CRP 683 Environmental Aspects of International Planning (also CRP 453)

Fall. 4 credits. B. Lynch.
For description, see CRP 453.

[CRP 703 Contemporary Theories of Regional Development

Fall or spring. 4 credits. Not offered 2002-2003. Staff.]

[CRP 711 Planning and Organization Theory

Fall or spring. 4 credits. Not offered 2002-2003. P. Clavel.]

CRP 714 Gender, Race, and Class in Planning

Fall. 3 credits. Letter grade. L. Beneria. This course introduces students to the importance of gender, race, and class issues in planning theory and practice. Both domestic and international topics are covered. Discussions, short papers, and term paper required.

[CRP 732 Methods of Regional Science and Planning III

Fall or spring. 3 credits. Not offered 2002-2003. Staff.]

[CRP 733 Seminar in Regional Models

Fall or spring. 3 credits. Not offered 2002-2003. Staff.]

CRP 790 Professional Planning Colloquium I

Fall. 1 credit. Staff. Visiting lecturers address problems and opportunities in the practice of planning. Topical focus to be announced. The only formal requirements for the course are attendance and a brief evaluation at the semester's end.

CRP 791 Master's Thesis in Regional Science

Fall or spring. 12 credits variable. S-U grades optional. Hours to be arranged. Regional Science faculty. Staff.

CRP 792 Master's Thesis, Project, or Research Paper

Fall or spring. 10 credits variable. S-U grades optional. Staff.

CRP 794 Planning Internships

Fall, spring, or summer. 1-12 credits variable. Staff. Combines a professional planning internship in a metropolitan area with academic study to provide experience and understanding of the planner's role in formulating and implementing plans and policies. Salaried internships in federal or state agencies, legislative offices, and comparable settings include development of research, analysis, and other technical skills. Weekly seminars draw on student field experiences, assigned readings, and guest speakers to examine current issues of federal, urban, and regional policy from the perspective of planning practice.

CRP 795 Master's Thesis in Preservation Planning

Fall or spring. 1-6 credits variable. Staff.

CRP 796 Professional Writing and Publishing (Colloquium)

Fall or spring. 2 credits. S-U grades only. Staff. Individual and group projects culminating in the production of a professional journal.

CRP 797 Supervised Readings

Fall or spring. 4 credits variable. Limited to graduate students. Prerequisites: permission of instructor. Staff.

For description, see department coordinator, 106 West Sibley.

[CRP 798 Colloquium in Regional Science, Planning, and Policy Analysis

Fall or spring. 1 credit. Not offered 2002-2003. Staff.]

[CRP 800 Advanced Seminar in Urban and Regional Theory I

Fall. 3 credits. Not offered 2002-2003. Staff.]

CRP 801 Advanced Seminar in Urban and Regional Theory II

Fall. 3 credits. S. Christopherson. The course is a continuation of CRP 800, concentrating on recent development.

[CRP 810 Advanced Planning Theory

Fall. 3 credits. Not offered 2002-2003. Staff.]

CRP 830 Seminar in Regional Science, Planning, and Policy Analysis

Fall or spring. 4 credits variable. S-U grades only. Staff.

This seminar provides an opportunity to review some of the literature and current research in regional science, planning, and policy analysis. Specific topics covered vary each year. Empirical and analytical research are emphasized. Students are expected to prepare and present a research paper during the semester on some aspect of the topics under review.

CRP 890 Planning Research Seminar I

Fall or spring. 2 credits. Staff. Intended for doctoral candidates in city and regional planning; other students welcome. Presentation and discussion of current problem areas and research by advanced doctoral students, faculty members, and visitors.

CRP 892 Doctoral Dissertation

Fall or spring. 1-2 credits variable. Staff.

Special Topic Courses

Fall or spring. Variable credit. Staff. Typical topics are:

CRP 609 Urban and Regional Theory**CRP 619 Planning Theory and Politics****CRP 629 Quantitative Methods and Analysis****CRP 639 Regional Development Planning****CRP 649 Social-Policy Planning****CRP 659 Urban Development Planning****CRP 669 History and Preservation****CRP 679 Planning and Developing Regions****CRP 689 Environmental Planning****CRP 699 Regional Science****CRP 719 Planning Theory and Politics****LANDSCAPE ARCHITECTURE**

Landscape Architecture at Cornell is jointly sponsored by the College of Agriculture and Life Sciences and the College of Architecture, Art, and Planning.

