DiTommaso, Antonio, Ph.D., McGill U. (Canada). Asst. Prof., Crop and Soil Sciences
Drinkwater, Laurie, Ph.D., U. of California, Davis. Assoc. Prof., Horticulture
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Earle, Elizabeth D., Ph.D., Harvard U. Prof., Plant Breeding
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Eloundou-Enyegue, Parfait M., Ph.D., Pennsylvania State U. Asst. Prof., Development Sociology
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Everett, Robert W., Ph.D., Michigan State U. Prof., Animal Science
Ewer, John, Ph.D., Brandeis U. Assoc. Prof., Entomology
Fahey, Timothy J., Ph.D., U. of Wyoming. Prof., Natural Resources
Feldman, Shelley, Ph.D., U. of Connecticut. Prof., Development Sociology
Fernandes, Erick C. M., Ph.D., North Carolina State U. Assoc. Prof., Crop and Soil Sciences
Fick, Gary W., Ph.D., U. of California, Davis. Prof., Crop and Soil Sciences
Forsline, Philip L., M.S., U. of Minnesota. Courtesy Asst. Prof., Horticultural Sciences (Geneva)
Fox, Danny G., Ph.D., Ohio State U. Prof., Animal Science
Francis, Joe D., Ph.D., U. of Missouri. Assoc. Prof., Development Sociology
Fry, William E., Ph.D., Cornell U. Prof., Plant Pathology
Fuchs, Mark, Ph.D., U. Louis Pasteur (France). Asst. Prof., Plant Pathology (Geneva)
Galton, David M., Ph.D., Ohio State U. Prof., Animal Science
Gan, Susheng, Ph.D., U. of Wisconsin. Asst. Prof., Horticulture
Gavin, Thomas A., Ph.D., Oregon State U. Assoc. Prof., Natural Resources
Gay, Geraldine K., Ph.D., Cornell U. Prof., Communication
Gebremedhin, Kifle G., Ph.D., U. of Wisconsin. Prof., Biological and Environmental Engineering
Geisler, Charles C., Ph.D., U. of Wisconsin. Prof., Development Sociology
Gellert, Paul K., Ph.D., U. of Wisconsin. Asst. Prof., Development Sociology
Gilbert, Cole, Ph.D. U. of Kansas. Assoc. Prof., Entomology
Gillett, James W., Ph.D., U. of California, Berkeley. Prof., Natural Resources
Gleason, Kathryn L., Ph.D., Oxford U. (England). Assoc. Prof., Landscape Architecture
Gloy, Brent A., Ph.D., Purdue U. Asst. Prof., Applied Economics and Management
Gomes, Carla P., Ph.D., U. of Edinburgh (UK). Asst. Prof., Applied Economics and Management
Gonzales, Angela, M.A., Harvard U. Asst. Prof., Development Sociology
Good, George L., Ph.D., Cornell U. Prof., Horticulture
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Hintz, Harold F., Ph.D., Cornell U. Prof., Animal Science
Hirschl, Thomas A., Ph.D., U. of Wisconsin. Prof., Development Sociology
Hoch, Harvey, Ph.D., U. of Wisconsin. Prof., Plant Pathology (Geneva)
Hodge, Kathie, Ph.D., Cornell U. Asst. Prof., Plant Pathology
Hoffmann, Michael P., Ph.D., U. of California, Davis. Prof., Entomology
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Irwin, Lynne H., Ph.D., Texas A&M U. Assoc. Prof., Biological and Environmental Engineering
Jahn, Margaret M., Ph.D., Cornell U. Prof., Plant Breeding
Jewell, William J., Ph.D., Stanford U. Prof., Biological and Environmental Engineering
Johnson, Patricia A., Ph.D., Cornell U. Prof., Animal Science
Just, David R., Ph.D., U. of California, Berkeley. Asst. Prof., Applied Economics and Management
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Knoblauch, Wayne A., Ph.D., Michigan State U. Prof., Applied Economics and Management
Knuth, Barbara A., Ph.D., Virginia Polytechnic Inst. and State U. Prof., Natural Resources
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Kraft, Clifford E., Ph.D., U. of Wisconsin, Madison. Assoc. Prof., Natural Resources
Krall, Daniel W., M.L.A. Cornell U. Assoc. Prof., Landscape Architecture
Krasny, Marianne E., Ph.D., U. of Washington. Prof., Natural Resources
Kresovich, Stephen, Ph.D., Ohio State U. Prof., Plant Breeding
Kroma, Margaret M., Ph.D., Iowa State U. Asst. Prof., Education
Kyle, Steven C., Ph.D., Harvard U. Assoc. Prof., Applied Economics and Management
Lailiang, Cheng, Ph.D., Oregon State U. Asst. Prof., Horticulture
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Lawless, Harry T., Ph.D., Brown U. Prof., Food Science
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Luo, Dan, Ph.D., Ohio State U. Asst. Prof., Biological and Environmental Engineering
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Yavitt, Joseph B., Ph.D., U. of Wyoming. Assoc. Prof., Natural Resources
Zitter, Thomas A., Ph.D., Michigan State U. Prof., Plant Pathology

COLLEGE OF ARCHITECTURE, ART, AND PLANNING

ADMINISTRATION

Mohsen Mostafavi, dean

W. Stanley Taft, associate dean

Nasrine Seraji, chair, department of architecture

Buzz Spector, chair, department of art

Kenneth M. Reardon, chair, department of city and regional planning

John McKeown, interim director, administration and finance

Deborah Durnam, director, admissions

Carol Cooke, 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. LeGro, registrar

FACULTY ADVISERS

Architecture students are assigned faculty advisers and are also invited to share concerns with and 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 concerns and seek advice from the volunteer student advisers (EARS) at any time.

DEGREE PROGRAMS

	Degree
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 science, history of architecture and urbanism, historic preservation planning, city and regional planning, regional science, and landscape architecture.

Students in most 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 670 students and a full-time teaching staff of over 60, 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 curricula, 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 architecture design studios and shop facilities are in Rand and Sibley. The Green Dragon Café, a student eatery and lounge, is located in the lower level of Sibley Dome. Darkrooms in the Department of Art are available for general use by students in the college and are used primarily as laboratories for the photography courses. Each user must pay a darkroom fee. 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 177,000 books, is capable of supporting undergraduate, graduate, and research programs. Some 1,300 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 near 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 members, students, and visitors.

Scholastic Standards

Semester by semester, a candidate for an undergraduate degree in this college is required to successfully complete a minimum of 12 credit hours with a grade point average for the semester of not less than C (2.0). The record of each student who falls below the standard will be reviewed by the college's Academic Records Committee for appropriate action, among those described below:

1. The student is issued a **Warning**. This means the student's performance is not up to expectations. Unless improvement is shown in the subsequent semester, the student may be placed on **Final Warning** or given a **Required Leave of Absence** from the college.
2. The student is issued a **Final Warning**. This indicates the student's record is unsatisfactory. Unless considerable improvement is shown in the subsequent semester, the student may be given a **Required Leave of Absence** from the college.
3. The student is placed on a **Required Leave of Absence**. 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 request to resume studies after a leave of absence of at least two semesters. This request is made by letter addressed to the college dean, chair of the Academic Records Committee, 129 Sibley Hall, Ithaca, NY 14853-6702. The student must submit evidence that time has been well used, and if employed, the student 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 a required leave, credit is not granted automatically. Upon receiving permission to return, a student must petition the department to request credit for courses taken. A return to study in the college after a required leave of absence is at the discretion of the college's Academic Records Committee. Requests for spring semester return must be made by November 15 and requests for fall semester return 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.
4. The student is placed on a **Required Withdrawal**. The student may not reregister in the College of Architecture, Art, and Planning and is dismissed from the college and is permanently prohibited from continuing studies in it.

The required withdrawal action does not prevent the student from 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 at the end of the next semester if the performance during that semester is deemed to be grossly deficient.

It is necessary to have a cumulative grade point average of at least 1.7 (C-) for graduation.

ARCHITECTURE

N. Seraji, chair (143 East Sibley Hall, 255-5236); 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, L. Mirin, V. Mulcahy, J. Ochshorn, C. F. Otto, A. Ovaska, H. W. Richardson, A. Simitch, V. K. Warke, J. Wells, M. Woods, J. Zissovici

Professional Degree Programs

Cornell offers two professional degrees in architecture: the undergraduate bachelor of architecture and the graduate master of architecture. These degrees count toward the professional registration requirements established by the various states, the National Architectural Accrediting Board, and the National Council of Architectural Registration Boards.

B. Arch.

The undergraduate 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 control, structures, construction, and computer 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 the post-professional M. Arch. II program. Some students are then able to complete the requirements for the master's degree in one additional year.

M. Arch. I

Cornell's graduate professional program is normally three and one-half years long and is intended for students who already have a bachelor's degree in any subject. Information on this professional graduate program may be found on the architecture web site (www.architecture.cornell.edu).

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 three types of degrees: the bachelor of architecture, the master of architecture, and the doctor of architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on the extent of its 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, constitute 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 semesters 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, history, theory, architectural science, and visual studies. In addition, courses are offered by other departments in Italian language, Italian culture, art, city and regional planning 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 post-professional 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

Fall Semester	*Credits*
101 Design I	6
181 History of Architecture I	3
151 Drawing I	2
MATH 111 Calculus or out-of-college elective	3–4
Out-of-college elective	3
	17–18
Spring Semester	
102 Design II	6
182 History of Architecture II	3
152 Drawing II	2
MATH 106 or 111 or out-of-college elective	3–4
Out-of-college elective (first-year writing seminar suggested)	3
	17–18

Second Year

Fall Semester	*Credits*
201 Design III	6
263 Structural Concepts	4
231 Architectural Analysis I	2
262 Building Technology, Materials, and Methods	3
ARCH 253 or out-of-college elective	2–3
	17–18
Spring Semester	
202 Design IV	6
232 Architectural Analysis II	2
261 Site Planning	3
264 Structural Elements	3
ARCH 253 or college elective	2–3
	16–17

Third Year

Fall Semester	*Credits*
301 Design V	6
361 Environmental Systems I—Lighting and Acoustics	3
Departmental elective	3
Departmental elective	3
Out-of-college elective	3
	18
Spring Semester	
302 Design VI	6
363 Structural Systems	3
362 Environmental Systems II—Mechanical and Passive Solar Systems	3
342 Architecture as a Cultural System	3
College or out-of-college elective	3
	18

Fourth Year

Fall Semester	*Credits*
401 Design VII	6
Departmental elective	3
Departmental elective	3
College elective	3
Out-of-college elective	3
	18
Spring Semester	
402 Design VIII	6
521 Professional Practice	3
Departmental elective	3
College or out-of-college elective	3
Out-of-college elective	3
	18

Fifth Year

Fall Semester	*Credits*
501 Design IX	6
[or Overlap Program 601 or 603	9]
Departmental elective	3
ARCH 510	3
Out-of-college elective	3
Out-of-college elective	3
	18
Spring Semester	
502 Design X	8
[or Overlap Program 602 or 604	9]
Departmental elective	3
Out-of-college elective	3
College or out-of-college elective	3
	17

Required Departmental Courses

Semesters Credits	*Course Subject*	*Numbers*	
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	521	3
3	drawing	151, 152, 253	6
			107–108

Electives

Departmental

Semesters		*Credits*
3	history of architecture: 300 level	9
1	visual representation in architecture	3
2	architectural theory or 600-level design-related course	6
1	architectural structures, construction, or environmental systems and conservation	3
		21

College

Semesters		
2	art: any studio courses (ART 214 will fulfill)	6

Out-of-College

Semesters		
1	first-year writing seminar	
3		
1	mathematics, or physical or biological sciences	3
1	humanities	3
		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.	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 subdisciplines 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 seminar course) in this area.

Theory of Architecture 231, 232, distribution requirements (6 credits), plus 6 credits in this area.

Visual Representation 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. 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 directed specifically 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 may apply to the professional M. Arch. I program.

Transfer students are responsible for completing that portion of the curriculum which has not been covered by equivalent work. Applicants who have had no previous work in architectural design must complete the 10-semester design sequence. Since this sequence may be accelerated by attending summer semesters, seven or eight regular semesters 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 semesters in residence, taking 35 of the 70 credits (including four semesters 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 semester 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 399
2. 12 credits in 600-level architectural history seminars: ARCH 681 through 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 Nonmajors

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 Nonmajors as a means of investigating possible graduate studies in architecture. Some may wish to develop architectural specialties within other disciplines. Students meeting the requirements for this concentration should complete a concentration form, which is available in the architecture department office. This form, when validated by the architecture department and the AAP college registrar, serves as evidence of completion of the concentration requirements. Students should consult their individual college registrars for information about whether their home college recognizes and notes such concentrations on transcripts or diplomas.

The curriculum for students in the Concentration in Architecture Program totals 14 credit hours minimum, including 8 credits of required courses and 6 credits of elective courses. Grades earned must be C or better in all courses.

