Mission Statement

THE IRWIN S. CHANIN SCHOOL OF ARCHITECTURE

The mission of The Irwin S. Chanin School of Architecture is to provide for its students the finest professional education available within an intellectual environment that fosters and expands their creative capacities and sensibilities and establishes the foundation for a productive professional life. The School is committed to the belief that one of society’s prime responsibilities is toward learning and education in the deepest sense: that the exercise of individual creativity within a willing community is a profoundly social act. Fundamental to the mission of the School is the maintenance of an atmosphere in which freedom of thought and exploration can flourish, where students can explore and utilize their special and individual talents, interests and modes of working, to their highest potential.
Aims and Objectives The School of Architecture offers a five-year program leading to the bachelor of architecture, a first professional degree accredited by the NAAB. The architecture curriculum is designed to prepare students for a rich array of opportunities in the profession, offering a broad cultural and intellectual foundation in the liberal arts as they relate to the design of the environment at all scales. The discipline of architecture interpreted in the widest possible sense as a cultural practice is seen as a basis for a fully-rounded education at the undergraduate level. Students develop their knowledge and design skills within a framework of studios and courses that stimulate research and debate into the nature and role of architecture as a cultural practice with profound social and environmental implications.

The content of the curriculum, based on a wide cultural view of architecture, reflects broad ethical values. Faculty-student interaction is conducted on an intensive basis in the design studio and other classes. Within this framework faculty members encourage students to develop their individual interests and strengths, with a constant stress on fundamentals and a basic commitment intended to equip the graduate with a lasting ability to produce an architecture that is a meaningful synthesis of the social, aesthetic and technological. The relationship between architecture and other creative disciplines is stressed through the five years. Students are encouraged to express themselves both verbally and visually.

In a moment where the nature, role and scope of the architect is rapidly assuming new directions and dimensions in both the social and technological domains, the school emphasizes the principles of design and their underlying human values, while preparing students to respond positively to change. The program seeks to engender a strong sense of the responsibilities of service and leadership, team-work and individual creativity essential to the development of principled professionals dedicated to interpreting and constructing the spatial needs of the community.

The five-year design sequence is carefully structured to introduce the student to the principles of architectonics, the investigation of program and site, structures and environmental and building technologies, in a comprehensive and integrated curriculum. The studios comprise an introduction to the basic elements of form, space and structure; complex institutional design problems in their urban context; and a year-long thesis that demonstrates the student’s ability to synthesize a comprehensive understanding of architecture in society. The traditional and essential skills of drawing, modeling and design development are complemented by a full investigation of the analytical and critical uses of digital technology. The study of world architecture and urbanism is deepened by the understanding of individual cultures, environmental and technological issues at every scale. The theory of the discipline, past and present, is investigated through the close analysis of critical texts and related to the theory and practice of other arts, such as public art, film and video. The position of the School of Architecture, together with the Schools of Art and Engineering and the Faculty of Humanities and Social Sciences, offers a unique opportunity for interaction and interdisciplinary research and experience.

The Cooper Union’s location in New York City in the heart of downtown Manhattan provides a stimulating professional, social and cultural context for the education of an architect and an urban laboratory for the study of design in society. The numerous cultural institutions of the city provide an inexhaustible resource for research and experience outside the studio and classroom. The school’s faculty includes nationally and internationally recognized architects; the school’s diverse student body consists of highly talented and motivated individuals and its distinguished alumni are leaders in architecture and related fields.
The Irwin S. Chanin School of Architecture offers a five-year program leading to the bachelor of architecture degree. The degree requirements are intended to provide students with a rigorous training in and exposure to the creative and technical aspects of architecture. The professional courses in the curriculum are supplemented and enhanced by required courses both within and outside the discipline of architecture. The requirements are as follows:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First Year</strong></td>
<td></td>
</tr>
<tr>
<td>Arch 111 Architectonics</td>
<td>4</td>
</tr>
<tr>
<td>FA10R Introduction to Techniques</td>
<td>1</td>
</tr>
<tr>
<td>Arch 114 Freehand Drawing</td>
<td>3</td>
</tr>
<tr>
<td>Arch 115 History of Architecture I</td>
<td>3</td>
</tr>
<tr>
<td>Arch 118 Computer Applications and Descriptive Geometry</td>
<td>2</td>
</tr>
<tr>
<td>Literary Forms and Expressions</td>
<td>3</td>
</tr>
<tr>
<td>Texts and Contexts</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Credits First Year</strong></td>
<td>16</td>
</tr>
<tr>
<td><strong>Second Year</strong></td>
<td></td>
</tr>
<tr>
<td>Arch 121 Design II</td>
<td>5</td>
</tr>
<tr>
<td>Arch 122 Structures I</td>
<td>2</td>
</tr>
<tr>
<td>Arch 125 History of Architecture II</td>
<td>3</td>
</tr>
<tr>
<td>Ma 163-4 Calculus and Analytic Geometry</td>
<td>3</td>
</tr>
<tr>
<td>Ph 165-6 Concepts of Physics</td>
<td>2</td>
</tr>
<tr>
<td>The Making of Modern Society</td>
<td>3</td>
</tr>
<tr>
<td>The Modern Context</td>
<td>-</td>
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<tr>
<td><strong>Total Credits Second Year</strong></td>
<td>18</td>
</tr>
<tr>
<td><strong>Third Year</strong></td>
<td></td>
</tr>
<tr>
<td>Arch 131 Design III</td>
<td>5</td>
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<tr>
<td>Arch 132 Structures II</td>
<td>2</td>
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<tr>
<td>Arch 134 Environmental Technologies</td>
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<tr>
<td>Arch 135 Building Technology</td>
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<tr>
<td>Electives*</td>
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<tr>
<td><strong>Total Credits Third Year</strong></td>
<td>15</td>
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<tr>
<td><strong>Fourth Year</strong></td>
<td></td>
</tr>
<tr>
<td>Arch 141 Design IV</td>
<td>5</td>
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<tr>
<td>Arch 142 Structures III</td>
<td>2</td>
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<tr>
<td>Arch 143 Construction Management</td>
<td>1</td>
</tr>
<tr>
<td>Arch 153 Town Planning</td>
<td>2</td>
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<tr>
<td>Electives*</td>
<td>6</td>
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<tr>
<td><strong>Total Credits Fourth Year</strong></td>
<td>16</td>
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<tr>
<td><strong>Fifth Year</strong></td>
<td></td>
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<tr>
<td>Arch 151 Thesis</td>
<td>6</td>
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<tr>
<td>Arch 152 Structures IV</td>
<td>2</td>
</tr>
<tr>
<td>Arch 154 Professional Practice</td>
<td>1</td>
</tr>
<tr>
<td>Arch 205/225 Advanced Concepts/Topics</td>
<td>2</td>
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<tr>
<td>Electives*</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total Credits Fifth Year</strong></td>
<td>15</td>
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<tr>
<td><strong>Total Credit Requirement for B.Arch. Degree</strong></td>
<td>160</td>
</tr>
</tbody>
</table>

