

# Bachelor of Architecture and M.S. in Civil Engineering

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The New Jersey School of Architecture and the Department of Civil and Environmental Engineering have established a dual degree program that permits students to obtain a B.Arch. and a Master of Science (M.S.) in Civil Engineering with a concentration in construction engineering and management. There is no reduction in the degree requirements for the professional degree in architecture. The dual degree program permits students to obtain an M.S. in Civil Engineering in substantially less time, in some cases with only one additional year of study.

Up to 12 credits of graduate-level coursework may be applied to both the B.Arch. and M.S. Students may take additional courses at the graduate level during their undergraduate career, but these courses do not count toward the undergraduate degree requirements and students are charged at the graduate course rate.

Eligible students should contact the Office of Graduate Studies in their junior or third year regarding the process for admission to the dual degree program. The Office of Graduate Studies will coordinate the process with the undergraduate program director in the School of Architecture and later with the graduate advisor and the Office of Graduate Admissions as the student nears completion of the undergraduate degree. In order to be eligible for initial and continued participation in the dual degree program, the student must maintain a 3.0 cumulative GPA and take the GRE during the senior or final undergraduate year.

## B.Arch. Requirements

### First Year

1st Semester		Credits
ARCH 195	Architecture Studio I	4
ARCH 110	Tools and Techniques I: Introduction to Architecture Thinking	3
ENGL 101	English Composition: Introduction to Academic Writing	3
CS 104	Computer Programming and Graphics Problems	3
MATH 107	University Mathematics A <sup>ii</sup>	3
FYS SEM	First-Year Student Seminar	0
<b>Term Credits</b>		<b>16</b>

### 2nd Semester

ARCH 196	Architecture Studio II	4
ARCH 156	Tools and Techniques II: Introduction to Architecture Making	3
ENGL 102	English Composition: Introduction to Writing for Research	3
MATH 105	Elementary Probability and Statistics <sup>ii</sup>	3
Social Sciences GER ( <a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/social-science-ger/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/social-science-ger/</a> )		3
<b>Term Credits</b>		<b>16</b>

### Second Year

#### 1st Semester

ARCH 295	Architecture Studio III	4
ARCH 210	History of Architecture I	3
ARCH 223	Construction I	3
PHYS 102	General Physics I	3
PHYS 102A	General Physics I Lab	1
<b>Term Credits</b>		<b>14</b>

#### 2nd Semester

ARCH 296	Architecture Studio IV	4
ARCH 211	History of Architecture II	3
ARCH 224	Construction II	3
Natural Science GER ( <a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/natural-science-ger/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/natural-science-ger/</a> )		3
History and Humanities GER 200 level ( <a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-200-level/</a> )		3
<b>Term Credits</b>		<b>16</b>

**Third Year****1st Semester**

ARCH 395	Architecture Studio V	4
ARCH 303	Structures I	3
ARCH 309	Environmental Control Systems I	3
ARCH 324	Landscape and Urbanism	3
History and Humanities GER 300+ level ( <a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/</a> )		3
<b>Term Credits</b>		<b>16</b>

**2nd Semester**

ARCH 396	Architecture Studio VI	4
ARCH 304	Structures II	3
ARCH 314	Environmental Control Systems II	3
ARCH Elective <sup>iii</sup>		3
History and Humanities GER 300+ level ( <a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/ger-300-level/</a> )		3
<b>Term Credits</b>		<b>16</b>

**Fourth Year****1st Semester**

ARCH 495	Advanced Architecture Studio I	5
ARCH 472	Professional Practice I	3
ARCH Elective (Technology)		3
Humanities and Social Science Senior Seminar GER ( <a href="http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/">http://catalog.njit.edu/undergraduate/academic-policies-procedures/general-education-requirements/hss-capstone/</a> )		3
<b>Term Credits</b>		<b>14</b>

**2nd Semester**

ARCH 463	Options Studio I	5
ARCH 475	Professional Practice II	3
ARCH Elective (Technology)		3
ARCH Elective <sup>iii</sup>		3
<b>Term Credits</b>		<b>14</b>

**Fifth Year****1st Semester**

ARCH 595	Advanced Architecture Studio II	5
ARCH 561	Synthesis Seminar	3
ARCH Elective (History/Theory)		3
ARCH Elective <sup>iii</sup>		3
<b>Term Credits</b>		<b>14</b>