Required courses. A minimum of 8 credits, including one design studio, one visual studies course (e.g., drawing), and one history of architecture course. For example,

ARCH 110 Introduction to Architecture Design Studio (offered summer only)	3 credits
or	
ARCH 103 Elective Design Studio (offered fall only, not offered every year)	6 credits

(ARCH 103 may substitute for ARCH 110; students who complete ARCH 103 must take all other course requirements for the concentration.)

ARCH 151 Drawing I (fall only) 2 credits

ARCH 181 or 182 History of Architecture I or II (ARCH 181, fall; ARCH 182, spring) 3 credits

Departmental elective courses: A minimum of 6 credits, including two departmental elective courses, are required.

Architectural Design

Courses in brackets are not offered this year.

Each student in the architecture program (undergraduates, graduates, and Rome Program participants) is charged a fee each semester to help defray the continuing costs of refurnishing and replacing equipment.

Sequence Courses

ARCH 101(1101) Design I
Fall, spring. 6 credits. Prerequisite: department students. Staff.
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(1102) Design II
Spring. 6 credits. Prerequisite: department students; ARCH 101 and 151. Staff.
Continuation of ARCH 101. Covers 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(2101–2102) Design III and IV
Fall and spring. 6 credits each semester. Prerequisites: department students; ARCH 151-152; for ARCH 201, ARCH 102 and 152; for 202, ARCH 201. Co-requisite: ARCH 231–232. Staff.

ARCH 301–302(3101–3102) Design V and VI
Fall and spring. 6 credits each semester. Prerequisites: department students; for ARCH 301, ARCH 202; for 302, ARCH 301. Staff.

ARCH 401–402(4101–4102) Design VII and VIII
Fall and spring. 6 credits each semester. Prerequisite: department students; for ARCH 401, ARCH 302; for 402, ARCH 401. Staff.
Programs in architectural design, urban design, or architectural technology and environmental science and topical studies.

ARCH 501(5101) Design IX
Fall or spring. 6 credits. Prerequisite: department students; ARCH 402. Co-requisite: ARCH 510. 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(5902) Design X—Thesis
Fall or spring. 8 credits. Requirement for B. Arch. candidates who must satisfactorily complete a thesis. Students accepted for admission to Overlap Program are exempt from thesis requirement. Prerequisite: ARCH 501 and 510. Staff.

ARCH 601–602(6101–6102) Special Program in Architectural Design
Fall and spring. 9 credits each semester. Prerequisite: acceptance into Overlap Program. Registration by petition only. Staff.

ARCH 603–604(6103–6104) Special Program in Urban Design
Fall and spring. 9 credits each semester. Prerequisite: acceptance into Overlap Program. Registration by petition only. Staff.

Graduate Courses

ARCH 511–512(5111–5112) Core Design Studios
Fall and spring. 6 credits. Prerequisites: M. Arch. I students; for ARCH 512, ARCH 511 and 551. Staff.
Two-semester sequence in which fundamental design skills are taught. The core studios integrate a broad range of architectural territories, and students acquire a command of techniques of design and representation through a number of complex architectural problems.

ARCH 513–516(5113–5116) Vertical Design Studios
Fall and spring. 6 credits. Prerequisites: M. Arch. I students; for ARCH 513, ARCH 512 and 552; ARCH 513–516 must be taken in sequence. Staff.
Vertical studios investigate a variety of programs and project types, from individual buildings to urban districts. Students examine topics of architectural production—such as building technology, landscape, urbanism, history, and theory—and their roles in analysis and design.

ARCH 701–702(7101–7102) Problems in Architectural Design
Fall and spring. 9 credits each semester. Staff.
Basic first-year design course for M. Arch. II students whose major concentration is architectural design.

ARCH 703–704(7103–7104) Problems in Urban Design
Fall and spring. 9 credits each semester. Staff.
Basic first-year design course for M. Arch. II students whose major concentration is urban design.

ARCH 801(8901) Thesis or Research in Architectural Design
Fall or spring. 9 credits. Prerequisite: ARCH 701–702. Staff.
Second-year design course for M. Arch. II students whose major concentration is architectural design.

ARCH 802(8902) Thesis or Research in Urban Design
Fall or spring. 9 credits. Prerequisite: ARCH 703–704. Staff.
Second-year design course for M. Arch. II students whose major concentration is urban design.

ARCH 811(8911) Graduate Thesis Proseminar
Fall. 3 credits. Prerequisites: M. Arch. I students; ARCH 515. Staff.
First half of the yearlong thesis in architecture. Covers research methods and other subjects students employ in the development of their individual thesis topics. Emphasizes learning different types of theses and developing specific programming, design, and site definition techniques.

ARCH 812(8912) Independent Design Thesis
Spring. 9 credits. Prerequisites: M. Arch. I students; ARCH 516. Staff.
The master of architecture thesis is an independent design project on a topic selected by the student and researched in ARCH 811. The student develops a thesis statement outlining an area of study or a problem that has consequences for contemporary architectural production and produces a design project that examines it. Marking the transition between the academic and professional worlds, the thesis project is an opportunity for each student to define an individual position with regard to a specific aspect of architectural practice.

Elective Design Courses

ARCH 103–104(1103–1104) Elective Design Studio
103, fall; 104, spring. 6 credits each semester. Prerequisite: nonarchitecture students; for ARCH 103, permission of instructor; for ARCH 104, ARCH 103 and permission of instructor. Staff.

ARCH 200, 300, 400, 500(2100, 3100, 4100, 5100) Elective Design Studio
Fall, spring, or summer. 6 credits. 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.
Nonsequence design used as temporary placement of transfer students, off-campus foreign programs for third-year students (summer and Rome) and for incompletes in design sequence. In some cases student must petition to convert elective design into sequence design.

ARCH 503(5103) Design IXa
Fall and spring. 6 credits. Limited to department students. Prerequisites: ARCH 406 and passing, but nonadvancing, grade in ARCH 502.
Structured studio for those needing to take an alternative to design thesis. Operates within the 401–402, 501 design studios.

Related Courses and Seminars

ARCH 110(1110) Introduction to Architecture: Design Studio
Summer. 3 credits. 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. S-U option. Not offered every year. Staff.
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 semester 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 members, as well as periodic reviews of the group by invited faculty and guest critics. The grade is based on the overall performance in the studio with special emphasis on the quality of a major studio project.

ARCH 111(1111) Concentration in Architecture: Design Studio
Summer only. 3 credits. Subject to enrollment. Prerequisite: nonarchitecture students. Not offered every year. Staff.
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(3103) Special Problems in Architectural Design
Fall or spring. Variable credit; max. 3. Does not count for design sequence credit. Prerequisite: permission of instructor and approved independent study form. Staff.
Independent study.

ARCH 306(3106) Praxis: Community Design Workshop (also ARCH 606[6106])
Fall or spring. 3 credits. Prerequisite: permission of instructor. Not offered every year. F. Davis.
Workshop-based, hands-on course directed to underserved local and global communities that 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(3113) Furniture Design
Fall or spring. 3 credits. Limited enrollment. Students who wish to earn arch visual representation credit must enroll in sec 01; arch technology credit, sec 02; and in-college elective credit, sec 03. Prerequisite: permission of instructor. Not offered every year. G. Hascup.
Explores the history, design, and materiality of furniture. Analyses 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 317(3117) Contemporary Italian Culture
Fall or spring. Variable credit; max. 3. Prerequisite: Rome Program participants. Staff.
Provides a broad view of the culture and social structure of Italy, drawing from Italian literature, history, and current events.

ARCH 510(5110) Thesis Proseminar
Fall and spring. 2 credits. Prerequisite: ARCH 402. 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 521(5201) Professional Practice
Fall or spring. 3 credits. Staff.
Examination of organizational and management theories and practices for delivering professional design services. Includes 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 522(5202) Professional Seminar
Fall or spring. 3 credits. Prerequisite: ARCH 411. Staff.
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 605(6109) Special Problems in Design
Fall and spring. Variable credit; max. 3. Does not count toward design sequence credit.Prerequisite: permission of instructor. Staff.
Independent study.

ARCH 606(6106) Praxis: Community Design Workshop (also ARCH 306[3106])
Fall or spring. 3 credits. Prerequisite: permission of instructor. Not offered every year. F. Davis.
For description, see ARCH 306.

ARCH 610(6110) Graduate Design Seminar
Fall. 3 credits. Intended for, but not limited to, graduate students in Architectural Design and Urban Design Program. Not offered every year. Staff.
Issues in architectural and urban design.

ARCH 611–612(6111–6112) Urban Housing Developments
611, fall; 612, spring. 3 credits each semester. Prerequisite: fourth- and fifth-year students in architecture and graduate students; permission of instructor. Not offered every year. Staff.

Architectural Theory

ARCH 130(1300) An Introduction to Architecture: Lectures
Summer. 3 credits. Open to nonarchitecture majors in college, high school students in 11th and 12th grades, and anyone with minimum of a high school diploma interested in exploring the field of architecture. S-U grades optional. Not offered every year. Staff.
Survey course that covers the many facets of architecture: history, design principles, preservations, landscape architecture, building technology, and cultural factors. Course format comprises lectures, demonstrations, films, and field trips. Evaluation is based on quizzes and a final exam.

[ARCH 131(1301) An Introduction to Architecture
Not offered 2005–2006; next offered 2006–2007.]

ARCH 231(2310) Architectural Analysis I
Fall. 2 credits. Co-requisite: for architecture students, ARCH 201. Staff.
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(2302) Architectural Analysis II
Spring. 2 credits. Co-requisite: for architecture students, ARCH 202. Staff.
Advanced analytical studies focusing on complex architectural spaces, objects, images, and representations.

ARCH 334(3304) Column, Wall, Elevation, Facade: A Study of the Vertical Surface in Architecture (also ARCH 634[6304])
Fall or spring. 3 credits. Prerequisite: third-year 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 semester 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 337(3309) Special Investigations in the Theory of Architecture I
Fall or spring. Variable credit, max. 3. Prerequisite: permission of instructor and approved independent study form. Staff.
Independent study.

ARCH 338(3308) Special Topics in the Theory of Architecture I
Fall or spring. 3 credits. Prerequisite: permission of instructor. Not offered every year. Staff.
Topic TBA before preregistration.

ARCH 339(3307) Elements, Principles, and Theories in Japanese Architecture
Spring. 3 credits. Not offered every year. L. Mirin.
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(4301) Theory of Architecture
Not offered 2005–2006.]

ARCH 432(4302) Theory of Architecture
Spring. 3 credits. Prerequisite: third-year standing. Not offered every year. Staff.
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(4305) Architecture and Representation
Fall. 3 credits. Prerequisite: degree candidates in architecture; successful completion of ARCH 231–232. Not offered every year. Staff.
Study of architecture as it functions as a representational art, referring to its past while inferring its present.

ARCH 531–532(5301–5302) Architectural Analysis I and II
Fall and spring. 3 credits. Prerequisites: for ARCH 532, 531; M. Arch. I students, or permission of instructor. Staff.
Introduction to a wide range of questions that inform the discipline of architecture. Architectural thinking is investigated through a cross-section of contemporary theoretical texts and an analysis of built projects, unbuilt proposals, drawings, and other forms of representation.

ARCH 634(6304) Column, Wall, Elevation, Facade: A Study of the Vertical Surface in Architecture (also ARCH 334[3304])
Fall or spring. 3 credits. Prerequisite: third-year students and above. J. Wells.
For description, see ARCH 334.

ARCH 635(6305) Theory and Criticism in Architecture
Spring. 3 credits. Prerequisite: permission of instructor. Not offered every year. Staff.
Inquiry into the fundamental principles of architectural criticism in theory and practice, with emphasis on the structures of criticism in the 20th century.

ARCH 637(6309) Special Investigations in the Theory of Architecture II
Fall or spring. Variable credit; max. 4. Prerequisite: permission of instructor and approved independent study form. Staff.
Independent study.

ARCH 638(6308) Special Topics in the Theory of Architecture II
Fall or spring. 3 credits. Prerequisite: permission of instructor. Not offered every year. Staff.
Topic TBA before preregistration.

Architecture, Culture, and Society

ARCH 342(3402) Architecture as a Cultural System
Spring. 3 credits. Can substitute ARCH 445, 446, 447, or 448 by 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(3409) Undergraduate Investigations in Architecture, Culture, and Society
Fall or spring. Variable credit; max. 3. Prerequisite: permission of instructor and approved independent study form. B. MacDougall.
Independent study.

ARCH 441–442(4408–4418) Special Topics in Architecture, Culture, and Society
Fall and spring. 3 credits each semester. Prerequisite: permission of instructor. B. MacDougall.
Topic TBA before preregistration.

ARCH 445(4405) Architecture and the Mythic Imagination
Fall. 3 credits. Prerequisite: ARCH 342 or permission of instructor. Not offered every year. B. MacDougall.

ARCH 447(4407) Architectural Design and the Utopian Tradition
Fall. 3 credits. Prerequisite: ARCH 342 or permission of instructor. Not offered every year. Staff.

ARCH 647–648(6401–6402) Architecture in Its Cultural Context I and II
647, fall; 648, spring. 4 credits each semester. Prerequisite: permission of instructor. Not offered every year. B. MacDougall.

