DEPARTMENT OF ARCHITECTURE

Undergraduate Study

The Department of Architecture offers two undergraduate courses of study. They provide a broad undergraduate education for students who have clear professional goals and for those who desire a solid foundation for a number of possible careers. Course 4 leads to the Bachelor of Science in Architecture and Course 4-B leads to the Bachelor of Science in Art and Design.

Bachelor of Science in Architecture (Course 4)

Course 4 (*https://catalog.mit.edu/degree-charts/architecture-course-4*) offers a program introducing students to architecture through the department's five discipline areas: art, culture and technology; architectural design and urbanism; building technology; design and computation; and history, theory and criticism of architecture, art and design.

The requirements for the SB in Architecture (BSA) (*https://catalog.mit.edu/degree-charts/architecture-course-4*) curriculum begin with two introductory subjects taken in sequence, 4.021 Design Studio: How to Design and 4.022 Introduction to Architectural Design Techniques, intended for sophomores. The remaining core subjects include introductory study in the five discipline areas.

The BSA includes two or three sequential architecture design studios. The approach fosters investigation and discussion in the development of sensitivity to the built environment. These sensibilities are linked to values and responsibilities to the community at large. Students in design studios develop technical and analytical skills and learn synthesis and invention using the elements of architectural form: material, structure, construction, light, sound, memory, and place. A thesis is optional and taken during the senior year.

This program prepares students for future studies in a professional Master of Architecture (MArch) program.

Bachelor of Science in Art and Design (Course 4-B)

The Bachelor of Science in Art and Design (BSAD) (*https://catalog.mit.edu/degree-charts/architecture-course-4-b*) provides undergraduates with a cohesive program of study that exposes them to cross-disciplinary fields in art and design. It provides a rigorous conceptual foundation along with strong practical skills that can be applied across diverse design domains. Students will be introduced to the design process, from concept to completion, through contextual critical thinking, experimentation, representation, and physical production techniques, critique, iteration, and reflection. The objective is to prepare students to pursue diverse career paths from product design to visual communication to information design to 2D and 3D art practices and more. Study in this program will enable students to take advantage of emerging opportunities in industry and academia.

The requirements for the BSAD curriculum begin with two introductory subjects taken in sequence, 4.021 Design Studio: How to Design and 4.022 Introduction to Architectural Design Techniques, intended for sophomores. A choice of a third design studio is taken in the junior year along with four additional core foundational subjects in design, art, computation, and history. The remaining four requirements are selected from a list of interdisciplinary subject offerings grouped around the following themes: objects, information, and art and experience. A thesis preparation subject is required and a thesis is presented in the senior year.

Minor in Architecture

The requirements for a Minor in Architecture are as follows:

4.021	Design Studio: How to Design	9-12
or 4.02A	Design Studio: How to Design Intensive	
4.022	Introduction to Architectural Design Techniques	12
Choose one of the following options:		48
Option 1		
4.023	Architecture Design Studio I	
Select two from the list of elective subjects below		
Option 2		
Select four from the list of elective subjects below		
Total Units		**69-72**

Elective Subjects

Architecture and Urbanism		
4.041	Design Studio: Advanced Product Design	12
4.053	Visual Communication Fundamentals	12
4.211[J]	The Once and Future City	12
4.218	Disaster Resilient Design	12
4.231	SIGUS Workshop	12
4.250[J]	Introduction to Urban Design and Development	12
Art, Culture and Technology		
4.301	Introduction to Artistic Experimentation	12
4.302	Foundations in Art, Design, and Spatial Practices	12
4.307	Art, Architecture, and Urbanism in Dialogue	12
4.322	Introduction to Three-Dimensional Art Work	12
4.341	Introduction to Photography and Related Media	12

4.344	Advanced Photography and Related Media	12
4.354	Introduction to Video and Related Media	12
4.356	Cinematic Migrations	12
4.368	Studio Seminar in Art and the Public Sphere	12
4.373	Advanced Projects in Art, Culture, and Technology	12

Building Technology

4.401	Environmental Technologies in Buildings	12
4.411[J]	D-Lab Schools: Building Technology Laboratory	12
4.432	Modeling Urban Energy Flows for Sustainable Cities and Neighborhoods	12
4.440[J]	Introduction to Structural Design	12
4.451	Computational Structural Design and Optimization	12

Computation

4.500	Design Computation: Art, Objects and Space	12
4.501	Tiny Fab: Advancements in Rapid Design and Fabrication of Small Homes	12
4.502	Advanced Visualization: Architecture in Motion Graphics	12
4.507	Introduction to Building Information Modeling in Architecture	12
4.520	Visual Computing	12

History and Theory of Architecture, Art and Design

4.601	Introduction to Art History	12
4.602	Modern Art and Mass Culture	12
4.603	Understanding Modern Architecture	12
4.605	A Global History of Architecture	12
4.609	Seminar in the History of Art, Architecture, and Design	12
4.614	Building Islam	12
4.635	Early Modern Architecture and Art	12
4.636	Topics in European Medieval Architecture and Art	12
4.651	Art Since 1940	12
4.657	Design: The History of Making Things	12

Minor in Art, Culture, and Technology

The HASS Minor in Art, Culture, and Technology is designed to explore the conjunction of art with culture, science, technology, and design, and to develop critical and production practices.