*The elective component for bachelor of architecture candidates can be fulfilled by elective courses in areas such as humanities and social sciences, visual arts, mathematics and science, and languages. Approval for these elective courses must be granted by the appropriate academic faculty. A minimum of six elective credits must be taken in the humanities and social sciences.

**Academic Standards and Regulations**

**Credits** Only those students who are officially registered in a course (i.e., by approval of the dean of the School of Architecture or a faculty adviser and notification of the Office of Admissions and Records) will have grades and credits entered on their records.

**Satisfactory Progress Toward Degree** The bachelor of architecture degree program is a rigorous course of study that seeks to prepare students intellectually and professionally for the investigation and making of architecture. The privilege of studying at The Cooper Union, with the added benefit of a full-tuition scholarship for all admitted students, brings with it certain responsibilities. For students in the School of Architecture, these responsibilities include meeting the requirements of a demanding professional curriculum. All students who accept our offer of admission are expected to fully commit themselves to completing the degree requirements in accordance with the curriculum, which has been designed with great attention to sequence, prerequisites and the relationships between course work and the goals of each design studio. All classes that comprise the curriculum are essential to the education of an architect, and must be successfully completed by each student in the order intended. Students admitted as freshmen will complete the program in five years; transfer students will complete the program in accordance with their placement in the design sequence.

Students who do not successfully complete required courses as outlined in the curriculum will not be permitted to advance to the next year of study until the missing requirement(s) is/are completed. Since make-up classes are not offered at The Cooper Union, missing requirements may need to be fulfilled through coursework taken outside Cooper Union. The intention to complete requirements outside Cooper Union requires a meeting with the appropriate academic adviser or faculty member in order to obtain advance approval of the potential substitute course, and to confirm the minimum grade required in order for transfer credit to be awarded. It is the responsibility of the student to locate an eligible course at a college/university that allows part-time/summer study, which will be taken at the student’s expense. It is in the best interest of each student to complete their coursework here at Cooper Union in conformance with the approved curriculum.

Students must pass a sufficient number of credits each semester to complete their degree requirements within five years of study. When dropping or adding courses, a student must follow all degree requirements.

The normal course load is 16–19 credits per semester. Students are required to be registered for a minimum of 12 credits per semester. Failure to maintain satisfactory progress toward the degree may be grounds for dismissal.
Students are eligible to register for more than 18 credits per semester, but not more than 20, if they have received at least a 3.0 rating for the previous semester.

**Transfer Credit**
 Incoming students who have completed college-level academic work outside Cooper Union may be eligible to receive transfer credit. Approval of transfer credit will be made by the appropriate dean or faculty based on transcripts from other schools and additional materials, including a course description, a course syllabus with topics and course requirements, a reading list and any quizzes, examinations, papers or projects, etc. that demonstrate the level, content and requirements of the course, as well as the student’s proficiency with the course topics. If necessary, a proficiency/placement exam may be administered in certain subject areas. Transfer students must be prepared to present these and other requested materials for each course for which transfer credit is sought. Transfer credit evaluation must be completed by the end of the first semester of study.

When admitted, transfer students are offered admission into a particular year of the five-year design sequence. This decision is final, and acceptance of the offer of admission represents agreement on the part of the admitted student with this decision. It will be necessary for the matriculating transfer student to successfully complete the design studio to which he/she is admitted, as well as all subsequent studios, as part of their degree requirements. The official academic transcript of a transfer student will be reviewed prior to the student’s first registration. This review will determine what, if any, additional coursework may be eligible for transfer credit.

Any credits or coursework below the minimum established for a given year of a student’s curriculum must be made up in summer courses at other schools (these courses to be approved by the dean) at the student’s personal expense. Students making up courses in this manner will be permitted to register for Cooper Union classes in September only after the Office of Admissions and Records receives a transcript showing the successful completion of these courses.

Currently enrolled students who find it necessary to complete degree requirements at another institution for transfer credit to Cooper Union must have appropriate advance approval.

Credit may be granted for work done at another institution by any student upon examination by the dean. This credit is to be recorded after satisfactory completion of one semester’s work at Cooper Union.

**Grades** used, with their numerical equivalents, are: A (4.0), A- (3.7), B+ (3.3), B (3.0), B- (2.7), C+ (2.3), C (2.0), C- (1.7), D+ (1.3), D (1.0), D- (.7), F (0). The assigned numerical equivalents are used in computing semester and annual ratings by multiplying the numerical equivalent of the grade for each subject by the credits assigned to the subject. The sum of such multiplications for all the subjects carried by a student is divided by the total credits carried by him/her for that period to determine the average rating.