ARCH 649(6409) Graduate Investigations in Architecture, Culture, and Society
Fall or spring. Variable credit; max. 4. Prerequisite: permission of instructor and approved independent study form. B. MacDougall.
Independent study.

Visual Studies

ARCH 151(1501) Drawing I: Freehand Drawing
Fall. 2 credits. Staff.
Freehand drawing with emphasis on line as a means of visualizing form and space in architecture.

ARCH 152(1502) Drawing II: Constructed Drawing Systems
Spring. 2 credits. Prerequisite: ARCH 151 or permission of instructor. Staff.
Freehand drawing as a means of conceiving and expressing spatial form; line weight, shades and shadows, and figure drawing.

ARCH 253(2503) Drawing III: Digital Media in Architecture
Fall or spring. 2 credits. Prerequisite: ARCH 152 or permission of instructor. Letter grades only.
Introduction to two- and three-dimensional digital media in architecture and its potential for visualization, representation, and analysis.

[ARCH 450(4530) Architectural Publications
Not offered 2005–2006.]

ARCH 458(4508) Special Investigations in Visual Representation
Fall or spring. Variable credit; max 3. Prerequisites: permission of instructor and approved independent study form. Staff.
Independent study.

ARCH 459(4509) Special Topics in Visual Representation I
Fall or spring. 3 credits. Prerequisite: permission of instructor. Staff.
Topics TBA before preregistration.

ARCH 551–552(5511–5512) Techniques in Visual Representation I and II
Fall and spring. 3 credits. Prerequisite: M. Arch. I students or permission of instructor. Staff.
These courses explore the practice of drawing through analog and digital methods. They serve as an introduction to visualization and representation skills necessary to the development of architectural thought. Students learn a broad range of techniques and tools in relation to one another.

ARCH 658(6509) Special Investigations in Visual Representation II
Fall or spring. Variable credit; max. 4. Prerequisites: permission of instructor and approved independent study form. Staff.
Independent study.

ARCH 659(6508) Special Topics in Visual Representation II
Fall or spring. 3 credits. Prerequisite: permission of instructor. Staff.
Topics TBA before preregistration.

Architectural Science and Technology

Structures

ARCH 263(2603) 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(2604) Structural Elements
Spring. 3 credits. Prerequisite: ARCH 263. J. Ochshorn or staff.
Concepts and procedures for the design of individual structural components (e.g., columns, beams) in steel, concrete, and timber construction.

ARCH 363(3603) 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(3604) Vertigo Structures (also ARCH 664[6604])
Fall or spring. 3 credits. Prerequisite: ARCH 363 or equivalent. Limited enrollment. Not offered every year. M. Cruvellier.

ARCH 365(3605) Bridge Design (also ARCH 665[6605])
Fall or spring. 3 credits. Limited enrollment. Prerequisite: ARCH 363 or equivalent. Not offered every year. M. Cruvellier.
The major visual impact of bridges on the built environment cannot be denied. And yet, during the past century, architects have virtually abandoned their historical role 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 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(3606) The Tectonic Articulation of Structure (also ARCH 666[6606])
Fall or spring. 3 credits. Limited enrollment. Prerequisite: ARCH 363 or

equivalent. 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(4603) 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 TBA before preregistration.

ARCH 473(4609) Special Investigations in Structures
Fall or spring. Variable credit; max. 3. Prerequisite: permission of instructor and approved independent study form. Staff.
Independent study.

ARCH 563(5603) Structural Concepts
Fall or spring. 3 credits. Prerequisite: M. Arch. I students or permission of instructor. Staff.
For description, see ARCH 263.

ARCH 564(5604) Structural Elements
Fall or spring. 3 credits. Prerequisite: M. Arch. I students or permission of instructor. Staff.
For description, see ARCH 264.

ARCH 663(6603) Structural Systems
Fall or spring. 3 credits. Prerequisite: M. Arch. I students or permission of instructor. Staff.
For description, see ARCH 363.

[ARCH 664(6604) Vertigo Structures (also ARCH 364[3604])
Not offered 2005–2006; next offered 2006–2007.]

ARCH 665(6605) Bridge Design (also ARCH 365[3605])
Fall or spring. 3 credits. Limited enrollment. Prerequisite: ARCH 363 or equivalent. Not offered every year. Staff.
For description, see ARCH 365.

ARCH 666(6606) The Tectonic Articulation of Structure (also ARCH 366[3606])
Fall or spring. 3 credits. Limited enrollment. Prerequisite: ARCH 363 or equivalent. Not offered every year. J. Ochshorn.
For description, see ARCH 366.

Construction

ARCH 262(2602) Building Technology, Materials, and Methods
Fall. 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(3607) Working Drawings (also ARCH 667[6607])
Fall or spring. 3 credits. Prerequisite: ARCH 262 or equivalent. Limited enrollment. Not offered every year. J. Ochshorn.

ARCH 465(4605) Special Topics in Construction
Fall or spring. 3 credits. Limited to 30 students. Prerequisite: ARCH 262 or permission of instructor. Not offered every year. Staff.
Topics TBA before preregistration.

ARCH 475(4604) Special Investigations in Construction
Fall or spring. Variable credit; max. 3. Prerequisite: permission of instructor and approved independent study form. Staff.
Independent study.

ARCH 562(5602) Building Technology, Materials, and Methods
Fall or spring. 3 credits. Prerequisite: M.Arch I students or permission of instructor. Staff.
For description, see ARCH 262.

ARCH 667(6607) Working Drawings (also ARCH 367[3607])
Fall or spring. 3 credits. Prerequisite: ARCH 262 or equivalent. Limited enrollment. Not offered every year. J. Ochshorn.

Environmental Systems and Conservation

ARCH 261(2601) Environmental Systems—Site Planning
Spring. 3 credits. Staff.
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(3601) Environmental Systems I—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(3602) Environmental Systems II—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 461(4601) Ecological Literacy and Design (also DEA 422[4220])
Spring. 3 credits. Letter grades only. Cost of field trips: approx. $25. J. Elliott.
Lecture/seminar course for advanced (junior or senior) students interested in learning about the effects of designing the built environment of the biophysical world. Course objectives are to develop sensitivities to environmental issues, construct conceptual frameworks for analysis, and demonstrate how ecological knowledge can be applied to the practice of design through participatory approaches to learning. Visit http://instruct1.cit.cornell.edu/courses/dea422/.ARCH.

ARCH 464(4619) Special Topics in Environmental Systems and Conservation
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(4618) Special Investigations in Environmental Systems and Conservation
Fall or spring. Variable credit; max. 3. Prerequisite: permission of instructor and approved independent study form. Staff.
Independent study.

ARCH 661(6601) Environmental Systems I—Lighting and Acoustics
Fall or spring. 3 credits. Prerequisite: M. Arch. I students or permission of instructor. Staff.
For description, see ARCH 361.

ARCH 662(6602) Environmental Systems II—Mechanical and Passive Solar Systems
Fall or spring. 3 credits. Prerequisite: M. Arch. I students or permission of instructor.
For description, see ARCH 362.

Computer Applications

ARCH 374(3704) Computer Graphics I (also COM S 465)
Fall. 4 credits. Prerequisite: COM S/ENGRD 211. Staff.
For description, see COM S 465.

ARCH 476(4706) Special Topics in Computer Applications
Fall or spring. 3 credits. Limited to 30 students. Prerequisite: ARCH 374 or 379 or permission of instructor. Not offered every year. Staff.
Topics TBA before preregistration.

[ARCH 477–478(4707–4708) Special Projects in Computer Graphics
Not offered 2005–2006.]

ARCH 479(4709) Advanced Computer Graphics: Virtual Reality (also ARCH 679[6709])
Fall. 3 credits. Prerequisites: introductory computer graphics or computer science course, or permission of instructor; upper-level undergraduate or graduate standing. H. Richardson.
Explores the role of synthetic imaging and computer graphics in architectural design. The first half of the course examines 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 half 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(6709) Advanced Computer Graphics: Virtual Reality (also ARCH 479[4701])
Fall. 3 credits. Prerequisite: introductory computer graphics or computer science course or permission of instructor; upper-level undergraduate or graduate standing. H. Richardson.
For description, see ARCH 479.

ARCH 761–762(7701–7702) Architectural Science Laboratory
761, fall; 762, spring. 6 credits each semester. Prerequisite: architectural science graduate students. D. Greenberg.
Projects, exercises, and research in the architectural sciences.

ARCH 763–764(7903–7904) Thesis or Research in Architectural Science
763, fall; 764, spring. Variable credit; max. 12. Prerequisite: 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 be taken only once to satisfy history of architecture or in-college requirements.

Sequence Courses

ARCH 181(1801) History of Architecture I
Fall. 3 credits. Requirement for first-year architecture students; open to all students in other colleges interested 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(1802) History of Architecture II
Spring. 3 credits. Requirement for first-year architecture students; open to all students in other colleges interested 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(3800) History of Theory
Not offered every year.

ARCH 381(3801) From Utopia 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 to 1600. Particular attention is given Italy and Spain. 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. This course considers 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 20th-century urban plans and built projects.

ARCH 382(3802) The Cinematic City
Fall. 3 credits. Prerequisite: ARCH 181–182 or permission of instructor. Not offered every year. M. Lasansky.
Examines the relationship between cinematic forms of mass media and architecture. Explores the representation, perception, and understanding of architecture as it has been mediated by various cinematic genres including film, television, and documentaries. Considers how cinema has been deployed as a tool in architectural production, how it has influenced the experience and design of space, the extent to which it has been used as a vehicle for critical commentary on the urban condition, and the way it is imbedded in the historical development of architecture and urbanism.

ARCH 383(3803) The Construction of Modern Life: The Politics of Memory and the Commodification of Architecture
Fall or spring. 3 credits. Prerequisite: ARCH 181–182 or permission of instructor. Not offered every year. M. Lasansky.
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. Focuses on late 18th-, 19th-, and 20th-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 (e.g., 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(3804) The Urban Landscape of Renaissance Rome: 1450 to 1600
Fall or spring. 3 credits. Prerequisites: ARCH 181–182 or permission of instructor. Not offered every year. M. Lasansky.
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. The course surveys 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(3805) Magnificent Utility—Architecture and the Arts of Persuasion
Not offered 2005–2006.]

ARCH 386(3806) The Architecture of India and Its Interpretation
Spring. 3 credits. Not offered every year. B. MacDougall.
Surveys the architectural record of ancient and medieval India with an emphasis on stupa and temple traditions. Devotes attention to European efforts to write a Western-style architectural history for India and to the British fascination with explaining Indian ethnology and history over two centuries. Attempts to evaluate the claim made by the historian James Fergusson that architecture provided the basis for reconstructing an imperfectly known Indian history. Also examines the notion that scholarly enterprises were closely entwined with strategies for domination. To this end, students read 19th-century firsthand reports on architecture in antiquarian English-language journals alongside more modern accounts. They are compared with indigenous architecture writings that were often unacknowledged by Europeans.

ARCH 387(3807) 19th Century: Tales of the City
Fall or spring. 3 credits. Prerequisite: ARCH 181–182 or permission of instructor. Not offered every year. M. Woods.
Focuses on 19th-century cities as settings for modernisms and modernities, new visions and experiences of modern life. The relationship between urbanism and creativity that emerges during the 19th century engages students in Berlin, Havana, Miami, London, Bombay, Paris, Harlem, and other cities. Issues of center and periphery, nation and locality, 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(3808) Modernism
Not offered 2005–2006.]

[ARCH 389(3809) Architecture, Revolution, and Tradition
Not offered 2005–2006.]

ARCH 390(3810) American Architecture and Building I (also AM ST 390[3810])
Fall or spring. 3 credits. Prerequisites: ARCH 181–182 or permission of instructor. Not offered every year. M. Woods.
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(3811) American Architecture and Building II (also AM ST 391[3811])
Fall or spring. 3 credits. Prerequisites: ARCH 181–182 or permission of instructor. Not offered every year. M. Woods.
Continuation of ARCH 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(3812) Modern Architecture on Film
Fall or spring. 3 credits. Prerequisites: ARCH 181–182 or permission of instructor. Not offered every year. M. Woods.
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, theater, 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(3813) The Cumulative City
Not offered 2005–2006.]

ARCH 395(3815) History of the Present—Contemporary Architecture and Urbanism
Fall or spring. 3 credits. Prerequisite: ARCH 181–182 or permission of instructor. C. F. Otto.
Theory and practice in architecture and urbanism are investigated from later Modernism to contemporary positions. Built work, theoretical texts and graphics, and the nature of design practice in locations worldwide (such as the United States and the Pacific Rim) raise issues of globalization and the specificity of place and cultural identity. By engaging the immediate past using methods of cultural and design history, the course problematizes the relationship (and relevance) of history to architectural practice and experience.

ARCH 396(3816) 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 TBA.

ARCH 397(3817) 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 TBA.

ARCH 398(3818) 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 TBA.

ARCH 399(3818) 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 TBA.

Graduate Seminars in the History of Architecture and Urbanism

All topics for ARCH 682 to 699 TBA before the start of the semester.

