

ARCHITECTURE BACHELOR OF SCIENCE

Leading to the Bachelor of Science Degree in Architecture

The Bachelor of Science in Architecture (B.S.Arch) program is a rigorous course of study centered on the design studio, where students work closely with faculty in their explorations of design and design methods. Associated courses in visual representation, history, theory, technology, and professional practice inform design studio problems. Student learning is enhanced by two semesters of cooperative work experience as well as study abroad options.

All entering freshmen are admitted to the four-year B.S.Arch program. During the junior year, students focus their educational interests by choosing one of the three concentrations outlined below.

Program Educational Objectives

The course of studies provides a pre-professional degree including a liberal arts curriculum in which students are challenged to view their education holistically, through required and elective courses both outside and within the Architecture Department. Advanced studies develop the skills and powers of inquiry necessary for understanding architecture within its larger global cultural context; they provide a forum where students develop abilities in advanced problem solving, independent research, and writing within the architectural and humanities curricula. The program encourages deep explorations in the material culture of architecture and challenges students to deploy this knowledge in ways that enrich the built environment and enhance people's lives. Along with providing a pre-professional degree in architecture, successful completion of the B.S.Arch. program allows students at Wentworth to apply to the one-year Master of Architecture program.

Professional Licensure and Accreditation

In the United States, most registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), the sole agency authorized to accredit professional degree programs in architecture offered by institutions with U.S. regional accreditation, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. Doctor of Architecture and Master of Architecture degree programs may require a pre-professional undergraduate degree in architecture for admission. However, the pre-professional degree is not, by itself, recognized as a professional NAAB-accredited degree. NAAB may grant a two-year, three-year, or eight-year term of accreditation to a program, depending on the extent of its conformance with established educational standards. In 2018, NAAB granted Wentworth Architecture an eight-year term of accreditation for the M.Arch Degree Program.

Admission to the M.Arch Program from the Wentworth B.S.Arch Program

B.S.Arch students may apply to the M.Arch program in their senior year; acceptance is based on a portfolio evaluation by department faculty, departmental GPA (architecture courses), overall GPA, transcript, a statement of objectives, and references. Undergraduate students who have achieved an overall GPA of 3.2 or higher through junior year will be accepted automatically into the M.Arch program for the following year's application cycle. These students only need submit an application

form, a resume, and a statement of objectives. Automatic acceptance applies *only* to applicants currently enrolled in Wentworth's B.S.Arch program.

Student Outcomes

The B.S.Arch program emphasizes the tangible, material, and cultural dimensions of the discipline, exploring a range of technologies that inform design. Graduates of the B.S.Arch program will have the ability to:

- Articulate design concepts in written, verbal and graphic forms, using appropriate media for communicating their ideas;
- Develop abstract ideas and concepts through critical, rational and intuitive thinking in order to resolve complex design problems using research, making, and experimentation;
- Describe both parallel and divergent histories of architecture and urban spaces as well as identify the social and spatial patterns that characterize different cultures and individuals;
- Translate codes, develop a program of functional uses, respond to and design sites, integrate appropriate facilities and systems, and apply principles of life-safety and accessibility;
- Employ knowledge of basic structural behavior and apply appropriate structural systems to design solutions;
- Select and apply environmental systems (both active and passive) and other building systems appropriate for a site and a program, considering environmental impact and sustainability;
- Make integrated design decisions, relying on critical assessment and evaluation, in order to synthesize environmental, technical, accessibility, structural, and material issues;
- Interpret professional issues through evaluating plans, schedules, specifications, and financial data.

B.S. Arch Program Concentrations

The undergraduate program in architecture offers three areas of concentration, which allow students to pursue a particular focus within their study of architecture. The core architectural education is equivalent across concentrations, and all achieve the same learning outcomes. All students are required to select a concentration at the end of their first semester in junior year.

Adaptive Interventions

This concentration investigates architecture as it relates to design interventions, adaptations, and transformations of existing conditions, communities, and contexts. It explores how built architectural works engage complex social, political, economic, environmental, historical, and disciplinary forces—and how to re-engage those changing forces when adapting or intervening in an existing setting. If the most sustainable building is one that already exists, this concentration establishes strategies for capitalizing on our built fabric while imagining inventive ways to transform buildings and urban environments from past generations.