The official meanings for letter grades are as follows:
- **A** Outstanding performance
- **B** Above average performance
- **C** Requirements satisfactorily completed
- **D** Minimum requirements met; passing but unsatisfactory
- **F** Failure to meet the minimum requirements of a subject

The designation **I** indicates that the work of the course has not been completed and that assignment of a grade and credit has been postponed. An I designation is permitted only in cases of illness (confirmed by a physician’s letter) or documentation of other extraordinary circumstances beyond the student’s control.

The deadline for removal of an I designation will be determined by the instructor and recorded at the time the designation is given, but will not be later than two weeks after the start of the next semester. If the I is not removed within the set time limit, either by completing the work in the subject or by passing a reexamination, the I will automatically become an F unless the dean of the School of Architecture extends the time or the student withdraws from school.

The designation of I will be granted only with the approval of the dean.

**W** The student has received permission from the instructor and the dean of the School of Architecture and has withdrawn from a course while passing the course requirements at the time of withdrawal. This permission must be obtained before the end of the sixth week of the semester. The grade is not included in the calculation of the student’s semester rating but remains on the student’s transcript. (See Change of Program: Withdrawing from a Course, p.34.)

**WF** The student has received permission from the dean of the School of Architecture and the instructor and has withdrawn from a course while failing the course requirements at the time of withdrawal. This permission must be obtained before the end of the sixth week of the semester. This grade is included in the calculation of the student’s semester rating, its numerical equivalent is 0, and it remains on the student’s transcript. (See Change of Program: Withdrawing from a Course, p.34.)

When appropriate, certain courses may be designated as Pass/Fail courses.
**Pass** Requirements completed. This designation is not included in the calculation of the student’s semester rating.

**Fail** Failure to meet the minimum requirements of a course. This grade is included in the calculation of the student’s semester rating; its numerical equivalent is 0.

**Academic/Final Probation** A semester rating below 2.0 and/or a grade less than C in Architectural Design (or Architectonics) places a student on automatic probation and may be the basis for final probation or dismissal, as determined by the Academic Standards Committee.

A second probation may result in final probation or the dismissal of the student. The Academic Standards Committee may place a student on final probation.

A student on final probation who receives a semester rating below 2.0 and/or a grade less than C in Architectural Design (or Architectonics) at any point in the remainder of his/her academic career in the School of Architecture will be immediately, automatically and permanently dismissed from Cooper Union with a forfeit of the right of appeal. Automatic dismissal on final probation unconditionally and irrevocably terminates a student’s academic career in the School of Architecture.

A student on probation may not carry more than 18 credits a semester.

Each student is responsible for his/her total accomplishment and for being continuously aware of the standards defined in the preceding paragraphs. Students whose records by midterm indicate a possible failure to meet minimum standards may be so informed.

A student must have a cumulative grade point average of 2.0 or better in order to graduate from The Irwin S. Chanin School of Architecture.

Any student who fails Arch 151 (Thesis) twice will be dropped automatically from the program.

**Change of Grade** A change in an official grade of record cannot be made by the dean of Admissions and Records without the express consent of the dean of the School of Architecture. The dean of Admissions and Records will automatically convert an I designation to an F if an official Change of Grade is not submitted within the two-week deadline after the start of the following semester. Grade changes will not be accepted after one year has elapsed from the completion of the course.

**Change of Program: Adding a Course** Students are permitted to add a course only during the first two weeks of a semester, during the drop/add period. They must receive the approval of the dean and must report the addition to the Office of Admissions and Records.

**Change of Program: Withdrawing from a Course** Students may withdraw from a course with appropriate written permission by notifying the Office of Admissions and Records during the first two weeks of a semester, during the drop/add period. A grade of W will appear on his/her record. If the student is failing the course at the time of withdrawal, a grade of WF will be recorded. It is the student's responsibility to obtain the necessary permission from the school and to submit proper notification to the Office of Admissions and Records in order to withdraw from a course.

Students are not permitted to withdraw from a course after the sixth week of the semester. Failure to attend a class does not constitute withdrawal. Students are not permitted to withdraw from a class as a means of avoiding a failing grade.

**Change of Program: Change of Section** Students are permitted to transfer from one section to another of the same course before midterm if they are passing the course at that time. Permission of the dean is required for the change of section.

**Leave of Absence** Students who have completed at least one year of study and need to interrupt their studies may be granted a leave of absence for up to one year by permission of the dean. Only students in good academic standing and making satisfactory progress toward the degree may request a leave of absence. A meeting with and permission from the dean of the School of Architecture is necessary.

**Medical Leave of Absence** Students who are forced to interrupt their studies for medical reasons must submit with their request for reinstatement an opinion from the student’s physician or therapist. Cooper Union reserves the right to require a second opinion by a physician of its choosing.

**Interim Year/Independent Study** Architecture students in good standing and making satisfactory progress toward the degree may elect to interrupt their studies at Cooper Union for a period of one year for purposes of study or travel. This Interim Year option is available to architecture students who have completed at least one year of study at Cooper Union. A meeting with and permission from the dean of the School of Architecture is necessary.
Students who intend to accomplish academic credit outside Cooper Union while on an Interim Year must consult with the dean to plan an appropriate program in affiliation with another institution. Credit will only be considered upon the student’s return and after review of his/her portfolio and appropriate academic documentation.

Readmission

Students who have withdrawn from the School of Architecture and have completed at least one year of study at Cooper Union must reapply to the school to be considered for readmission in competition with transfer applicants.

Students who have withdrawn from school before they have completed one year of study at Cooper Union must reapply through the freshman admission procedure.