ARCH 680(6800) Seminar in Historiography
Fall. 4 credits. Requirement for first- and second-year graduate students in History of Architecture and Urbanism Program. Prerequisite: permission of instructor. Staff.
Examines historiographic and methodological issues 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 686(6806) Seminar in 17th- and 18th-Century Architecture and Urbanism
Not offered 2005–2006.]

[ARCH 688(6808) Seminar in 20th-Century Architecture and Urbanism
Not offered 2005–2006.]

[ARCH 690(6810) Seminar in American Architecture, Building, and Urbanism
Not offered 2005–2006; next offered 2006–2007.]

[ARCH 692(6812) Seminar in 19th-Century Architecture, Building, and Urbanism
Not offered 2005–2006; next offered 2006–2007.]

ARCH 696(6816) 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 697(6817) 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(6818) 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(6819) 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(2809) Undergraduate Independent Study in the History of Architecture and Urbanism
Fall or spring. Variable credit; max. 3. May not be taken by students in design to satisfy undergraduate history requirements. Prerequisite: permission of instructor. Staff.
Independent study for undergraduate students.

ARCH 499(4901) Undergraduate Thesis in the History of Architecture and Urbanism
Fall or spring. 4 credits. Prerequisite: B.S. honors candidates in history. Staff.

ARCH 799(7809) Graduate Independent Study in the History of Architecture and Urbanism
Fall or spring. Variable credit; max. 12. Prerequisite: permission of instructor. Staff.
Independent study for graduate students only.

ARCH 899(8921) 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(9901) Ph.D. Dissertation in the History of Architecture and Urbanism
Fall or spring. Variable credit; max. 12. Staff.
Independent study for the doctoral degree.

ART

B. Spector, chair (224 Tjaden Hall, 255-3558); R. Bertoia, J. Locey, T. McGrain, E. Meyer, G. Page, director of graduate studies; B. Perlus, W. S. Taft, and visiting artists and 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 first-year 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

The B.F.A. degree requires 130 academic credits. A minimum of 58 are taken in the Department of Art.

Curriculum

Students are expected to take an average course load of 16 credits per semester during their four years. Students wishing to take more than three studio courses in any one semester 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 before the act. No student in the first year of the B.F.A. 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, electronic imaging, 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 electronic imaging and printmaking (26 credits each). 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 electronic imaging and 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); 134, 231, 232, 233, 234 (1 of 4); 331, 431, 432 (senior thesis)

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

Electronic Imaging: ART 171; 271/234 (1 of 2); 272/273 (1 of 2), 373/374 (1 of 2), 471, 472 (senior thesis)

Dual Concentration

Students interested in studying in more than one area may choose to do a dual concentration. The dual concentration requires a first area, in which the thesis is conducted, and a nonthesis 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 available only as a second area of concentration.

The required courses for the dual concentration are:

First Area of Concentration	*Total Credits*
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
Electronic Imaging: ART 171; 271/234 (1 of 2); 272/273 (1 of 2) or 373/374 (1 of 2); 471/472	23
Second Area of Concentration	*Total Credits*
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
Electronic Imaging: ART 171; 271/234 (1 of 2); 272/273 (1 of 2); or 391/392 (1 of 2)	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 and theatre, film, and dance.

Students must file an approved "area of concentration" form. In addition to the courses required of all B.F.A. majors during their first and second year (see B.F.A. curriculum), students must take two studios at the 200 or 300 level, a minimum of two "out of college" studio electives (OCE studio) of 3–4 credits each, ART 481 Pre-Thesis in Combined Media and ART 482 Thesis in Combined Media.

Note: The total number of in- and 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 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 submit a petition, which should include the proposed course schedule for both semesters and must have appropriate faculty approval.

Sample Rome Curriculum

ART 400	Rome Studio Requirement for Rome B.F.A. students, fulfills 4 credits in a studio concentration	4
ART 209	Site-Specific Processes	3
ART 312*	Modern Art in Italy	3
ART 317	History of Art in Rome: Early Christian to the Baroque Age [not offered 2005–2006]	4
or		
ART 318	History of Art in Rome: Renaissance in Rome and Florence	4
or		
ART 372.20	Special Topics in Art History (spring only)	4
ITALA 111/112	Italian Language	4
[ARCH 317	Contemporary Italian Film	1**]

**Students may add by approved petition to take 19 credits in Rome.

18 Total

Other electives available to B.F.A. students include courses in architectural history, visual studies, city and regional planning, and the Independent Studio in Art.

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 elective credits must be taken outside of the college. In the first year, students must take two first-year 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: for example, 260, 265, 270, 360, 362, 365, 366, 367, 370, 376, 447, 464.

Non-Western: for example, 215, 280, 339, 378, 380, 383, 384, 385, 386, 395, 396, 470, 478, 490, 571.

Three electives: any art history elective at the 300 level or above or any architectural history elective. (Note: 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 semesters in physical education must be met.

A candidate for the B.F.A. degree at Cornell is required to spend the last two semesters 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 semesters.

Students who transfer into the undergraduate degree program in art must complete a minimum of four semesters 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 semesters of studio work.

For those students matriculating in fall of 2005:
Students are required to take ART 111 Introductory Art Seminar; ART 121 Introductory Painting; or ART 141 Introductory Sculpture; Art History elective; and a first-year writing seminar during the fall semester of the freshman year. ART 131/132/133 Introductory Printmaking; Art History elective; and an additional first-year writing seminar must be taken during the spring semester of the freshman year. Two 300-level courses in theory and criticism must be taken sometime between the sophomore and senior years.

Courses that will fulfill the theory and criticism requirement (Note: Offerings may vary from year to year. Check the current course catalog.):

ARCH 447

ART 170

ART 312 (Rome students only)

ART H 367, 370, 377, 422, 463, 464, 466, 494, 571, 594

ENGL 395

GERST 660

GOVT 375

ASRC 304, 503

ANTHR 320, 322, 453

THETR 376

First Year

Fall Semester (Required Curriculum)	*Credits*
111 Introductory Art Seminar	1
Art History Elective	4
121 Introductory Painting	3
or	
141 Introductory Sculpture	3
151 Drawing I	3
First-year writing seminar	3
In-/Out-of-College Electives	3
	17

Spring Semester (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	
First-year writing seminar	3
	16

Second Year

Fall Semester (Required Curriculum)	*Credits*
161 Introductory Photography	3
171 Electronic Imaging in Art	3
251 Drawing III	3
Out-of-college elective (OCE)/Art History	3–4
OCE	3
	15–16

Spring Semester	
200-level studio	4
200-level studio	4
252 Drawing IV	3
300-level course in theory and criticism	3
OCE	3
	17

Third Year

Fall Semester	
200-level studio	4
Art studio concentration	4
Art history elective or 300-level course in theory and criticism	3–4
OCE	3
In/OCE	3
	17–18

Spring Semester	
Art studio concentration	4
Art history elective or 300-level course in theory and criticism	3–4
In/OCE (two courses)	7
	14–15

Fourth Year

Fall Semester	
Pre-Thesis	6
In/OCE (three to four courses)	10
	16

Spring Semester	
Thesis	6
In/OCE (three courses)	9
	15

The M.F.A. Program

The master of fine arts program requires four semesters 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 semester; of these, 9 credits are in studio work, and 3 credits are in graduate seminar (ART 611, 612, 623, 624). Students are required to take at least 12 credits of academic work outside the Department of Art during their four semesters in residence. Candidates for the master of fine arts degree must have completed 18 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, several courses are offered 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 4.

Courses in Theory and Criticism

ART 111(1101) Introductory Art Seminar
Fall. 1 credit. Prerequisite: B.F.A. students. S-U grades only. 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 170(1700) Visual Imaging in the Electronic Age
Fall or spring. 3 credits. D. Greenberg.
Interdisciplinary survey course designed to introduce students in the creative arts, science, and engineering to the concepts of digital pictorial representation and display. It is a concept and theory course that concentrates on "why" rather than "how." Topics include perspective representations, display technology, how television works, bandwidth concepts, digital photography, computer graphics modeling and rendering, matting and composing, color perception, data acquisition, volumetric imaging, and historical precedents, primarily from the art world. Also included are other modes of imaging.

Related Courses

ART 209(2009) Site-Specific Processes
Fall or spring. 3 credits. Prerequisite: ART 251 or permission of instructor. Staff.
This studio course investigates materials, methods, and processes specific to Rome. The Italian experience and specifically the city of Rome is used to engage in artistic practices not readily available on the Ithaca campus. The methods to be studied in workshop settings could include: fresco painting, egg tempera, watercolor, paper making, wood carving, stone carving, mosaics, and ceramics. The final project involves the use of one or more processes presented in a site-specific installation.

ART 214(2104) Art and the Multicultural Experience
Fall. 3 credits. R. Dalton.
Investigates selected topics related to art and the multicultural experience. Students 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 underrepresented American minority cultural groups.

ART 312(3102) Modern Art in Italy
Fall or spring. 3 credits. Fulfills 300-level theory and criticism requirement for fine arts majors. Prerequisite: Rome Program participants. Staff.
Introduces students to contemporary art in Rome through studio visits, gallery exhibitions, and museum collections. Lectures by artists, critics, and others. Traces art from idea to realization and explores the gallery and its relationship to artists and to promotion of art, the role of the art critic and museum, and art collecting.

[ART 317(3107) History of Art in Rome: Early Christian to the Baroque Age
Not offered 2005–2006.]

ART 318(3108) History of Art in Rome: Renaissance in Rome and Florence
Not offered every year. Staff.
Surveys art from the beginning of the 15th century to Michelangelo's death (1564) with field trips to important churches, collections, and villas. Emphasis is given to sculpture and painting, and in the case of fresco, mosaics, and stucco decoration, the relationship with architecture and environment is a key element.

ART 419(4109) Independent Study/ Supervised Readings in Art
Fall, spring, or summer. 4 credits, variable. Prerequisite: juniors in good academic standing and written permission of 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 570(5700) Theory Seminar
Fall and spring. 4 credits. Priority given to AAP and Art History graduate students. B. Spector and M. Fernandez.
Introduces students in art, art history, and architecture to diverse theoretical texts of relevance to the three fields. Readings include classic texts in post-structural theory and more recent writings in new areas of theory and artistic practice, including digital art, cyber-feminism, globalization, museums and museology, architecture in/as visual space, biotechnology and artificial life, as well as issues in cognitive science and human-computer interaction centering on space and embodiment. Occasionally this seminar focuses on a single topic of convergence for these diverse areas.

ART 611(6101) Professional Skills for the Visual Artist
Spring. 3 credits. Prerequisite: M.F.A. students. Staff.
This seminar helps 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 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(6102) Recent Practice in the Visual Arts
Fall. 3 credits. Prerequisite: M.F.A. students. Staff.
This seminar is designed to provide graduate students with an overview of recent visual artwork. Students 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 are encouraged to travel to nearby cities to look at contemporary work.

ART 613(6103) Online Publication for the Visual Artist
Fall. 3 credits. Prerequisite: M.F.A. students. Staff.
Seminar 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 online magazine. Additionally each student learns to create a home page on the web.

ART 614(6104) Contemporary Theory in the Visual Arts
Spring. 3 credits. Prerequisite: M.F.A. students. Staff.
Seminar exploring selected writings on the current issues represented within the visual arts. 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.

ART 623(6203) Contemporary Theory and Visual Culture
Fall. 3 credits. Prerequisite: M.F.A. students. Staff.
Seminar exploring selected writings on current issues in the visual arts. Designed to introduce graduate students to several approaches to critical inquiry and analysis of contemporary practice in the visual arts. Topics vary but may include related criticism in areas such as visual culture, semiotics, identity politics, and institutional frames.

ART 624(6204) Current Criticism in the Visual Arts
Spring. 3 credits. Prerequisite: M.F.A. students. Staff.
Seminar designed to introduce graduate students to critical writing in the visual arts, both in print and in digital format. 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 online magazine. Additionally, each student learns to create a home page on the web.

Studio Courses in Painting

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

ART 121(1201) Introductory Painting
Fall, spring, or summer. 3 credits. Staff.
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(2201) Painting II
Fall or spring. 4 credits. Prerequisite: ART 121 or permission of instructor. Staff.
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(3201) Painting III
Fall or spring. 4 credits. Prerequisite: ART 221 or permission of instructor. Staff.
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 20th century are used as well as developing technologies applicable to the painting process.

ART 322(3202) Painting IV
Fall or spring. 4 credits. Prerequisite: ART 321 or permission of instructor. Staff.
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(4201) Pre-Thesis in Painting
Fall or spring. 6 credits. Prerequisite: ART 322. Staff.
Advanced study of painting through assigned and independent projects using a variety of

materials leading to the formulation of a thesis project.

ART 422(4202) Thesis in Painting
Fall or spring. 6 credits. Prerequisite: ART 421. Staff.
Focused independent project demonstrating creative ability and technical proficiency. Projects are exhibited in an appropriate space at the end of the semester.

ART 429(4209) Independent Studio in Painting
Fall, spring, or summer. 4 credits, variable. Prerequisites: juniors in good academic standing and permission of instructor. Staff.
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 his or her progress and evaluate results.