The Program

Program faculty: M. I. Adleman, S. Baugher, K. L. Gleason, chair; H. Gottfried, P. Horrigan, R. Jaenson, D. W. Krall, L. J. Mirin, A. Okigbo, R. T. Trancik, P. J. Trowbridge, K. A. Wolf.

Landscape Architecture offers a three-year Master of Landscape Architecture License Qualifying Degree, administered through the Graduate School, for those who have a four-year undergraduate degree in another field. The major is composed of several parts: core courses related to professional education in Landscape Architecture; a concentration in a subject related to the core courses; and free electives. Requirements of the three-year M.L.A. curriculum include 90 credits, and six resident units, satisfactory completion of the core curriculum courses, and a thesis or a capstone studio.

The department also offers a two-year Master of Landscape Architecture Advanced Degree Program, administered through the Graduate School, for those with accredited degrees in Landscape Architecture or Architecture. The two-year program entails core courses in the

discipline and the development of concentrations in subject matter areas such as landscape history and theory, landscape ecology and urban horticulture, the cultural landscape, site/landscape and art, or urban design.

Both of these degrees are accredited by the Landscape Architecture Accreditation Board (LAAB) of the American Society of Landscape Architects.

Dual Degree Options

Graduate students can earn a Master of Landscape Architecture and a Master of Science (Horticulture) or a Master of City and Regional Planning simultaneously. Students need to be accepted into both fields of study to engage in a dual degree program and must fulfill requirements of both fields of study. Thesis requirements are generally integrated for dual degrees.

Course Information

Note: All of the following courses are offered through the College of Agriculture and Life Sciences except LANAR 497, 524, and 525.

- LA 141 Grounding in Landscape Architecture**
Fall. 4 credits.
- LA 142 Grounding in Landscape Architecture**
Spring. 4 credits.
- LA 201 Medium of the Landscape**
Fall. 5 credits.
- LA 202 Medium of the Landscape**
Spring. 5 credits.
- [LA 260 Pre-Industrial Cities and Towns of North America (also CRP 360, CRP 666 and LA 666)]**
Fall. 3 credits. Not offered 2002-2003.]
- [LA 261 Fieldwork in Urban Archaeology (also CRP 261)]**
Fall. 3 credits. Not offered 2002-2003.]
- [LA 262 Laboratory in Landscape Archaeology (also ARKEO 262)]**
Fall. 3 credits. Not offered 2002-2003.]
- LA 263 American Indians, Planners, and Public Policy (also CRP 363/547 and LA 547)**
Spring. 3 credits.
- LA 282 The American Landscape**
Fall. 3 credits.
- LA 292 Creating a Second Nature**
Spring. 3 credits.
- LA 301 Integrating Theory and Practice I**
Fall. 5 credits.
- LA 302 Urban Design in Virtual Space**
Spring. 5 credits.
- LA 315 Site Engineering I**
Spring. 3 credits.
- LA 316 Site Engineering II**
Fall. 2 credits.
- LA 318 Site Construction**
Spring. 5 credits.
- LA 402 Integrating Theory and Practice: Community Design Studio**
Spring. 5 credits.
- LA 403 Directed Study: The Concentration (also LA 603)**
Fall or spring. 1 credit.
- LA 410 Computer Applications in Landscape Architecture**
Fall or spring. 3 credits.
- LA 412 Professional Practice Seminar**
Spring. 1 credit.
- LA 486 Placemaking by Design: Theory Seminar**
Fall. 3 credits.
- LA 490 Rome Wasn't Built in a Day**
Spring. 3 credits.
- LA 491 Creating the Urban Eden: Woody Plant Selection, Design, and Landscape Establishment (also HORT 491)**
Fall. 4 credits.
- LA 492 Creating the Urban Eden: Woody Plant Selection, Design, and Landscape Establishment**
Spring. 4 credits.
- LA 494 Special Topics in Landscape Architecture**
Fall or spring. 1-3 credits.
- LANAR 497 Individual Study in Landscape Architecture**
Spring. 1-5 credits; may be repeated for credit. S-U grades optional. L. J. Mirin.
Work on special topics by individuals or small groups.
- LA 498 Undergraduate Teaching**
Fall or spring. 1-2 credits.
- LA 501 Composition and Theory**
Fall. 5 credits.
- LA 502 Composition and Theory**
Spring. 5 credits.
- LA 505 Graphic Communication I**
Fall. 3 credits.
- LA 506 Graphic Communication II**
Spring. 3 credits.
- LANAR 524 History of European Landscape Architecture**
Fall. 3 credits. L. Mirin.
A survey from classical times to the present, emphasizing design principles and techniques that have established the landscape architecture tradition in Europe. Particular reference is made to the manner in which gardens, streets, plazas, parks, and new towns reflect in their built form, a range of responses to demands of culture, economics, technology, security, the law, and ecology.
- LANAR 525 History of American Landscape Architecture**
Spring. 3 credits. L. Mirin.
Landscape architecture in the United States from Jefferson to the present is examined as a unique expression of the American experience. Influences exerted by the physical landscape, the frontier and utopian spirit, and the cultural assumptions of democracy and capitalism are traced as they affect the forms of urban parks, private and corporate estates, public housing, transportation planning, national parks, and other open-space designs.
- LA 545 The Parks and Fora of Imperial Rome**
Spring. 3 credits.
- LA 547 Americans, Indians, Planners, and Public Policy (also CRP 363/547 and LA 263)**
Spring. 3 credits.
- LA 569 Archaeology in Preservation Planning and Site Design (also CRP 569)**
Spring. 3 credits.
- LA 580 Landscape Preservation: Theory and Practice**
Fall. 3 credits.
- LA 582 The American Landscape**
Fall. 3 credits.
- LA 590 Theory Seminar**
Spring. 3 credits.
- LA 598 Graduate Teaching**
Fall or spring. 1-2 credits.
- LA 601 Integrating Theory and Practice I**
Fall. 5 credits. Limited to graduate students.
- LA 602 Integrating Theory and Practice II**
Spring. 5 credits. Limited to graduate students.
- LA 603 Directed Study: The Concentration (also LA 403)**
Fall or spring. 1 credit.
- LA 615 Site Engineering I**
Spring. 3 credits.
- LA 616 Site Engineering II**
Fall. 2 credits.
- LA 618 Site Construction**
Spring. 5 credits. Weeks 8-15.
- [LA 619 Advanced Site Grading]**
Spring. 2 credits. Not offered 2002-2003.]
- [LA 666 Pre-Industrial Cities and Towns of North America (also CRP 360/666 and LA 260)]**
Fall. 3 credits. Not offered 2002-2003.]
- LA 680 Graduate Seminar in Landscape Architecture**
Fall or spring. 1-3 credits.
- LA 694 Special Topics in Landscape Architecture**
Fall or spring. 1-3 credits.
- LA 701 Urban Design and Planning: Designing Cities in the Electronic Age (also CRP 555)**
Fall. 5 credits.
- LA 702 Advanced Design Studio**
Spring. 5 credits.
- LA 800 Master's Thesis in Landscape Architecture**
Fall or spring. 9 credits.