Students who have been dismissed for academic deficiencies and are eligible for readmission must apply within two years to the chairman of the Academic Standards Committee before May 15 for admission in September and before November 15 for admission in January. They should be prepared to demonstrate a change from the circumstances that warranted their dismissal.

Former students who have been dismissed due to academic deficiencies and who have been out of Cooper Union for more than two years (four semesters) at the time of anticipated return must apply through the regular admission procedure. If offered admission, previous Cooper Union credits earned may be evaluated for transfer credit.

Residence

A candidate for a degree must be enrolled during the entire academic year immediately preceding the granting of the degree and in residence during the last semester.

Graduation

To be eligible for graduation, a student must complete the minimum number of credits listed for his/her curriculum and must spend a minimum of four semesters in full-time resident study at Cooper Union.

Students are responsible for their total accomplishment and for being continuously aware of the standards for graduation.

Graduation requirements as outlined in this catalog are guidelines that are subject to change.

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**Master of Architecture II Post-Professional Degree Curriculum**

**Aims and Objectives**

In spring 2006, the School of Architecture registered a new master of architecture II program with the State Education Department of the University of the State of New York. This new post-professional degree program will extend the vision and intellectual rigor of the undergraduate program and allow a further development of the school’s pre-eminent position in the education of architects.

The master of architecture (M.Arch. II) is a design research, post-professional degree open to applicants with a first professional degree in architecture (bachelor of architecture or master of architecture I) from a program accredited by the NAAB or equivalent accrediting agency in another country. The program will serve professionals who wish to continue in practice with higher research and design skills in those areas in which the program offers specialization. It will additionally prepare those with first professional degrees who wish to develop parallel careers in teaching and/or continue to engage in research toward an appropriate Ph.D. degree at another institution.

The program seeks to address modern and contemporary issues in the practice and theory of architecture and urbanism, incorporating considerations from history as well as the present condition of globalization and the continual emergence of new scientific developments and technologies.

The program will offer concentrations in one or a combination of three areas: theory, history and criticism of architecture, urban studies and technologies. Students will declare their area(s) of concentration during the application process. Applicants are required to complete a minimum of two years of work experience after obtaining their first professional degree before applying to the program.

The design studio will be a major component of the program; students from all three concentrations will work together on a common program under the direction of a studio critic during the first two semesters. Seminars will address issues particular to the concentrations as well as other topics making use of the interdisciplinary resources offered by Cooper Union.

**Theory, History and Criticism of Architecture**

This area will concentrate on questions concerning the theory and criticism of modernism and contemporary architecture, the philosophy and aesthetics of architecture, the mediatization of architecture and broader cultural and historical issues through the critical readings of texts as well as research through studio work.

**Urban Studies**

This area will concentrate on issues central to the design, planning and development of cities and regions, including study of the morphological, social and cultural effects of globalization; the survival of local urban cultures; redevelopment of central cities, suburbs and exurbs; and issues specific to New York and comparative cities.
Technologies This area will concentrate on technological issues of architectural design, representation, planning and production, such as the impact of new information technologies, new materials and manufacturing processes; hardware and software development; mapping and modeling techniques; and the technologies of fabrication as they influence new design strategies. This area will focus as well on the economic, ethical and technological dimensions and design potentialities of sustainability and developments in new structural systems, materials and building assemblies.

Program Requirements All admitted M.Arch II students must have previously obtained a bachelor of architecture or a masters of architecture first professional degree from a school accredited by the NAAB or equivalent accrediting agency in another country. The program is structured to be completed in two full-time consecutive semesters with a final thesis semester during the summer session. Final thesis presentations will take place during the first week of the fall semester following the student’s year of study. Graduate students are expected to complete all 30 credits of the M.Arch II degree requirements in full-time continuous resident study at Cooper Union.

Courses Credits

<table>
<thead>
<tr>
<th>Semester I (Fall)</th>
<th>Credits</th>
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<tbody>
<tr>
<td>Arch 411 Graduate Research Design Studio I</td>
<td>6</td>
</tr>
<tr>
<td>Arch 401 Proseminar</td>
<td>2</td>
</tr>
<tr>
<td>Seminar in concentration</td>
<td>2</td>
</tr>
<tr>
<td>Seminar out of concentration</td>
<td>2</td>
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<tr>
<td>Total Credits First Semester</td>
<td>12</td>
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<table>
<thead>
<tr>
<th>Semester 2 (Spring)</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>Arch 412 Graduate Research Design Studio II</td>
<td>6</td>
</tr>
<tr>
<td>Arch 402 Thesis Research Tutorial</td>
<td>2</td>
</tr>
<tr>
<td>Seminar in concentration</td>
<td>2</td>
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<tr>
<td>Seminar out of concentration</td>
<td>2</td>
</tr>
<tr>
<td>Total Credits Second Semester</td>
<td>12</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Semester 3 (Summer)</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch 413 Graduate Thesis (written or studio)</td>
<td>6</td>
</tr>
<tr>
<td>Total Credit Requirement for M.Arch II Degree</td>
<td>30</td>
</tr>
</tbody>
</table>

Seminars Out of Concentration It is recommended that students register for courses originating in the graduate program (Arch 482, Arch 483 and Arch 485) to satisfy their out-of-concentration seminar requirements. As an alternative, the lecture component of elective courses originating in the undergraduate program at the advanced level (such as Arch 190 Structures Elective, Arch 225 Advanced Topics in History, Theory and Criticism, etc.) as well as Arch 205 Advanced Concepts, will be open to students in the graduate program for credit with tutorial meetings and with graduate-level requirements for written or project based work, to satisfy requirements for their out-of-concentration coursework.

The undergraduate curriculum course numbering system is structured such that a first digit of “2” or greater OR a second digit of “4” or greater indicates an upper level course, which students in the undergraduate program would normally take in their 4th or 5th year of study.