**2nd Semester**

ARCH 464 or ARCH 566	Option Studio II or Advanced Architectural Design Studio	5
ARCH Elective (History/Theory)		3
ARCH Elective <sup>iii</sup>		3
ARCH Elective <sup>iii</sup>		3
<b>Term Credits</b>		<b>14</b>
<b>Total Credits</b>		<b>150</b>

- i Students must maintain continuous enrollment in the HUM101/HUM102 sequence every Fall and Spring semester until successful completion.
- ii Students must maintain continuous enrollment in the Math sequence every Fall and Spring semester until successful completion.
- iii Courses listed under ARCH Elective (Technology) and ARCH Elective (History/Theory) can be counted as ARCH Electives.

ARCH Electives (Technology)

<b>Code</b>	<b>Title</b>	<b>Credits</b>
ARCH 301	Digital Modeling and Fabrication	3
ARCH 316	Structural Computer Applications BIM	3
ARCH 337	Building Information Modeling	3
ARCH 361	Adaptive Paradigms in Architecture	3
ARCH 423	Advanced Construction	3
ARCH 429	Advanced Structures	3
ARCH 461	Resilient Structural Design and Construction	3
ARCH 483	ST:	3
ARCH 537	Cable and Tension Structures	3
ARCH 538	Sustainable Architecture	3
ARCH 541	Material Systems in Design	3
ARCH 543	Lighting	3
ARCH 545	Case Studies in Architectural Technology	3
ARCH 546	Designing and Optimizing the Building Enclosure	3

## ARCH Electives (History/Theory)

<b>Code</b>	<b>Title</b>	<b>Credits</b>
ARCH 331	Formal Principles of Landscape Design Traditions Across the Globe	3
ARCH 332	Architecture: Image and Word I	3
ARCH 333	Architecture:Image and Word II	3
ARCH 335	Digital Tectonics	3
ARCH 408	Investigations in the Contemporary Landscape	3
ARCH 530	Methods of Architectural Research	3
ARCH 531	History of Modern Architecture	3
ARCH 533	History of American Architecture	3
ARCH 534	Aspects of Urban + Suburban Form	3
ARCH 535	History of Architectural Ideas	3
ARCH 536	Landscape and American Culture	3
ARCH 557	Problems in Modern Housing	3
ARCH 559	Social Issues in Housing	3
ARCH 571	Sustainable City	3
ARCH 572	Mapping Urbanism	3
ARCH 574	Case Studies in Community and Urban Design	3
ARCH 576	Architecture of Utopia	3
ARCH 583	ST:	3
INT 350	History of Furniture	3

## ARCH Electives

<b>Code</b>	<b>Title</b>	<b>Credits</b>
ARCH 283	Special Topics	3
ARCH 317	Advanced Architectural Graphics	3
ARCH 432	P3 Post Presentation Processing	3
AD 150	Color and Composition	3
AD 325	Entrepreneurship for Designers	3
AD 340	Photography and Imaging	3
DD 320	Robotics for Architects and Designers	3
DD 321	Interactive and Reactive Environments	3
DD 334	Simulated Environments	3
DD 449	Imaginary Worlds: Architecture in Motion Pictures	3
ID 340	Materials and Processes	3
ID 341	Sustainable Materials and Processes	3

ID 370	New Product Testing	3
INT 351	Furniture Design	3

## M.S. in Civil Engineering Requirements

(30 credits)

Code	Title	Credits
Bridge Courses		
Select 10 credits from the following: 1		10
CE 200	Surveying	
CE 200A	Surveying Laboratory	
CE 501	Introduction to Soil Behavior	
MATH 105	Elementary Probability and Statistics	
Courses Counting Toward Both Degrees		
ARCH 650	Economy Of Building	3
ARCH 651	Public and Private Development	3
ARCH 647	Visualizing Urbanism	3
or ARCH 675		
MIS 645	Information Technology and Competitive Advantage	3
Civil and Environmental Engineering Electives		
Select two of the following:		6
CE 615	Infrastructure and Facilities Remediation	
CE 631	Advanced Reinforced Concrete Design	
CE 642	Foundation Engineering	
CE 702	Special Topics in Civil Engineering	
CE 711	Methods Improvement in Construction	
ENE 662	Site Remediation	3
<b>Total Credits</b>		<b>31</b>