Emerging Technologies

This concentration builds knowledge and skills in the technologies that are transforming the discipline and profession of architecture. It explores emergent design techniques, materials, construction methods, digital fabrication, computational software, and media of architecture. It offers students an understanding of the principles and applications of technologies that are central to shaping architectural modernity and the future of the built environment.

Urbanism

This concentration explores architecture's capacity for engaging urban systems and landscapes in the Anthropocene, economics and social justice, and the larger forces of history and culture operating on and through the built environment. It challenges students to explore the interplay between complex social, cultural, and ecological systems as a form of design research and empowers young professionals to collaborate across disciplinary boundaries and provide leadership in reshaping our cities.

Cooperative Work Experience

The Architecture Department has a substantial and well-established cooperative education component embedded in the curriculum. B.S.Arch students spend two semesters working in an architectural or allied professional office. The department collaborates with the Institute's Center for Cooperative Education and Career Services to reinforce the learning content of these placements. Prior to their first cooperative education experience, students take ARCH2225 PRO-PRACTICE PREP which introduces them to basic concepts and terminology as well as the industry-standard software related to construction drawings. Work experience during cooperative education semesters may be documented and applied toward future professional licensure through the Architectural Experience Program (AXP), administered by the National Council of Architectural Registration Boards (NCARB).

Study Abroad

The Department of Architecture has a long tradition of offering semester-long study-abroad programs for undergraduates in international locations of architectural and urbanistic significance. The programs are led by Wentworth faculty members in collaboration with architects and scholars residing in those cities. During their time abroad, students enrich their cultural and professional perspectives through study-travel and working closely with local design professionals. Study-abroad curriculum is aligned with required courses in Boston, allowing normal progress toward graduation. New study-abroad opportunities are currently in development for future academic years.

Degree Details

Total Credits for degree: 136

This is a four-year program that begins in the fall of the student's first year and is planned to end in the spring semester of the fourth year.

In the junior year, students select one of three concentrations – Adaptive Interventions, Emerging Technologies, or Urbanism – which is the focus of their advanced coursework during junior and senior years.

Special Grade Requirement

The Architecture Department has a special grade requirement that applies to all design studio courses from the sophomore year onward. Students in the B.S.Arch program must comply with the following design studio grade requirement:

Final grade must be C or better if the final grade in the previous design studio is less than a C.

Students who receive a final grade below C for two consecutive semesters are not permitted to continue in the program until they successfully repeat the second studio for which they received a sub-standard grade.

Curricular Sequence Foundation and Integration

In the first year, students get a broad introduction to the field of architectural design, which serves as the foundation for the curriculum. In the following three semesters, students gain knowledge in integrative design, with sequenced courses in construction technology, environmental systems, structures, history and theory supporting design studios of increasing complexity.

Course	Title	Credits
Freshman Year		
Fall Semester		
ARCH1000	STUDIO 01	6
ARCH1200	ARCHITECTURAL REPRESENTATION	4
MATH1000	COLLEGE MATHEMATICS	4
MATH1500, MATH1700, MATH1750, MATH1800 or MATH1850 will satisfy the MATH Requirement		
English Sequence		4
Credits		18
Spring Semester		
ARCH1500	STUDIO 02	6
ARCH1700	ARCHITECTURAL MEDIA	4
English Sequence		4
PHYS1000	COLLEGE PHYSICS I	4
PHYS1250 will satisfy PHYS requirement		
Credits		18
Sophomore Year		
Fall Semester		
ARCH2000	STUDIO 03	6
ARCH2100	HISTORY/THEORY 01	4
ARCH2200	BUILDING MATTERS: MATERIALS & ELEMENTS OF CONSTRUCTION	4
HSS Elective		4
Credits		18
Spring Semester		
ARCH2500	STUDIO 04	6
ARCH2600	HISTORY/THEORY 02	4
ARCH2700	ENERGY & RESOURCES IN ARCHITECTURE	4
ARCH3400	STRUCTURES 01	4
ARCH2225	PRO-PRACTICE PREP	0
Credits		18
Summer Semester		
COOP3500	COOP EDUCATION 1	
Credits		0
Junior Year		
Fall Semester		
ARCH3000	STUDIO 05	6
ARCH3900	STRUCTURES 02	4
HSS Elective		4
General Elective		4
Credits		18