Graduate courses in the Albert Nerken School of Engineering as well as select upper level undergraduate elective courses could be made available to M.Arch. II students with prior permission from the student’s academic adviser and the individual course instructor. Undergraduate courses may be used to satisfy requirements for out-of-concentration coursework only.

First Entering Class Additional information for the first entering class of the M.Arch II (post-professional) degree, including application and admission requirements, will be available in September 2008. Please consult the Cooper Union web site (http://apply.cooper.edu) for additional information after September 2008.
Academic Integrity

Built upon Peter Cooper’s vision of education, The Cooper Union for the Advancement of Science and Art from its inception has been dedicated to the highest ethical standards. The School of Architecture, founded on principles of independent and exploratory thought, maintains that individual creativity within a willing community is a profoundly social act. In fostering a context of intellectual rigor, the program gives emphasis to a broad spectrum of cultural and ethical concerns which are of significance in the preparation of students for a professional degree and their role in society as practicing professionals of intelligence, creativity and integrity.

Authorship
Acts of academic dishonesty are extremely serious violations of both the spirit and the substance of this community. The Academic Standards Committee of The Irwin S. Chanin School of Architecture will review acts of academic dishonesty including cheating, plagiarizing or the submission of work that has not been prepared by the person claiming authorship. Such acts are viewed as an extremely serious violation, punishable by probation, suspension or dismissal. The action of the Academic Standards Committee in such cases will become part of the student’s permanent academic record.

The Studios
Central to maintaining a creative environment for intellectual investigation and intuitive exploration are the shared design and computer studio spaces on the third and seventh floors of the Foundation Building.

In the studios, students work together as a community of individuals. Here, students and faculty from all years engage in a process of rigorous inquiry, discussion and critique, freely sharing knowledge, ideas and methodologies. Students study the principles and works of architecture that have contributed to the betterment of the human condition in the development of their own projects. Students of the upper years serve as mentors for the lower years. Diversity and balance are critical values in generating an academic ambiance where humanistic ideals and ethical views serve as a constant reference for individual growth and development. The social and intellectual environment thus created is considered a vital part of the students’ experience at Cooper Union. Students are required to be present in studio for all hours that their design studio meets and to develop their work in the studio.

Students should be aware of and observe all policies and conditions for the use of the studios, including hours of access. Studio use policies and responsibilities are distributed at the beginning of each academic year.

Annual Exhibition of Student Work
The End of Year Show is a major event of the School of Architecture, exhibiting the work developed during the previous academic year to the academic and professional communities and the public at large. It is an opportunity to present the pedagogical framework of the school and faculty and to celebrate the rigor and diversity of the student work.

The exhibition occupies the lobbies, halls and classrooms of the third and seventh floors, and the Houghton Gallery on alternate years. Preparation of these spaces and hanging the work is a tremendous task that must be accomplished in the very short period of time between the end of classes and commencement. Students of all years are required to make requested projects available for the exhibition and are expected to fully participate in the installation.

In addition to making their work available for the Annual Exhibition, individual student work may be requested for other purposes (other exhibitions, accreditations, etc.). Students are required to provide requested projects or other materials, which will be returned to them in a timely manner.
Facilities

The facilities of the School of Architecture are housed on the third and seventh floors of the Foundation Building, initially completed in 1859 and now a National Historic Landmark widely referred to as one of New York City’s grand monuments. In 1974, John Hejduk, the first dean of the School of Architecture, designed a major alteration of the interior; in 2002, the restoration of the brownstone exterior was completed.

The Studios All students in the School of Architecture are provided individual workspace on the third floor within a shared studio. With the first through fourth years sharing a single large studio and the fifth-year thesis class in more intimate individual spaces, a unique environment fostering cross-fertilization between classes and individual students is maintained. School of Architecture students have individual studio workspace with a full-size drawing/drafting table as well as a small individual or larger shared work table for reference, model building, etc.

Computer Studio The School of Architecture has developed a computing facility on the seventh floor of the Foundation Building. It is specifically intended to support a design curriculum that recognizes the growing use of computing as an instrument of practice and which urges students to explore its formal and cultural implications. The facility now has both Macintosh and Dell Precision PCs (including a high-end multiple-processor rendering station), scanning and printing capabilities and a large-format plotter. Software includes an array of imaging, drawing, drafting and 3D modeling and rendering programs. This facility is open to all students of Cooper Union. Considered integral to the activities of the design studio, this computing facility is open whenever the design studios are open, giving students access an average of 17 hours a day. A student trained to assist in the effective use of the facility and to do simple troubleshooting on the hardware is present whenever the center is open.

In addition, computing facilities in the Schools of Art and Engineering are open for use by students of the School of Architecture.

Lecture Room A small auditorium on the third floor is used for lecture classes and invited lecturers. Special lectures are open to all interested Cooper Union students.

Shop An outstanding all-college sculpture shop administered by the School of Art is located on the fourth floor. Integral to both the program and pedagogy of the School of Architecture, the shop is equipped for projects in wood, metal, plastics, plaster and clay, and includes a bronze casting foundry. For a complete description of the sculpture shop facility, please refer to the School of Art section (page 50).

Study Collection The School of Architecture has fostered the growth of a non-circulating Study Collection of books and other visual material that are not otherwise accessible through the Cooper Union library system, sometimes including rare or limited edition items, often on loan from private collections. Students make use of the room for quiet reading and study. The room can also be used for small seminar meetings.