ART 721–722(7201–7202), 821–822(8201–8202) 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, 432, 439): $95

Screenprinting (132, 232, 431, 432, 439): $45

Lithography (133, 233, 431, 432, 439): $95

Expanded Print Forms (134, 234): $95

ART 131(1301) Introductory Intaglio
Fall and spring. 3 credits. Staff.
Basic introduction to etching techniques, with emphasis on engraving, lift ground, relief printing, monotypes, and experimental techniques.

ART 132(1302) Introductory Graphics
Fall and spring. 3 credits. Staff.
Introduces the two-dimensional thought process and the language of vision. Students explore design projects and the use of graphic materials, including collage, pochoir, and screen printing.

ART 133(1303) Introductory Lithography
Fall and spring. 3 credits. Staff.
Study of 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 134(1304) Expanded Print Forms
Spring. 3 credits. Prerequisite: one of the following: ART 131, 132, 133, 161, 171, 251, or permission of instructor. Staff.
Intensive experimental studio designed to introduce students to various ideas and processes of making artists' books. Encourages the integration of studio practice (photography, printmaking, drawing, and painting) with new digital strategies (digital photography/ink jet print, video/sound, CD-ROM/digital book making). Presents both concept and process as related to the visual book form. An introduction to digital publication as an expanded print form helps students investigate how the book is reinvented or reshaped within an electronic context.

ART 231(2301) Intaglio II
Spring. 4 credits. Prerequisite: ART 131. Staff.
Studio course in advanced etching techniques. Refinement of processes and ideas through the uses of acquatint, spit bite, lift ground, soft ground, and dry point in black and white with an introduction to multiple-plate color printmaking.

[ART 232(2302) Advanced Screen Printing
Not offered 2005–2006.]

ART 233(2303) Lithography II
Spring. 4 credits. Prerequisite: ART 133. Staff.
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 kodalith and computer-generated transparencies.

ART 234(2304) Large-Format Digital Printing
Fall and spring. 4 credits. Prerequisites: ART 161, 171, and one of the following: ART 131, 132, 133, 134 or permission of instructor. Staff.
Focuses on the use of digital printing and its use in combination with traditional forms of printmaking. Students explore various approaches to image making while also using traditional materials and media, including relief, monotype, lithography, screen printing, intaglio, transfers, collage, and photomechanical processes. Students use appropriate software, including Adobe PhotoShop, Quarkxpress, Final Cut Pro, and Adobe illustrator to draw from both still and video base sources. Students work with large-format inkjet printers.

ART 331(3301) Printmaking III
Fall or spring. 4 credits. Prerequisite: ART 231, 232, or 233 or permission of instructor. Staff.
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(3302) Printmaking IV
Fall. 4 credits. Prerequisite: ART 331 or permission of instructor. Staff.
Continuation and expansion of ART 331.

ART 431(4301) Pre-Thesis in Printmaking
Fall or spring. 6 credits. Prerequisite: ART 332. Staff.
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(4302) Thesis in Printmaking
Fall or spring. 6 credits. Prerequisite: ART 431. Staff.
Advanced printmaking project to demonstrate creative ability and technical proficiency.

ART 439(4309) Independent Studio in Printmaking
Fall, spring, or summer. 4 credits, variable. Prerequisites: juniors in good academic standing and written permission of instructor. Staff.
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 his or her progress and evaluate the results.

ART 731–732(7301–7302), 831–832(8301–8302) 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 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(1401) Introductory Sculpture
Fall, spring, or summer. 3 credits. Staff.
Series of studio problems introducing the student to the basic principles of artistic expression in three-dimensions, i.e., clay modeling, direct plaster, plaster casting, and construction in wood, metal, and other materials.

ART 241(2401) Sculpture II
Fall or spring. 4 credits. Prerequisite: ART 141, or 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(3401) Sculpture III
Fall or spring. 4 credits. Prerequisite: ART 241 or permission of instructor. Staff.
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(3402) Sculpture IV
Fall or spring. 4 credits. Prerequisite: ART 341 or permission of instructor. Staff.
Continuation and expansion of ART 341. Special projects may include site-specific and/or large-scale installations.

ART 343(3403) Sculpture V
Fall or spring. 4 credits. Prerequisite: ART 342 or permission of instructor. Staff.
Continued study of the principles of sculpture and the selection and expressive use of materials and media. Group discussions and individual criticism.

ART 441(4401) Pre-Thesis in Sculpture
Fall or spring. 6 credits. Prerequisite: ART 342. Staff.
Further study of the art of sculpture through both assigned and independent projects executed in various media. Instruction through

bimonthly group discussions and individual criticism. Students complete a body of work through an approved statement of purpose and proposed schedule.

ART 442(4402) 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(4409) Independent Studio in Sculpture
Fall, spring, or summer. 4 credits variable. Prerequisites: juniors in good academic standing and written permission of instructor. Staff.
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(7401–7402), 841–842(8401–8402) 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:

Black-and-white courses: $135

Color courses: $215

Additional black-and-white course taken the same semester: $55

Additional color course taken the same semester: $135

ART 161(1601) Photography I
Fall, spring, or summer. 3 credits. Staff.
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(1608) Black-and-White Photography
Summer, three-week session only. 3 credits. Staff.
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(1609) Color Photography
Summer, three-week session only. 3 credits. Staff.
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(2601) Photography II
Fall, spring, or summer. 4 credits. Prerequisite: ART 161 or ARCH 251, or permission of instructor. Staff.
Continuation of Photography I, concentrating on black-and-white photographic processes, history and theory of creative practice, and individual projects.

ART 263(2603) Color Photography
Fall and summer. 4 credits. Prerequisite: ART 161 or ARCH 251, or permission of instructor. Staff.
Studio course in color photography with emphasis on camera skills, darkroom techniques, and the content of color photography.

ART 264(2604) Photo Processes
Fall, spring, or summer. 4 credits. Prerequisite: ART 161 or ARCH 251, or permission of instructor. Staff.
Studio course in alternative and nonsilver photographic processes. Emphasis is on camera skills, basic techniques and processes, image content, and creative use of photo processes.

ART 265(2605) Studio Photography
Fall or spring. 4 credits. Prerequisite: ART 161 or ARCH 251, or permission of instructor. Staff.
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(3601) Photography III
Fall, spring, or summer. 4 credits. Prerequisite: ART 161, 261, or permission of instructor. Staff.
Continued study of creative use of photography, with emphasis on specialized individual projects.

ART 461(4601) Pre-Thesis in Photography
Fall or spring. 6 credits. Prerequisite: ART 261, 263. Staff.
Studio course intended for photography majors and other qualified students.

ART 462(4602) Thesis in Photography
Fall or spring. 6 credits. Prerequisite: ART 461. Staff.
Studio course intended for photography majors and other qualified students. Advanced photography project to demonstrate creative ability and technical proficiency.

ART 469(4609) Independent Studio in Photography
Fall, spring, or summer. 4 credits, variable. Prerequisites: juniors in good academic standing and written permission of instructor. Staff.
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(7601–7602), 861–862(8601–8602) 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 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(1501) Drawing I
Fall, spring, or summer. 3 credits. Staff.
General course introducing 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. Students have the opportunity to explore various media such as charcoal, chalk, pencil, pen, ink, and wash.

ART 152(1502) Drawing II
Spring. 3 credits. Prerequisite: ART 151. Staff.
General course in drawing that emphasizes figure study and life drawing. 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(1508) Conceptual Drawing
Summer, six-week session. 3 credits. Staff.
Emphasizes drawing from the imagination. Stresses the generation of ideas and their development in sketches. 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(1509) Life and Still-Life Drawing
Summer, six-week session. 3 credits. Staff.
Studies the human figure and still life both as isolated phenomena and in relation to their environment. Focuses are on helping the student observe and discover.

ART 251(2501) Drawing III
Fall. 3 credits. Prerequisite: ART 152. Staff.
Intermediate drawing course in which 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(2502) Drawing IV
Spring. 3 credits. Prerequisite: ART 251. Staff.
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(4509) Independent Studio in Drawing
Fall, spring, or summer. 4 credits, variable. Prerequisites: juniors in good academic standing and written permission of instructor. Staff.
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 his or her progress and evaluate the results.

Studio Courses in Electronic Imaging

Course fees:

171, 372, 479	$250
234, 271, 272	$105
373/374	$250
481, 482, 489	$ 70

ART 171(1701) Electronic Imaging in Art
Fall or spring. 3 credits. Staff.
Introductory studio course using the computer as a tool for making art. Students explore various approaches to 2- and 3-D web art using software programs and various functions. This course is an introduction to the web.

ART 234(2304) Large-Format Digital Printing
Fall and spring. 4 credits. Prerequisite: ART 171. Staff.
Focuses on the use of digital printing and its use in combination with traditional forms of printmaking. Students explore various approaches to image making while also using traditional materials and media, including relief, monotype, lithography, screen printing, intaglio, transfers, collage, and photomechanical processes. Students use appropriate software, including Adobe PhotoShop, Quarkxpress, Final Cut Pro, and Adobe Illustrator to draw from both still and video-based sources. Students work with large-format inkjet printers.

ART 271(2701) Electronic 3-D Modeling and Animation
Fall or spring. 4 credits. Prerequisite: ART 171. Not offered every year. Staff.
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(2702) Digital Video and Sound
Fall or spring. 4 credits. Prerequisite: ART 171. Not offered every year. Staff.
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 273(2703) Computer Animation (also CIS 565[5640])
Fall. 4 credits. D. Greenberg.
Focuses on techniques of computer animations. Combines critical readings with studio projects that employ a variety of animation software. Topics include modeling, storyboarding, 2-D and 3-D key frame animation, motion and kinematics, lighting effect and shading, texturing and material properties, physical simulation, and cinematography.

ART 373(3703) Intermediate Electronic Imaging Studio I
Fall. 4 credits. Prerequisite: ART 272 or 273. Lab fee TBA. Staff.
For information, please call department.

ART 374(3704) Intermediate Electronic Imaging Studio II
Spring. 4 credits. Prerequisite: ART 272 or 273. Lab fee TBA. Staff.
For information, please call department.

ART 471(4701) Pre-Thesis in Electronic Imaging
Fall and spring. 6 credits. Prerequisites: ART 171, 234 or 271, 272 or 273, 373 or 374. Lab fee TBA. Staff.
For information, please call department.

ART 472(4702) Thesis in Electronic Imaging
Fall and spring. 6 credits. Prerequisite: ART 471. Lab fee TBA. Staff.
For information, please call department.

Special Studio Courses

ART 372(3702) Special Topics in Art Studio
Fall, spring, or summer. 4 credits, variable. Staff.
Exploration of a particular theme or project.

ART 372.20(3702.20) Special Topics in Art History
Spring. 4 credits, variable. Prerequisite: Rome Program participants. Staff.
Topic TBA.

ART 379(3709) Independent Studio in Rome
Fall and spring. 4 credits, variable. Prerequisites: Rome Program participants; juniors in good academic standing and written permission of instructor. Staff.
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 his or her progress and evaluate the results.

ART 391(3901) Media Arts Studio I (also ARCH 459/659[4509/6509], FILM/DANCE 391[3910])
Fall. 3 credits. Prerequisites: FILM 277 or 377; junior standing and permission of instructor. Lab fee: $50. Staff.
For description, see FILM 391.

[ART 392(3902) Media Arts Studio II
Not offered 2005–2006.]

ART 400(4000) Rome Studio
Fall or spring. 4 credits. Fulfills 4 credits of concentration requirement. Prerequisites: Rome Program participants; permission of instructor. Content for Rome studio determined by instructor. Fee: $60; additional fees 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 479(4709) Independent Studio in Electronic Imaging
Fall, spring, or summer. 4 credits, variable. Prerequisites: juniors in good academic standing and written permission of instructor. Staff.
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 his or her progress and evaluate the results.

ART 481(4801) Pre-Thesis in Combined Media
Fall or spring. 6 credits. Prerequisite: written permission of instructor on combined media thesis form (must be received in art department before enrollment in course). Students must enroll in pre-thesis course in their primary area of concentration. Staff.
Students are responsible, under faculty direction, for planning their own projects and selecting the media in which they 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(4802) Thesis in Combined Media
Fall or spring. 6 credits. Prerequisites: ART 481 and written permission of instructor on combined media thesis form (must be received in art department before enrollment in course). Students must enroll in thesis course in their primary area of concentration. Staff.
Students are responsible, under faculty direction, for planning their own projects and selecting the media in which they 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(4809) Independent Studio in Combined Media
Fall, spring, or summer. 4 credits, variable. Prerequisites: juniors in good academic standing and written permission of instructor. Staff.
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

K. Reardon, chair (108 W. Sibley Hall, 254-5378; S. Baugher, L. Benería, R. S. Booth, S. Christopherson, P. Clavel, M. Drennan, A. M. Esnard, J. F. Forester, W. W. Goldsmith, N. Kudva, Y. Levitte, D. Lewis, B. Lynch, director, URS; P. Olpadwala, R. Pendall, S. Saltzman, M. A. Tomlan, R. T. Trancik, M. Warner. Emeriti: S. Czamanski, W. Isard, J. W. Reps, S. W. Stein. Visiting: I. Azis, T. Vietorisz

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 (for students in the graduating class of 2006 and earlier)
Requirements for graduation: URS requirements include (1) eight semesters of residence; (2) 120 credits; (3) two first-year 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 1-credit nonacademic courses in physical education. Note: Physical education credit does not count toward graduation or toward the 12-credit minimum required for good academic standing each semester. No course may satisfy more than one requirement.