The minor consists of six subjects arranged into three levels of study and chosen as follows:

Tier I

4.301	Introduction to Artistic Experimentation	12
or 4.302	Foundations in Art, Design, and Spatial Practices	

Select one of the following:		12
4.601	Introduction to Art History	
4.602	Modern Art and Mass Culture	
4.635	Early Modern Architecture and Art	
4.636	Topics in European Medieval Architecture and Art	
4.641	19th-Century Art: Painting in the Age of Steam	
4.651	Art Since 1940	
4.657	Design: The History of Making Things	

Tier II

Select two of the following:		24
4.320	Introduction to Sound Creations	
4.322	Introduction to Three-Dimensional Art Work	
4.341	Introduction to Photography and Related Media	
4.354	Introduction to Video and Related Media	

Tier III

Select two of the following:		18-24
4.314	Advanced Workshop in Artistic Practice and Transdisciplinary Research	
4.344	Advanced Photography and Related Media	
4.352	Advanced Video and Related Media	
4.356	Cinematic Migrations	
4.361	Performance Art Workshop	
4.368	Studio Seminar in Art and the Public Sphere	
4.373	Advanced Projects in Art, Culture, and Technology	

Total Units		**66-72**

Minor in Design

The Minor in Design provides undergraduates with a cohesive program of study that exposes them to the cross-disciplinary field of design. The minor provides a rigorous conceptual foundation in design along with strong design skills. Students will be introduced to design from concept to completion through contextual critical thinking, experimentation, representation, and physical production techniques, critique, iteration and reflection. The minor prepares students to pursue diverse career paths or further education in multiple areas of design, from product design to 3D design to visual communication, and enables them to take advantage of emerging opportunities in industry and academia.

The minor consists of six subjects:

Required Subjects

Design Studios		
4.021	Design Studio: How to Design	9-12
or 4.02A	Design Studio: How to Design Intensive	
4.053	Visual Communication Fundamentals	12
4.031	Design Studio: Objects and Interaction [1]	12
or 4.032	Design Studio: Information Design and Visualization	

Electives

Select 30-36 units of the following (from any category):		30-36
Objects		
2.00A	Designing for the Future: Earth, Sea, and Space	
2.00B	Toy Product Design	
2.00	Introduction to Design	
2.007	Design and Manufacturing I [2]	
2.009	The Product Engineering Process [2]	
4.031	Design Studio: Objects and Interaction [1]	
4.041	Design Studio: Advanced Product Design	
4.043	Design Studio: Interaction Intelligence	
4.110	Design Across Scales and Disciplines	
4.118	Creative Computation	
4.451	Computational Structural Design and Optimization	
4.501	Tiny Fab: Advancements in Rapid Design and Fabrication of Small Homes	
4.657	Design: The History of Making Things	
EC.720[J]	D-Lab: Design [2]	
Information		

4.032	Design Studio: Information Design and Visualization [1]	
4.051	The Human Factor in Innovation and Design Strategy	
4.500	Design Computation: Art, Objects and Space	
4.502	Advanced Visualization: Architecture in Motion Graphics	
4.520	Visual Computing	
6.1040	Software Design [2]	
6.4400	Computer Graphics [2]	
6.8371	Digital and Computational Photography [2]	
6.9101[J]	Introduction to Design Thinking and Innovation in Engineering	
6.C35[J]	Interactive Data Visualization and Society	
CMS.405	Visual Design [2]	
CMS.631	Data Storytelling Studio	
CMS.633	Digital Humanities: Topics, Techniques, and Technologies	
Art and Experience		
4.301	Introduction to Artistic Experimentation	
4.302	Foundations in Art, Design, and Spatial Practices	
4.307	Art, Architecture, and Urbanism in Dialogue	
4.320	Introduction to Sound Creations	
4.322	Introduction to Three-Dimensional Art Work	
4.341	Introduction to Photography and Related Media	
4.354	Introduction to Video and Related Media	
4.602	Modern Art and Mass Culture	
21M.601		
21M.603		
21M.737		
CMS.362	Civic Media Collaborative Design Studio	

Total Units		**63-72**

[1] 4.031 or 4.032 may be used as restricted elective if not selected as part of the design studio requirement.

[2] Subject has prerequisites that are outside of the program.

Minor in the History of Architecture, Art, and Design

The HASS Minor in the History of Architecture, Art and Design is designed to enable students to concentrate on the historical, theoretical, and critical issues associated with artistic and architectural production. Introductions to the historical frameworks and stylistic conventions of art and architectural history are followed by more concentrated study of particular periods and theoretical problems in visual culture and in cultural history in general.

The minor consists of six subjects arranged into three levels of study and chosen as follows:

Tier I [1]		
4.601	Introduction to Art History	12
or 4.602	Modern Art and Mass Culture	
4.605	A Global History of Architecture	12
or 4.614	Building Islam	
Tier II		
Select three from the lists below, including at least one from each category:		36
History of Architecture and Design		
4.603	Understanding Modern Architecture	
4.605	A Global History of Architecture [1]	
4.614	Building Islam [1]	
4.657	Design: The History of Making Things	
History of Art		
4.601	Introduction to Art History [1]	
4.602	Modern Art and Mass Culture [1]	
4.635	Early Modern Architecture and Art	
4.636	Topics in European Medieval Architecture and Art	
4.641	19th-Century Art: Painting in the Age of Steam	
4.651	Art Since 1940	
Tier III		
Select one of the following:		12
4.609	Seminar in the History of Art, Architecture, and Design	
	Other advanced seminar in the history of art, design and/or architecture, including offerings from Harvard or Wellesley, with permission of the HASS Minor Advisor and the instructor.	
Total Units		**72**

[1]   Can satisfy part of Tier I or Tier II requirement, but not both.

For a general description of minors (*https://catalog.mit.edu/mit/undergraduate-education/academic-programs/minors*), see Undergraduate Education.