School of Architecture Archive The Archive is responsible for the ongoing collection, documentation and storage of student work, and now has a record of student work produced at the school since 1983, an invaluable record of the pedagogy of the school used for exhibitions, publications and student research. In addition, the Archive’s Blueprint Collection, Lantern Slides, New York Postcard Collection, Stanley Prowler Slide Collection and New York City Waterfront Archive are resources available for use by students and faculty for research and study. The Archive also manages the loan of analog and digital video cameras as well as still cameras for student use on class projects.
## Courses

Students should consult official class lists for courses offered in a given semester. There is no assurance that a course listed in this catalog will be given every year. Be advised that each school offers certain electives that are open to all students; consult each school’s course listing.

### Design (Required)
All Architectonics students are required to take an Introduction to (Shop) Techniques course.

1 credit

**Arch 111 Architectonics**
Introduction to the study of architecture: investigation of the interrelationships of space, structure and visual composition. Exploration of the syntax of architecture. Models and orthographic drawing.

4 credits

**Arch 121 Design II** Projects comprise elemental architectural programs wherein the student is required to sustain the formal investigations of first year while integrating the complexities of program, context and site. Spatial, structural, material, environmental and visual design are integrated. Emphasis is placed on communicating concepts through drawings and models.

5 credits

**Arch 131 Design III** Study and analysis of historical precedents followed by a sequence of design problems of increasing complexity. Emphasis on the planning of buildings and the interrelationships among form, structure, detail and technologies.

5 credits

**Arch 141 Design IV** Investigation of urban programs and sites requiring the integration of form, structure and space. Examination of the complexities implicit in the resolution of urban problems. Analytic studies and explorations generate specific programs for development of each project. Emphasis given to large-scale integrations and the impact of urban transformations upon existing fabric.

5 credits

**Arch 151 Thesis** A synthesis of four years’ educational experience. The choice of the area of study is the responsibility of the student. The scope of the problem is defined by each student, who also decides on his/her method of exposition. Problems are analyzed and studied with the aid of faculty from each discipline and by visiting critics.

6 credits

### Structures (Required)

**Arch 122 Structures I**
A qualitative examination of the behavior of structures. Characteristics and development of the stresses generated from the simple to the complex. A study of the materials of construction used in structures.

2 credits

**Arch 132 Structures II**
The study of strength of materials is applied to the quantitative design procedures for wood and steel structures. Students complete individual projects in wood and low-rise steel structures.

2 credits. Prerequisites: Ma 163/164, Ph 165/166, Arch 122 Structures I

**Arch 142 Structures III**
The design of reinforced concrete using stress methods and plastic design is combined with individual projects in low-rise concrete structures. Elements of soil mechanics and soil investigations are included (fall only) in foundations design.

2 credits. Prerequisite: Arch 132 Structures II

**Arch 152 Structures IV** Intensive seminars are completed on prestressed concrete, wind and earthquake design for tall structures and special structures, while the student becomes the structural consultant for individual assignments for the structural solution of real architectural projects covering prestressed, high-rise steel and concrete buildings and shells.

2 credits. Prerequisite: Arch 142 Structures III

### Environmental Technologies (Required)

**Arch 134 Environmental Technologies**
Environmental and life safety systems as they affect program and building form, including mechanical (heating, cooling, ventilating), water supply and disposal, electrical, lighting, acoustics, vertical transportation, communication, security and fire protection. Principles of sustainability. Passive and active systems.

3 credits

### Building Technology (Required)

**Arch 135 Building Technology**
Materials and methods of architectural construction, lectures, examination and discussion of classic as well as current building techniques. Students assemble full-size “mock-ups” of details for class study germane to their design classes. In general, this course does not separate “construction” from “design” but attempts to supplement, by means of a more detailed study of design assignments. Field trips may be made to buildings under construction.

2 credits

**Arch 114 Freehand Drawing**
Basic drawing skills, composition and color perception. Studio and homework assignments.

3 credits

**History of Architecture (Required)**

**Arch 115 History of Architecture I**
(Sem. I) An introduction to the study of the concepts, designs and built examples of architecture from antiquity through approximately the third century C.E. Selected projects from throughout the world will be analyzed in terms of planning, design, structure, technique, function, social context and meaning.

3 credits

**Arch 115 History of Architecture II**
(Sem. II) An introduction to the study of the concepts, designs and built examples of architecture from approximately the fourth through the 15th century. Selected projects from throughout the world will be analyzed in terms of planning, design, structure, technique, function, social context and meaning.

3 credits

**Arch 125 History of Architecture II**
(Sem. I) An introduction to the study of the concepts, designs and built examples of architecture from approximately the 15th through the 18th century. Selected projects from throughout the world will be analyzed in terms of planning, design, structure, technique, function, social context and meaning.