1. General education

a. First-year writing seminars: two courses

b. Foreign language: three courses or qualification in one foreign language

c. Distribution requirement: nine 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 (two to three courses required)

Group 2: Quantitative and formal reasoning (one to two courses required)

Group 3: Social sciences and history (two to three courses required)

Group 4: Humanities and the arts (two to three courses required)

Advanced Placement Credit

Students in the graduating class of 2006 and earlier 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.

Students in the graduating classes of 2007 and later may apply *no* advanced placement or transfer credit to general education requirements in Groups 1 through 4 (sciences, quantitative reasoning, social sciences/humanities/arts).

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

MATH 171 Statistical Theory and Application in the Real World

SOC 301 Evaluating Statistical Evidence (II)

microeconomics course (at least 3 credits, from an approved list)

architecture course (at least 3 credits)

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

Students must take one CRP course in each of the following six areas: design, economics, environment, history, politics/policy, and quantitative analysis.

The URS approved area requirements list is available in 106 W. Sibley Hall. Students must take any additional five 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 4 credits toward additional CRP course requirement.

4. Free Electives: six to nine courses

5. Physical Education (two semesters)

Required credits: 120

New requirements for students in the graduating class of 2007 and after

General Education: same as graduating class of 2006 and earlier.

1. First-year writing seminars: two courses

Students earning a score of 5 on both English literature and English language exams will receive 3 credits (in out-of-college electives) and place out of one first-year writing seminar.

Distribution Requirements: same as graduating class of 2006 and earlier

(For a complete listing of courses in Groups 1 through 4, see "Distribution Requirements" under "College of Arts and Sciences." Note: The Arts and Science distribution requirement has been changed for entering freshmen in that college (class of 2007). Rather than selecting courses from Groups 3 (social sciences and history) and 4 (humanities and the arts), **as of fall semester 2004**, Arts and Sciences students are required to complete five courses in at least four of the following five categories: Cultural Analysis (CA); Historical Analysis (HA); Knowledge, Cognition, and Moral Reasoning (KCM); Literature and the Arts (LA); and Social and Behavioral Analysis (SBA). Social science and humanities courses are marked individually by category, and any given department may offer courses that fall into distinct categories. URS students are also encouraged to select their Group 3 and Group 4 courses from four of these five categories.

Required Courses for the Major in Urban and Regional Studies: seven courses

CRP 100 The American City (fall, 3 credits)

CRP 101 The Global City: People, Production, and Planning in the Third World (spring, 3 credits)

CRP 106 URS First-Year Seminar (spring, 1 credit)

CRP 200 The Promise and Pitfalls of Contemporary Planning (fall, 3 credits)

CRP 201 People, Planning and Politics in the City (spring, 3 credits)

ECON 101 Microeconomics (both semesters, 3 credits)

Statistics Various courses (both semesters, 3 credits)

Area Requirement: six CRP courses

A. Design and Land Use (one course)

B. Urban History, Society, and Politics (one course)

C. Environment (one course)

D. Regional Development and Globalization (one course)

E. Methods for Planning and Urban Studies (two courses)

Either CRP 331 or 332

CRP 331 Preparation for Urban Fieldwork (spring, 3 credits)

CRP 332 Urban Policy Research Seminar (fall, 3 credits)

or an equivalent research course approved by the URS director

And one of the following:

CRP 328 Overview Quantitative Methods in Public Policy Analysis

CRP 408 Introduction to Geographic Information Systems

CRP 327 Regional Economic Impact Analysis

CRP 425 Quantitative Methods for Urban Analysis (4 credits) This requirement is also satisfied by GOVT 300 Methods: Research Design and Qualitative Methods (Cornell in Washington) *or* an equivalent research methods course approved by the URS director.

URS-Approved Area Requirements List (available in program office).

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

Urban Studies Concentration (non-URS majors)

The Urban and Regional Studies Concentration has been formulated specifically for those students not enrolled in the Program of Urban and Regional Studies and who are interested in complementing their current academic program with an introduction to various facets of urban studies (domestic, environmental, international, professional, urban affairs).

To complete the Urban and Regional Studies (URS) concentration, students must take at least six courses (minimum total of 18 credits) in the Department of City and Regional Planning (CRP). Courses must be completed with letter grade of C or above.

Nine (9) credits of required core courses:

CRP 100 American Cities (3 credits)

CRP 101 The Global City: People, Production in the Third World (3 credits)

CRP 200 The Promise and Pitfalls of Contemporary Planning (3 credits)

And 9 credits of elective department courses at the 300 level or higher.

(Please consult department course listings.)

Students meet with their home college faculty adviser. Upon completion of course requirements, students complete a URS concentration application form, available in 106 W. Sibley Hall. The AAP registrar verifies course completion and grades for concentration requirements and signs the application form. The URS program director (URS concentration adviser) also verifies completion of the concentration, signs the form, and sends a letter (on department letterhead) to the student's home college. The home college will record completion of the URS concentration on the student's transcript.

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, and Feminist, Gender, and Sexuality Studies). 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. The department encourages 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 17th-century Palazzo Lazzaroni. Students in good standing can earn degree credits through courses taken with Cornell faculty members 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 Cornell's 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 Barbara Lynch, program director, Urban and Regional Studies, Cornell University, 106 West Sibley Hall, Ithaca, NY 14853–6701, 255–2186).

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 (M.P.S./I.D.) degree is administered jointly with the Cornell International Institute for Food, Agriculture, and Development (CIIFAD). It is intended to meet the specific training needs of experienced planners or midcareer professionals in related fields.

The 60-credit master of arts (M.A.) in historic preservation planning prepares students for professional work in the creative preservation and use of our physical heritage.

The master of science (M.S.) or master of arts (M.A.) degrees 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 (Ph.D.) 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 Lazzaroni. 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(1100) The American City
Fall. 3 credits. S-U grades optional for out-of-department students only.
W. W. Goldsmith.
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 21st 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(1101) 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.
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 106(1106) URS First-Year Seminar
Fall. 1 credit. S-U grades only. N. Kudva.
Introduces students to substantive issues of the diverse disciplines that make up the planning profession through weekly interaction with CRP and other faculty members in the department. Students have the opportunity to engage in open discussions.

CRP 200(2000) The Promise and Pitfalls of Contemporary Planning
Fall. 3 credits. Prerequisite: CRP 100.
K. Reardon.
Introduction to the historical origins and evolution of the city planning profession in the United States. The theoretical foundation, core values, primary methods, and key challenges facing contemporary planners are examined through a combination of readings, lectures, films, guest speakers, and field trips. Students acquire a deeper understanding of professional practice by working with local officials to develop community development profiles for several Ithaca neighborhoods.

CRP 201(2010) People, Planning, and Politics in the City
Spring. 3 credits. Prerequisites: CRP 100 and 101. P. Olpadwala.
Seminar examining 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 and others questions.

CRP 261(2610) Fieldwork in Urban Archaeology (also LA 261[2610])
Fall. 3 credits. S. Baugher.
For description, see LA 261.

CRP 293(2930) Inequality, Diversity, and Justice (also GOVT 293[2935], SOC 293[2930], PHIL 193[1930])
Fall. 4 credits. R. Miller.
For description, see PHIL 193.

CRP 309(3090) Community Development Seminar (also CRP 509[5090])
Spring. 3 credits. Letter grades. K. Reardon.
Introduction to the theory, method, and practice of contemporary community development. Topics 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 318(3810) Politics of Community Development (also CRP 518[5180])
Spring. 3 credits. Letter grades. Staff.
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(3210) Introduction to Quantitative Methods for the Analysis of Public Policy
Spring. 3 credits. Not offered every year.
Y. Mansury.
Introduction to the role and use of quantitative methods in the study of urban and regional issues. 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 considered.

CRP 327(3270) Regional Economical Impact Analysis (also CRP 627[6270])
Fall. 3 credits. Letter grades. Y. Mansury.
A central concern of practicing planners and economic development professionals is how different events affect the regional economy of concern. Some events are the result of policy choices, such as the closing of a military base or an increase in the local sales tax. Some are the result of exogenous economic forces such as out-migration of population, disasters, natural-floods and hurricanes. This course defines the context, a regional economy, for such analysis, and then presents analytical tools for estimating economic impacts. The major tool covered in depth is regional input-output. Most of the course is devoted to understanding and applying IMPLAN, a software and data system for performing regional input-output analysis at the county level.

CRP 328(3280) Overview: Quantitative Methods in Policy Planning (also CRP 528[5280])
Fall or spring. 3 credits. S-U grades optional. Staff.
Introduces students to the basic tools that are used in policy analysis. The 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(3300) Neighborhood Planning Workshop (also CRP 530[5300])
Spring. 4 credits. Letter grades. K. Reardon.
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 331(3310) Preparation for Urban Fieldwork
Spring. 3 credits. Prerequisite: Urban Scholars or permission of instructor. Letter grades only. R. Sinton.
Introduces students to the key theories, methods, and challenges of experiential education, service-learning, reflective practice, and urban ethnography, in preparation for field-based learning and research experiences with nonprofit organizations and local government agencies that serve distressed urban communities. Topics include principles of experiential learning, learning contracts, participant observation, informal/formal interviewing skills, creating critical-incident journals, managing field relations, professional ethics, ethnographic report–writing, and urban social inequality.

CRP 332(3320) Urban Policy Research Seminar on New York City
Fall. 3 credits. Prerequisite: successful completion of Cornell Urban Scholars, Adult Literacy, or Urban Semester Programs or permission of instructor(s). S-U grades optional. R. Sinton.
Designed to enhance students' organizational, analytical, research, and communication skills in producing scholarly articles of publishable quality that critically examine important urban policy issues affecting the lives of New York City's poorest children, families, and neighborhoods. Students produce policy-oriented journal articles that address vital issues confronting the city's most vulnerable residents, whom they've identified while working in Cornell-sponsored summer internships with nonprofit organizations and public agencies that provide direct services to the poor.

CRP 343(3430) Affordable Housing Policy and Programs (also CRP 643[6430])
Fall. 3 credits. S-U grades optional.
R. Pendall.
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(3540) Introduction to Environmental Planning (also CRP 554[5540])
Spring. 3 credits. A-M. Esnard.
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(3600) Pre-Industrial Cities and Towns of North America (also LA 260/666[2600/6660], CRP 666[6660])
Not offered 2005–2006.]

CRP 361(3610) Seminar in American Urban History (also CRP 661[6610])
Fall or spring. 3 credits. Prerequisite: permission of instructor. M. Tomlan.
Seminar in the historical evolution of the American city. Emphasizes factors in urban growth, the process of urbanization, the urban reform movement, and intellectual and social responses to the city.

[CRP 363(3630) American Indians, Planners, and Public Policy (also CRP 547[5470], LA 263/547[2630/5470])
Not offered 2005–2006.]

CRP 365(3650) Gender and Globalization (also FGSS 360[3600])
Fall. 3 credits. L. Beneria
For description, see FGSS 360(3600).

CRP 368(3860) The History of Urban Form in America (also CRP 668[6680])
Fall or spring. 3 credits. Letter grades. M. Tomlan.
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(3700) The Regional Question: The Case of Italy
Spring. 4 credits, variable. Prerequisite: Rome Program participants; majors in urban and regional studies. 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 372(3720) 20th-Century Italy: Politics and Society
Spring. 3 credits. S-U grades optional for out-of-department students only. Staff.
Comprehensive survey of Italian society today, starting with Italy's geography and the historical forces that shaped the nation. Discussion includes north-south tensions and such broad features of Italian social life as community structure, urban development, and family forms. The course also reviews selected institutional issues, such as gender, the system of education, problems of criminality and justice, economic reform, social class, religion, and politics.

CRP 377(3770) The City in Brazil (also CRP 687[6870])
Summer. 3 credits. S-U grades optional. W. Goldsmith.
Students are taught in Brazil by professors from Cornell and the Instituto de Pesquisa e Planejamento Urbano e Regional (IPPUR), at the Federal University of Rio de Janeiro. Students will live in three Brazilian cities, on site with local scholars, top city officials, and activists. In Belem de Para, at the mouth of the Amazon River, the focus is on the environment and development. In Brasillia, the focus is on modernist planning of the new national capital with its signature Plano Piloto, the separated satellites cities, and migration from the Brazilian Northeast. In Rio de Janeiro, the focus is on housing, transportation, and the informal economy in the context of metropolitan growth and decline.

CRP 378(3780) Recycling and Resource Management (also CRP 578[5780])
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(3800) Environmental Politics
Fall. 4 credits. Letter grades. Not offered 2005–2006. R. Booth.]