FACULTY ROSTER

- Azis, Iwan, Ph.D., Cornell U. Visiting Prof., City and Regional Planning.
- Baughner, Sherene, Ph.D., SUNY at Stony Brook. Visiting Prof., City and Regional Planning
- Beneria, Lourdes, Ph.D., Columbia U. Prof., City and Regional Planning
- Bertoia, Roberto, M.F.A., Southern Illinois U. Assoc. Prof., Art
- Blum, Zevi, B.Arch., Cornell U. Assoc. Prof., Art
- Booth, Richard S., J.D., George Washington U. Prof., City and Regional Planning
- Bowman, Stanley J., M.F.A., U. of New Mexico. Prof. Emeritus, Art
- Briggs, Laura, M. Arch., Columbia U. Assoc.

- Prof., Architecture
 Chi, Lily H., M. Phil., Cambridge U. Assoc.
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 Clavel, Pierre, Ph.D., Cornell U. Prof., City and
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 Colby, Victor E., M.F.A., Cornell U. Prof.
 Emeritus, Art
 Crump, Ralph W., B.Arch., Cornell U. Prof.
 Emeritus, Architecture
 Cruvellier, Mark R., M. Eng., Ph.D., McGill U.
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 Czamanski, Stan, Ph.D., U. of Pennsylvania.
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 Hubbell, Kent L., M.F.A.S., Yale. Prof.,
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 Schack, Mario L., M.Arch., Harvard U. Arthur
 L. and Isabel B. Wiesenberger Prof.,
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 Simitch, Andrea, B.Arch., Cornell U. Assoc.
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 Singer, Arnold, Prof. Emeritus, Art
 Spector, Buzz, M.F.A., U. of Chicago. Prof., Art
 Squier, Jack L., M.F.A., Cornell U. Prof., Art
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 Zissovici, John, M.Arch., Cornell U., Assoc.
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