3 credits
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arch 125</td>
<td>(Sem. II) An introduction to the study of the concepts, designs and built examples of architecture from approximately the 18th through the 20th century. Selected projects from throughout the world will be analyzed in terms of planning, design, structure, technique, function, social context and meaning.</td>
<td>2 credits</td>
</tr>
<tr>
<td>Arch 153</td>
<td>Town Planning</td>
<td>A modernist response to the problems of large metropolitan cities. Taking a historical perspective, the course will analyze town planning responses of specific architects and groups for cities such as Paris, London, New York, Vienna and Chicago, questioning the cultural determinants that made town planning a modernist stance.</td>
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<tr>
<td><strong>Advanced Concepts and Topics (Required)</strong></td>
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<tr>
<td>Arch 205</td>
<td>Advanced Concepts</td>
<td>This course is intended to be an advanced course dealing with the relationship between architectural space and some other discipline in the humanities. The course deals with an interdisciplinary approach toward a new poetic and the phenomenology, psychology and metaphysics of space. (After fulfilling the Arch 205 Advanced Concepts degree requirement, a student may enroll in other additional Arch 205 Advanced Concepts classes for elective credit.)</td>
</tr>
<tr>
<td>Arch 225</td>
<td>Advanced Topics in History, Theory, Criticism</td>
<td>Advanced study in history, theory, and criticism of architecture, urbanism and technology. (After fulfilling the Arch 225 Advanced Topics degree requirement, a student may enroll in other additional Arch 225 Advanced Topics classes for elective credit.)</td>
</tr>
<tr>
<td><strong>Elective Courses</strong></td>
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<tr>
<td>Arch 165</td>
<td>Analysis of Architectural Texts</td>
<td>Introduction to analytical methods and techniques and their relationship to synthetic activity in the design process.</td>
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<tr>
<td>Arch 175</td>
<td>Modern Architectural Concepts</td>
<td>The concepts and generators of form and space relative to architecture of the 20th century are explored and investigated.</td>
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<tr>
<td>Arch 176</td>
<td>Theory of Landscape Architecture</td>
<td>Lecture/studio course explores the interrelationships of nature, site design and built form. Focus on basic elements of nature addressed ideologically, poetically, culturally and practically through an interdisciplinary study of works by selected artists, writers, landscape architects and architects. Work with landscape fundamentals, continue on to more complex issues of natural processes and aesthetics, such as atmosphere, ephemeral and time, and of site planning, such as site selection, topography, drainage, ecology and climate, especially as related to architecture and art in the land. Redefine relationship between humanity and nature. Independent, visceral searches as starting points for design, using methods that cross boundaries traditionally separating, art, architecture and landscape architecture, in an attempt to dismantle stereotype and to probe new ground.</td>
</tr>
<tr>
<td>Arch 177</td>
<td>Computer Graphics, Image Processing and Vision</td>
<td>Introduction to basic concepts of spatial description and manipulation by computer enables students to use these techniques as an aide in problems of formal spatial drawing with a computer. Examination of the issues of “hand-eye axis” in computer-based drawing systems such as “paint” systems as well as more abstract algorithmic methods of drawing. Image acquisition and transformation by computer, its relation to computer vision and control of robots and machines which build will be another area of emphasis. Survey of a wide variety of applications including bitmapped design, page layout and make-up, animation and interactive control of video systems.</td>
</tr>
<tr>
<td>Arch 178</td>
<td>Advanced Drawing Seminar</td>
<td>The course will focus on the dialogue between figuration and abstraction. Students will be expected to plan and elaborate an ongoing series of drawings. The class will meet on a seminar basis to critique work in progress and to discuss issues relevant to the language of drawing. There may be an open studio available for those students who wish to pursue drawing from the model. However, students will be encouraged to investigate a broad spectrum of imagery and materials.</td>
</tr>
</tbody>
</table>
Arch 300 Computer-Aided Design and Descriptive Geometry
Architecture-specific exploration into perception, methods and conventions of the geometric representation of space through the new perspective of computer applications. Introduction to concepts of projections, hinge and projector lines as well as absolute and relative coordinate systems through local deduction by considering parallel, axial, radiant and stereoscopic projections as variations of the same system. Introduction of CAD specific methods such as Solid, NURBS and Parametric Modeling, hierarchical- and command-based programs. Critical comparison of computer capabilities and architectural tangible scale modeling methods to understand possibilities and limitations of computer-aided design in architecture. Critical exploration of methods and media for representation and design of specific works of architecture. 2 credits. Open to all students

Arch 401 Proseminar
An introduction to research in architecture and urbanism: theory, research (methods and techniques) and writing, for M.Arch. II degree students only. Selected readings in historiography, theory, criticism and design and methods. Includes lectures and seminars by faculty and visiting specialists in the fields of history and criticism, architecture and urban design methods, research in representational techniques, digital technology, etc. Presentations by each student in the program will encourage interdisciplinary comparison and shared knowledge. 2 credits

Arch 402 Thesis Research Tutorial
Individual thesis research conducted under the supervision of an adviser or advisers leading to the preparation of a Thesis Prospectus required for advancement to the third semester of the program. 2 credits

Arch 411 Graduate Design Research Studio I
The Design Research Studio 1 will establish a general problem incorporating aspects of architectural, urban and technological design research to be undertaken by the class, with each student contributing to their specific area of expertise. The studio will include seminars by invited guests on topics relevant to the program’s principal areas of study. 6 credits

Arch 412 Graduate Design Research Studio II
Individual design projects within general guidelines established by the faculty, each emphasizing the special area(s) of research of the student. 6 credits

Arch 413 Graduate Thesis
The choice of the area of study is the responsibility of the student. The scope of the project and method of exposition is defined by each student in consultation with their thesis adviser and must be approved prior to the beginning of the summer term on the basis of a thesis prospectus presented to the group of faculty. Students will develop a mutually agreed upon schedule for meetings with their adviser and for regular project reviews. 6 credits

Arch 485 Graduate Seminar in Theory, History and Criticism of Architecture
Selected topics in the advanced study of the theory and criticism of modernism and contemporary architecture, the philosophy and aesthetics of architecture, the mediatization of architecture and broader cultural and historical issues, through the critical readings of texts as well as case studies. 2 credits

Arch 483 Graduate Seminar in Urban Studies
Selected topics in the advanced study of urban form including readings and case studies in urban analysis, global development, historic preservation and typological transformation. 2 credits

Arch 482 Graduate Seminar in Technologies
Selected topics in the advanced study of technological issues in architectural design, representation, materials, planning, production and construction. 2 credits
Faculty

Administration
Anthony Vidler, Dean; Professor
B.A., Hons., Dip.lArch., Cambridge University;
Ph.D., Delft University of Technology
(The Netherlands)
Elizabeth O’Donnell, Associate Dean
Monica Shapiro, Administrative Associate
Pat De Angelis, Secretary
Emmy Mikelson, Assistant to the Deans for Public Programs and Research
Steven Hillyer, Director, Architecture Archive
Barbara Coit, Collections Assistant, Architecture Archive
Sara Jones, Special Projects Assistant, Architecture Archive