[CRP 381(3810) Principles of Spatial Design and Aesthetics (also CRP 581[5810])
Fall. 3 credits. Limited to 30 students. Not offered 2005–2006. R. Trancik.]

CRP 384(3840) Green Cities (also CRP 584[5840], LA 495[4950])
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 urban ecology 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 390(3900) Professional Planning Colloquium I (also CRP 790[7850])
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 three- to five-page paper about the lecture series.

CRP 395(3850) Special Topics (also CRP 585[5850])
Fall, spring, summer. 4 credits, variable. Times TBA. Staff.
For description, see department coordinator, 106 West Sibley Hall.

CRP 395.03(3850) Wilderness and Wildlands: Issues in Policy and Planning (also CRP 679.03[5850])
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 considers historical and philosophical foundations and political factors that affect decisions about wilderness policies, planning, acquisition, protection, and management. The roles of government, professional planners and managers, organized special interests, the legal system, citizens, and user groups are examined. Practical exposure to planning and policy development through readings, discussions, guest practitioners, and a field trip to the Finger Lakes National Forest. Optional weekend trip to Adirondack Park Wilderness area.

CRP 395.73(3850) Planning for Sustainable Transportation: Crisis or Utopia? (also CRP 679.73[5850])
Spring. 3 credits. S-U grades optional. Y. Levitte.
Explores issues related to sustainable transportation policy and practice. The course (1) provides an overview of current transportation trends and their impacts; (2) reviews themes such as planning history and politics, the problems with the present auto-dominated systems, and key challenges to developing sustainable transport systems; and (3) looks at regulatory, design and market based approaches to reducing automobile-dependency, introducing creative sustainable solutions from around the world.

CRP 404(4040) Urban Economics (also CRP 504[5040])
Spring. 4 credits. Not offered every year. Prerequisite: microeconomics course. Staff.
Analyzes urban phenomena 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(4080) Introduction to Geographic Information Systems (GIS) (also CRP 508[5080])
Spring. 4 credits. 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(4120) Devolution, Privatization, and the New Public Management (also CRP 612[6120], AEM 433/633[4330/6330], FGSS 411/611[4110/6110])
Fall. 4 credits. Prerequisite: ECON 101 or equivalent. S-U grades optional. M. Warner.
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 semester.

CRP 416(4160) European City: The Public Sphere and Public Space
Spring. 4 credits, variable. Enrollment may be limited by instructor. Prerequisite: junior or senior standing; Rome Program participants. S-U grades optional for nonmajors. Staff.
Examination of the social, economic, and political life of the European city, particularly Italian cities, especially Rome. Study of the socioeconomic 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)?

CRP 417(4170) Economic Development: Firms, Industries, and Regions (also CRP 517[5170])
Fall. 4 credits. S. Christopherson.
Economic development policy in the United States has focused historically on the provision of subsidies to individual firms. As the limitations of this strategy have become more apparent, alternative approaches including multifirm and workforce development are being implemented. This comparative course draws on cases from a variety of industries and national contexts. Particular attention is paid to economic development issues and policies in New York State.

CRP 418(4180) Government Policy Workshop (also CRP 618[6180], AEM 434/634[4340/6340], FGSS 420/620[4200/6200])
Spring. 4 credits. S-U grades optional. M. Warner.
Students undertake research requested by clients (associations of local government, unions, nonprofits, 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 444(4440) Resource Management and Environmental Law (also CRP 544[5440], NTRES 444[4440])
Spring. 4 credits. Prerequisite: junior, senior, or graduate standing and permission of instructor. R. Booth.
Introduces the application of legal concepts and processes to the management of natural resources and natural-resource areas. 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(4480) Social Policy and Social Welfare (also CRP 548[5480])
Spring. 4 credits. Not offered every year. S. Christopherson.
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 examines how economic change and government policy affect social provision in the United States.

[CRP 451(4510) Environmental Law (also CRP 551[5510])
Fall. 4 credits. Not offered 2005–2006. R. Booth.]

CRP 453(4530) Environmental Aspects of International Urban Planning (also CRP 683[6830])
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(4570) Community Service Fieldwork
Fall or spring. 4 credits, variable. Prerequisite: permission of instructor. 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(4740) Urban Transformations in the Global South (also CRP 674[6740])
Fall or spring. 4 credits. S-U grades optional. W. Goldsmith.
Economic globalization and the post-colonial political order are continually reshaping urban societies and landscapes in the global South, often by relegating everyday life to the margins and shrouding it in illegality. This course focuses on the spatial, social, and political dimensions of urban transformations, paying particular attention to such topics as competition among cities for international capital and its implications for sociospatial organization; dynamic interrelations between informality in labor markets and in housing urban environmental challenges and municipal efforts to address them; and issues related to governance, social movements, and new formulation of citizenship.

CRP 477(4770) Issues in African Development (also CRP 677[6770])
Fall and spring. 1 credit. S-U grades only. M. Ndulo.
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(4900) Student-Faculty Research
Fall or spring. 4 credits, variable. Prerequisite: undergraduates in 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 492(4920) Honors Thesis Research
Fall or spring. 4 credits. Prerequisite: Urban and Regional Studies Program majors who have been selected as honor students by department faculty. Staff.
Each selected student works with his or her thesis adviser.

CRP 493(4930) Honors Thesis Writing
Fall or spring. 4 credits. Prerequisite: CRP 492. Staff.
Each selected student works with his or her thesis adviser.

CRP 497(4970) Independent Study
Fall or spring. 4 credits, variable. Prerequisite: junior or senior standing; 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. Upper-level 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(5040) Urban Economics (also CRP 404[4040])
Spring. 4 credits. Not offered every year. Prerequisite: microeconomics course. Staff.
For description, see CRP 404.

CRP 508(5080) Introduction to Geographic Information Systems (GIS) (also CRP 408[4080])
Spring. 4 credits. A.-M. Esnard.
For description, see CRP 408.

CRP 509(5090) Community Development Seminar (also CRP 309[3090])
Spring. 3 credits. K. Reardon.
For description, see CRP 309.

CRP 512(5120) Public and Spatial Economics for Planners
Fall. 3 credits. No prior knowledge of economics necessary. Staff.
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(5130) Introduction to Planning Practice and History
Fall. 4 credits. Staff.
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(5170) Economic Development: Firms, Industries, and Regions (also CRP 417[4170])
Fall. 4 credits. S. Christopherson.
For description, see CRP 417.

CRP 518(5180) Politics of Community Development (also CRP 318[3180])
Spring. 3 credits. P. Clavel.
For description, see CRP 318.

CRP 519(5190) Urban Theory and Spatial Development
Spring. 3 credits. W. Goldsmith.
Surveys theories on the existence, size, location, and functioning of cities and their metropolitan areas in rich and poor regions of the world. Considers 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(5200) Statistical and Mathematical Concepts for Planning
Fall. 3 or 4 credits. Not offered every year. Staff.
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(5210) Mathematical Foundation for Planning Analysis
Fall. 1 credit. Meets for two hours, once each week, for approximately half the semester. Prerequisite: permission of department. S-U grades only. 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.

CRP 525(5250) Introductory Methods of Planning Analysis
Fall. 4 credits. R. Pendall.
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(5280) Overview: Quantitative Methods in Policy Planning (also CRP 328[3280])
Fall and spring. 3 credits. S-U grades optional. Staff.
For description, see CRP 328.

CRP 529(5290) Mathematics for Planners
Fall. 4 credits, variable. S-U grades optional. Not offered every year. Staff.
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(5300) Neighborhood Planning Workshop (also CRP 330[3300])
Spring. 4 credits. K. Reardon.
For description, see CRP 330.

CRP 532(5320) Real Estate Development Process
Fall. 3 credits. Letter grades. Fee for case studies packet. 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(5330) Real Estate Marketing and Management
Fall. 3 credits. R. Abrams.
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(5370) Real Estate Seminar Series
Fall and spring. 0.5 credit each semester. Prerequisite: M.P.S./R.E. students. S-U grades only. B. Olson.
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 544(5440) Resource Management and Environmental Law (also CRP 444[4440]/NTRES 444[4440])
Spring. 4 credits. R. Booth.
For description, see CRP 444.

CRP 546(5460) Introduction to Community and Environmental Dispute Resolution
Fall. 3 credits. J. Forester.
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(5470) American Indians, Planners, and Public Policy (also CRP 363[3630], LA 263/547 [2630/5470])
Not offered 2005–2006.]

CRP 548(5480) Social Policy and Social Welfare (also CRP 448[4480])
Spring. 4 credits. Not offered every year. S. Christopherson.
For description, see CRP 448.

[CRP 551(5510) Environmental Law (also CRP 451[4510])
Fall. 4 credits. Not offered 2005–2006.]

CRP 552(5520) Land-Use Planning
Fall. 3 credits. A-M. Esnard.
Covers surveys, analyses, and plan-making techniques for guiding physical development of urban areas, location requirements, space needs, and interrelations of land uses. Emphasizes residential, commercial, and industrial activities and community facilities, and housing and neighborhood conditions. Lectures, seminars, and field exercises.

CRP 553(5530) Land-Use Regulations
Spring. 3 credits. R. Pendall.
This 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, and planned-unit development.

CRP 554(5540) Introduction to Environmental Planning (also CRP 354[3540])
Spring. 3 credits. A.-M. Esnard.
For description, see CRP 354.

CRP 555(5550) Urban Systems Studio (also LA 701[7010])
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 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(5560) Design in Real Estate Development
Spring. 3 credits. S-U grades optional. H. Richardson.

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(5570) City Planning Design Studio
Spring. 4 credits. Prerequisite: design courses or permission of instructor. Staff.
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(5580) 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 nonprofit 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(5600) Documentation for Preservation
Fall or spring. 3 credits. M. Tomlan.
Methods of identifying, recording, collecting, processing, and analyzing information dealing with historic and architecturally significant structures, sites, and objects.

CRP 561(5610) Historic Preservation Planning Workshop: Surveys and Analyses
Fall or spring. 4 credits. M. Tomlan.
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. Emphasizes fieldwork with individuals and community organizations.

CRP 562(5620) Perspectives on Preservation
Fall. 3 credits. 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(5630) Problems in Contemporary Preservation Practice
Spring. Variable credit. M. Tomlan.
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(5640) Building Materials Conservation
Spring. 3 credits. Prerequisite: junior, senior, or graduate standing. M. Tomlan.
Survey of the development of building materials in the United States, chiefly during the 19th and early 20th centuries, and a review of the measures that might be taken to conserve them.

CRP 565(5650) 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(5660) Planning and Preservation Practice
Fall. 1 credit. Prerequisite: graduate standing in CRP programs or M.P.S./R.E. or permission of instructors. S-U grades only. 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(5670) Measured Drawing
Fall. 3 credits. Prerequisite: undergraduate architecture students and graduate students in history and preservation; 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(5690) Archaeology in Preservation Planning and Site Design (also LA 569[5690])
Not offered 2005–2006.]

CRP 578(5780) Recycling and Resource Management (also CRP 378[3780])
Spring. 3 credits. S-U grades optional. R. Young.
For description, see CRP 378.

[CRP 581(5810) Principles of Spatial Design and Aesthetics (also CRP 381[3810])
Fall. 3 credits. Limited to 30 students. Not offered 2005–2006. R. Trancik.]

CRP 584(5840) Green Cities (also CRP 384[3840], LA 495[4950])
Fall. 4 credits. S-U grades optional. Not offered every year. R. Young.
For description, see CRP 384.

CRP 585(5850) Special Topics (also CRP 385[3850])
Fall, spring, or summer. 4 credits, variable. Times TBA. Staff.
For description, see department coordinator, 106 West Sibley Hall.

CRP 605(6050) Urban Public Finance
Fall. 4 credits. Prerequisite: exposure to microeconomics. Not offered every year. Staff.
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(6070) GIS Applications Workshop
Fall. 4 credits. Prerequisites: introductory GIS course or permission of instructor. A.-M. Esnard.
Advanced GIS course that focuses on GIS applications and projects for one or more clients. During some semesters students work on their own projects. Contact the instructor directly to learn about project options for the current semester.

CRP 612(6120) Devolution, Privatization, and the New Public Management (also CRP 412[4120], AEM 433/633[4330/6330], FGSS 411/611[4110/6110])
Fall. 4 credits. Prerequisite: ECON 101 or equivalent. S-U grades optional. M. Warner.
For description, see CRP 412.

CRP 614(6140) Gender and International Development (also FGSS 614[6140])
Spring. 3 credits. L. Beneria.
The four main objectives are to (1) analyze the location of women in development processes and to understand the centrality of gender in each case; (2) 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) reflect upon the linkages between the global economy and the macro and micro processes of development from a gender perspective; and (4) provide a basis for research, practical action, and policy formulation and for evaluating directions and strategies for social change.

CRP 618(6180) Government Policy Workshop (also CRP 418[4180], AEM 434/634[4340/6340], FGSS 420/620[4200/6200])
Spring. 4 credits. S-U grades optional. M. Warner.
For description, see CRP 418.