Course	Title	Credits
Spring Semester		
COOP4500	COOP EDUCATION 2	0
	Credits	0
	Total Credits	90

ENGL/HSS Note

Full-time students are required to complete:

- At least one course in Humanities
- At least one course in the Social Sciences
- The remaining courses from either the Humanities or Social Sciences category.

Students with a three English course sequence may use the third English course to satisfy a Humanities requirement.

A minimum of 28 credits total, including English, humanities, and social science credit, is required to complete the humanities and social sciences graduation requirement.

Concentration

In the fall of junior year, students choose one of three concentrations. In the following semester, juniors take their first concentration seminar, which surveys the history and theory of their chosen concentration. This seminar is followed in senior year by a second concentration seminar and a concentration-specific studio (Studio 07).

Urbanism Concentration

Course	Title	Credits
Junior Year		
Summer Semester		
ARCH3500	STUDIO 06	6
ARCH3200	PASSIVE & ACTIVE SYSTEMS	4
ARCH3700	CONCENTRATION STUDIES 01	4
HSS Elective		4
	Credits	18
Senior Year		
Fall Semester		
ARCH4000	STUDIO 07 (URBANISM)	6
ARCH3750	CONCENTRATION STUDIES 02	4
HSS Elective		4
	Credits	14
Spring Semester		
ARCH5500	STUDIO 08	6
Architecture Elective (p. 3)		4
HSS Elective		4
	Credits	14
	Total Credits	46

Emerging Technologies Concentration

Course	Title	Credits
Junior Year		
Summer Semester		
ARCH3500	STUDIO 06	6
ARCH3200	PASSIVE & ACTIVE SYSTEMS	4

Course	Title	Credits
ARCH3700	CONCENTRATION STUDIES 01	4
HSS Elective		4
	Credits	18

Senior Year**Fall Semester**

ARCH4025	STUDIO 07 (EMERGING TECHNOLOGY)	6
ARCH3750	CONCENTRATION STUDIES 02	4
HSS Elective		4
	Credits	14

Spring Semester

ARCH5500	STUDIO 08	6
Architecture Elective (p. 3)		4
HSS Elective		4
	Credits	14
	Total Credits	46

Adaptive Interventions Concentration

Course	Title	Credits
Junior Year		
Summer Semester		
ARCH3500	STUDIO 06	6
ARCH3700	CONCENTRATION STUDIES 01	4
HSS Elective		4
ARCH3200	PASSIVE & ACTIVE SYSTEMS	4
	Credits	18
Senior Year		
Fall Semester		
ARCH3750	CONCENTRATION STUDIES 02	4
ARCH4050	STUDIO 07 (ADAPTIVE INTERVENTIONS)	6
HSS Elective		4
	Credits	14
Spring Semester		
ARCH5500	STUDIO 08	6
Architecture Elective (p. 3)		4
HSS Elective		4
	Credits	14
	Total Credits	46

Architecture Electives

Students are encouraged to pursue breadth, as well as depth in their architectural studies. The following list is indicative of the department's elective course offerings in recent years:

Course	Title	Credits
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Design Strategies for Low-Carbon Buildings)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Geospatial Modeling)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Holistic Sustainable Design Integration)	4

Course	Title	Credits
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Animated Architectural Volumes)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Potentials of Additive Manufacturing)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Architects, Directors, Scenographers)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Collage in Architecture)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Green & Resilient Design)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Color Relationships)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Modernism Beyond the West)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Material Intelligence)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Issues in Professional Practice)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Context Analysis-Berlin)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Space & Media)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (City of the Future)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Building Community)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Project Planning)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Framing Chinese Architecture)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Multi(ply))	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Fundamentals of Design Finance)	4
ARCH3800	SPECIAL TOPICS IN ARCHITECTURE (Explorations in the Making)	4