Full-Time Faculty

Professors
Diana I. Agrest
Dipl. Arch., School of Architecture and Urbanism, University of Buenos Aires;
Université de Paris: Ecole Pratique des Hautes Etudes VI Section
R.A.
Diane H. Lewis
B.Arch., The Cooper Union;
The American Academy in Rome
R.A.
Yoael A. Seinuk
Degree in Civil Engineering, University of Hawaiia

Adjunct Faculty

Stephen Rustow
B.A., University of Rochester;
M.Arch., M.G.P., Massachusetts Institute of Technology
R.A., N.C.A.R.B.
Sean W. Scully
B.A., Harvard University;
B.Arch., Columbia University
R.A.
David Turnbull
B.A. Hons, Dipl. Arch., University of Bath (England)
Leibniz Woods
University of Illinois; Purdue University
Guido Zuliani
Diploma (M.Arch.), Istituto Universitario d’Architettura di Venezia, Italy

Associate Professors

Tamar Zinger
B.Arch., The Cooper Union;
M.Sc., Technion-Israel Institute of Technology;
M.A., Ph.D., Princeton University
Michael Young
B.Arch., California Polytechnic Institute;
M.Arch., Princeton University
R.A.

Assistant Professors

William Clark
B.A., Pennsylvania State University;
M.A., Ph.D., Columbia University
Elisabeth O’Donnell
University of Minnesota;
B.Arch., The Cooper Union
R.A.
D. Graham Shane
Diploma (B Arch.), The Architectural Association School, London, England;
M.Arch., Ph.D., Cornell University
David Shapiro
B.A., Ph.D., Columbia University;
B.A., M.A., University of Cambridge (England)
Richard Stapleton
B.A., Duke University;
M.A., Ph.D., New York University, Institute of Fine Arts
Michael Webb
Diploma, Regent Street Polytechnic (England)

Associate Professors

Felicia Davis
B.S., Tufts University; The Architectural Association (England);
M.Arch., Princeton University
Hayley Eber
B.A.S., The University of Cape Town;
B.Arch., The Cooper Union;
M.Arch., Princeton University

Assistant Professors

Louis Katos
B.C.E., M.B.A., New York University
Sheng Shi
B.S.C.E., M.S.S.E., Drexel University
P.E.
Joan Waltermath
B.A., Rhode Island School of Design;
M.F.A., Hunter College, CUNY
Georg Windeck
Dipl., Technical University of Berlin
Suzan Wines
B.Arch., The Cooper Union
R.A.

Visiting Professors

Samuel M. Anderson
A.B., Harvard College; Sussex University (England);
B.Arch., The Cooper Union
R.A.
Ashok Rajji
B.Sc., University of Bombay (India);
B.S., M.S., Texas A&M University, P.E.
Peter Schubert
B.S.Arch., Ohio State University;
M.Arch., Columbia University
R.A.

Instructors

Pablo Lorenzo-Eiroa
Dipl. Arch., University of Buenos Aires;
Escuela Superior de Bellas Artes
Ernesto de la Carcova (Argentina);
M.Sc., University of Buenos Aires;
M.Arch., Princeton University
Jane Lea
B.A., Barnard College; M.Arch., Columbia University

Visiting Assistant Professor

Michael M. Samuelian
B.Arch., The Cooper Union;
M.Arch., Harvard University
R.A., N.C.A.R.B.

Other Adjunct/Visiting Professors

In order to indicate the distinction and level of professional accomplishment of these professors, we take pleasure in listing appointments of the past years: Anders Abraham, Wiel Arets, John Ashbery, Manuel Bala, Norman Bryson, Sverre Fehn, Jay Fellows, Robert Freeman, Remo Guidieri, Janis Hall, John Hawkes, Christopher Janney, Josef Paul Kleihues, Jana Leo de Blas, James Merrill, Don Metz, Francesco Pelizz, Ahmad Rahimian, Gaetano Pesce, John Rajchman, George Ranalli, Aldo Rossi, Joseph Rykwert, Antonio Sanmartin, Jürgen Sawade, Massimo Scorigi, Catherine Seavitt, Bemard Streckor, Bernard Tsuchimi, Hans Tupper, Wim van den Bergh, Michael Webb and Bruce McM. Wright

Emeriti

Peter D. Eisenman
The Irwin S. Chanin Distinguished Professor Emeritus of Architecture
B.Arch., Cornell University;
M.S.Arch., Columbia University;
M.A., Ph.D., University of Cambridge (England)
Sue Ferguson Gussow
Professor Emerita of Architecture
Pratt Institute; The Cooper Union;
The Brooklyn Museum; B.S., Columbia University;
M.F.A., Tulane University
Richard Henderson, Associate Dean of the Irwin S. Chanin School of Architecture; Professor Emeritus of Architecture
B.Arch., Cornell University; R.A.
Richard Scollino
Professor Emeritus of Architecture
The Cooper Union; B.S. in Arch., University of Cincinnati; M.Arch., Harvard University; Università degli Studi, Rome; Hon. L.H.D., University of Illinois at Chicago

* deceased

Proportional-Time Faculty

Professors
Kevin Bone
University of Colorado;
Wright/Ingraham Institute;
B.Arch., Pratt Institute;
Royal Danish Academy of Art
R.A.
Anthony Candido
Georgia Institute of Technology;
B.Arch., Illinois Institute of Technology
David Gersten
New York Institute of Technology;
B.Arch., The Cooper Union
Roderick Knox
B.Arch., B.F.A., The Cooper Union;
M.Arch., Harvard University
R.A., N.C.A.R.B.

Visiting Assistant Professor

Michael M. Samuelian
B.Arch., The Cooper Union;
M.Arch., Harvard University
R.A., N.C.A.R.B.

* deceased