CRP 621(6210) Quantitative Techniques for Policy Analysis and Program Management
Spring. 4 credits. D. Lewis.
Examines selected analytical techniques used in the planning and evaluation of public policy and public investments. Topics include simulation modeling, benefit-cost and cost-effectiveness analysis (including capital budgeting), and optimization strategies.

CRP 627(6270) Regional Economical Impact Analysis (also CRP 327[3270])
Fall. 3 credits. Letter grades. Staff.
For description, see CRP 327.

CRP 632(6320) Methods of Regional Science and Planning I
Spring. 4 credits, variable. Staff.
Introduction to some of the major methods and models used in regional science and planning. Topics related to the structure and assumptions of the models, model development, and their applications in regional science and planning are discussed. Where appropriate, computer implementation emphasizing statistical, econometric models is considered.

CRP 635(6350) Workshop: State Economic Development Strategies
Fall or spring. 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(6370) Regional Development Planning: An International Perspective
Fall. 4 credits, variable. S-U grades optional. T. Vietorisz.
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(6380) Planning and the Global Knowledge Economy: Sustainability Issues
Spring. 4 credits, variable. S-U grades optional. T. Vietorisz.
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(6420) The Micro-Politics of Participatory Planning Practices
Spring. 4 credits, variable. 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 taken can be called a "critical pragmatism." Practitioners' oral histories are used to investigate the challenges of participatory planning practices.

CRP 643(6430) Affordable Housing Policy and Programs (also CRP 343[3430])
Fall. 3 credits. S-U grades optional. R. Pendall.
For description, see CRP 343.

CRP 653(6530) Legal Aspects of Land-Use Planning
Spring. 3 credits. 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(6550) Real Estate Project Workshop
Spring. 4 credits. Prerequisite: permission of instructor. Fee for mandatory field trip. 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 is addressed, including project feasibility, marketing, planning and design, and legal constraints and concerns. Projects focus on real-world case studies and require professional-level reports suitable for oral and written presentations.

CRP 657(6570) Real Estate Law
Spring. 3 credits. Letter grades. A. Klausner.
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(6580) Residential Development
Spring. 4 credits. Letter grades. Fee for mandatory field trip. B. Olson.
Explores the residential-development process from site acquisition through delivery of the finished product. Topics 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. Current issues in providing competitive housing products in today's markets are also explored. Composition of the residential-development project team is discussed. Classes are supplemented by presentations from visiting professionals. The course includes a semester-long project based on an actual property and market opportunity.

CRP 661(6610) Seminar in American Urban History (also CRP 361[3610])
Fall or spring. 3 credits. Prerequisite: permission of instructor. M. Tomlan.
For description, see CRP 361.

CRP 662(6620) 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(6630) Historic Preservation Law
Spring. 3 credits. Offered alternate years. R. Booth.
Covers law of historic district and landmark designation; tools for preservation (e.g., police power, taxation, eminent domain); and recent developments in state and federal historic preservation.

CRP 664(6640) Economics and Financing of Neighborhood Conservation and Preservation
Spring. 3 credits. 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(6650) Preservation Planning and Urban Change
Fall. 3 credits. M. Tomlan.
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(6660) Pre-Industrial Cities and Towns of North America (also CRP 360[3600], LA 260/666[2600/6600])
Not offered 2005–2006.]

CRP 668(6680) The History of Urban Form in America (also CRP 368[3680])
Fall or spring. 3 credits. M. Tomlan.
For description, see CRP 368.

CRP 670(6700) Regional Planning and Development in Developing Nations
Fall or spring. 4 credits. Prerequisite: second-year graduate standing. 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(6710) Seminar in International Planning
Spring. 1 credit. S-U grades only. Staff.
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(6720) International Institutions
Spring. 3 credits. L. Beneria.
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 U.N. system up to the early 1970s, and 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(6740) Urban Transformations in the Global South (also CRP 474[4740])
Fall or spring. 4 credits. S-U grades optional. W. Goldsmith.
For description, see CRP 474.

CRP 675(6750) Workshop on Project Planning in Developing Countries
Fall. 4 credits. D. Lewis.
Examines 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 677(6770) Issues in African Development (also CRP 477[4770])
Fall or spring. 1 credit. S-U grades only. M. Ndulo.
For description, see CRP 477.

[CRP 678(6780) Concrete Manifestations—Infrastructure in the New World Order
Fall or spring. 4 credits. S-U grades optional. Not offered 2005–2006.]

CRP 679.03(5850) Wilderness and Wildlands: Issues in Policy and Planning (also CRP 395.03[3850])
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 679.73(5850) Planning for Sustainable Transportation: Crisis or Utopia? (also 395.73[5850])
Spring. 3 credits. S-U grades optional. Y. Levitte.
Explores issues related to sustainable transportation policy and practice. The course (1) provides an overview of current transportation trends and their impacts; (2) reviews themes such as planning history and politics, the problems with the present auto-dominated systems, and key challenges to developing sustainable transport systems; and (3) looks at regulatory, design and market based approaches to reducing automobile-dependency, introducing creative sustainable solutions from around the world.

CRP 683(6830) Environmental Aspects of International Urban Planning (also CRP 453[4530])
Fall. 4 credits. B. Lynch.
For description, see CRP 453.

CRP 687(6870) The City in Brazil (also CRP 377[3770])
Summer. 3 credits. Letter grades optional. Staff.
For description, see CRP 377.

CRP 790(7850) Professional Planning Colloquium I (also CRP 390[3900])
Fall. 1 credit. Staff.
For description, see CRP 390.

CRP 791(8910) Master's Thesis in Regional Science
Fall or spring. 12 credits, variable. S-U grades optional. Hours TBA. Regional Science faculty. Staff.

CRP 792(8920) Master's Thesis, Project, or Research Paper
Fall or spring. 10 credits, variable. S-U grades optional. Staff.

CRP 794(7940) Planning Internships
Fall, spring, or summer. 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(8950) Master's Thesis in Preservation Planning
Fall or spring. 6 credits, variable. Staff.

CRP 796(7960) Professional Writing and Publishing (Colloqui)
Fall or spring. 2 credits. S-U grades only. Not offered every year. Staff.
Individual and group projects culminating in the production of a professional journal.

CRP 797(7970) Graduate Independent Study
Fall or spring. 4 credits, variable. Prerequisites: graduate student standing, permission of instructor. Staff.
For description, see department coordinator, 106 West Sibley Hall.

CRP 800(8000) Advanced Seminar in Urban and Regional Theory I
Fall. 3 credits. S. Christopherson.
Introduction to key conceptual and empirical literature in urban theory. Focuses on the relationship between political and economic processes and their joint influence on urban spatial form.

[CRP 801(8010) Advanced Seminar in Urban and Regional Theory II
Not offered 2005–2006.]

[CRP 810(8100) Advanced Planning Theory
Not offered 2005–2006.]

CRP 830(8300) Seminar in Regional Science, Planning, and Policy Analysis
Fall or spring. 4 credits, variable. S-U grades only. Staff.
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(8900) 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(9920) Doctoral Dissertation
Fall or spring. 2 credits, variable. Staff.

Special Topic Courses
Fall or spring. Variable credit. Staff.
Typical topics are:

CRP 609(6090) Urban and Regional Theory

CRP 619(6190) Planning Theory and Politics

CRP 629(6290) Quantitative Methods and Analysis

CRP 639(6390) Regional Development Planning

CRP 649(6490) Social-Policy Planning

CRP 659(6590) Urban Development Planning

CRP 669(6690) History and Preservation

CRP 679(6790) Planning and Developing Regions

CRP 689(6890) Environmental Planning

CRP 699(6990) Regional Science

CRP 719(7190) 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: K. L. Gleason, chair (446 Kennedy Hall, 255-1649, -7924); M. I. Adleman, S. Baugher, H. Gottfried, A. Hammer, P. Horrigan, R. Jaenson, D. W. Krall, L. J. Mirin, A. Okigbo, R. T. Trancik, P. J. Trowbridge, R. Venables.

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, 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 140(1400) The Symbols of New York State's Cultural Landscape
Spring. 3 credits.

LA 141(1410) Grounding in Landscape Architecture
Fall. 4 credits.

LA 142(1420) Grounding in Landscape Architecture
Spring. 4 credits.

LA 155(1550) American Indian Cultural Landscapes: Changes in Time
Fall. 3 credits.

LA 201(2010) Medium of the Landscape
Fall. 5 credits.

LA 202(2020) Medium of the Landscape
Spring. 5 credits.

LA 261(2610) Fieldwork in Urban Archaeology (also CRP 261[2610])
Fall. 4 credits.

LA 262(2620) Laboratory in Landscape Archaeology (also ARKEO 262[2620])
Spring. 3 credits.

[LA 263(2630) American Indians, Planners, and Public Policy (also CRP 363/547[3630/5470], LA 547[5470])
Not offered 2005–2006.]

LA 266(2660) Jerusalem through the Ages
Fall. 3 credits.

LA 282(2820) The American Landscape
Fall. 3 credits.

LA 301(3010) Integrating Theory and Practice I
Fall. 5 credits.

LA 302(3020) Integrating Theory and Practice: Community Design Studio
Spring. 5 credits.

LA 315(3150) Site Engineering I
Spring. 3 credits.

LA 316(3160) Site Engineering II
Fall. 2 credits.

LA 318(3180) Site Construction
Spring. 5 credits.

[LA 360(3600) Pre-Industrial Cities and Towns of North America (also CRP 360/666[3600/6660], LA 666[6660])
Not offered 2005–2006.]

LA 402(4020) Integrating Theory and Practice II
Spring. 5 credits.

LA 403(4030) Directed Study: The Concentration (also LA 603[6030])
Fall or spring. 1 credit.

LA 410(4100) Computer Applications in Landscape Architecture
Fall or spring. 3 credits.

LA 412(4120) Professional Practice
Spring. 1 credit.

[LA 483(4830) Seminar in Landscape Studies
Not offered 2004–2005.]

LA 486(4860) Placemaking by Design: Theory Seminar
Fall. 3 credits.

LA 491(4810) Creating the Urban Eden: Woody Plant Selection, Design, and Landscape Establishment (also HORT 491[4910])
Fall. 4 credits.

LA 492(4920) Creating the Urban Eden: Woody Plant Selection, Design, and Landscape Establishment
Spring. 4 credits.

LA 494(4940) Special Topics in Landscape Architecture
Fall or spring. 1–3 credits.

LA 495(4950) Green Cities (also CRP 384/584[3840/5840])
Fall. 4 credits.

LANAR 497(4970) 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(4980) Undergraduate Teaching
Fall or spring. 1–2 credits.

LA 501(5010) Composition and Theory
Fall. 5 credits.

LA 502(5020) Composition and Theory
Spring. 5 credits.

LA 505(5050) Graphic Communication I
Fall. 3 credits.

LA 506(5060) Graphic Communication II
Spring. 3 credits.

LANAR 524(5240) History of European Landscape Architecture
Fall. 3 credits. L. Mirin.
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(5250) 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(5450) The Parks and Fora of Imperial Rome
Spring. 3 credits. Not offered 2005–2006.]

[LA 547(5470) Americans, Indians, Planners, and Public Policy (also CRP 363/547[3630/5470], LA 263[2630])
Not offered 2005–2006.]

[LA 569[5690] Archaeology in Preservation Planning and Site Design (also CRP 569[5690])
Spring. 3 credits. Not offered 2005–2006.]

LA 580(5800) Landscape Preservation: Theory and Practice
Fall. 3 credits.

LA 582(5820) The American Landscape
Fall. 3 credits.

LA 590(5900) Theory Seminar
Spring. 3 credits.

LA 598(5980) Graduate Teaching
Fall or spring. 1–2 credits.

LA 601(6010) Integrating Theory and Practice I
Fall. 5 credits. Prerequisite: graduate standing.

LA 602(6020) Integrating Theory and Practice II
Spring. 5 credits. Prerequisite: graduate standing.

LA 603(6030) Directed Study: The Concentration (also LA 403[4030])
Fall or spring. 1 credit.

LA 615(6150) Site Engineering I
Spring. 3 credits.

LA 616(6160) Site Engineering II
Fall. 2 credits.

LA 618(6180) Site Construction
Spring, weeks 8–15. 5 credits.

[LA 666(6660) Pre-Industrial Cities and Towns of North America (also CRP 360/666[3600/6660], LA 260[2600])
Not offered 2005–2006.]

LA 680(6800) Graduate Seminar in Landscape Architecture
Fall or spring. 1–3 credits.

LA 694(6940) Special Topics in Landscape Architecture
Fall or spring. 1–3 credits.

LA 701(7010) Urban Design and Planning: Designing Cities in the Electronic Age (also CRP 555[5550])
Fall. 5 credits.

LA 702(7020) Advanced Design Studio
Spring. 5 credits.

LA 800(8000) 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.
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Warner, Mildred, Ph.D., Cornell U. Asst. Prof., City and Regional Planning
Wells, Jerry A., B. Arch., U. of Texas. Prof., Architecture
Woods, Mary N., Ph.D., Columbia U. Assoc. Prof., Architecture
Zissovici, John, M. Arch., Cornell U. Assoc. Prof., Architecture