**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 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) curriculum begin with two introductory subjects taken in sequence, 4.021 Design Studio: How to Design and 4.022 Design Studio: Introduction to Design Techniques and Technologies, 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) 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 Design Studio: Introduction to Design Techniques and Technologies, 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:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.021</td>
<td>Design Studio: How to Design</td>
<td>9-12</td>
</tr>
<tr>
<td>or 4.02A</td>
<td>Design Studio: How to Design Intensive</td>
<td></td>
</tr>
<tr>
<td>4.022</td>
<td>Design Studio: Introduction to Design Techniques and Technologies</td>
<td>12</td>
</tr>
</tbody>
</table>

Choose one of the following options:

**Option 1**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.023</td>
<td>Architecture Design Studio I</td>
<td>12</td>
</tr>
</tbody>
</table>

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**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.211[J]</td>
<td>The Once and Future City</td>
<td>12</td>
</tr>
<tr>
<td>4.218</td>
<td>Disaster Resilient Design</td>
<td>12</td>
</tr>
<tr>
<td>4.231</td>
<td>SIGUS Workshop</td>
<td>12</td>
</tr>
<tr>
<td>4.250[J]</td>
<td>Introduction to Urban Design and Development</td>
<td>12</td>
</tr>
</tbody>
</table>

**Art, Culture and Technology**

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.301</td>
<td>Introduction to Artistic Experimentation</td>
<td>12</td>
</tr>
<tr>
<td>4.307</td>
<td>Art, Architecture, and Urbanism in Dialogue</td>
<td>12</td>
</tr>
<tr>
<td>4.322</td>
<td>Introduction to Three-Dimensional Art Work</td>
<td>12</td>
</tr>
<tr>
<td>4.341</td>
<td>Introduction to Photography and Related Media</td>
<td>12</td>
</tr>
<tr>
<td>4.354</td>
<td>Introduction to Video and Related Media</td>
<td>12</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Title</td>
<td>Units</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------------------------------------------------------------------------</td>
<td>-------</td>
</tr>
<tr>
<td>4.368</td>
<td>Studio Seminar in Art and the Public Sphere</td>
<td>12</td>
</tr>
<tr>
<td>4.401</td>
<td>Environmental Technologies in Buildings</td>
<td>12</td>
</tr>
<tr>
<td>4.411[J]</td>
<td>D-Lab Schools: Building Technology Laboratory</td>
<td>12</td>
</tr>
<tr>
<td>4.432</td>
<td>Modeling Urban Energy Flows for Sustainable Cities and Neighborhoods</td>
<td>12</td>
</tr>
<tr>
<td>4.440[J]</td>
<td>Introduction to Structural Design</td>
<td>12</td>
</tr>
<tr>
<td>4.451</td>
<td>Computational Structural Design and Optimization</td>
<td>12</td>
</tr>
<tr>
<td>4.500</td>
<td>Design Computation: Art, Objects and Space</td>
<td>12</td>
</tr>
<tr>
<td>4.501</td>
<td>Tiny Fab: Advancements in Rapid Design and Fabrication of Small Homes</td>
<td>12</td>
</tr>
<tr>
<td>4.502</td>
<td>Advanced Visualization: Architecture in Motion Graphics</td>
<td>12</td>
</tr>
<tr>
<td>4.520</td>
<td>Visual Computing</td>
<td>12</td>
</tr>
</tbody>
</table>

**Building Technology**

- **4.601** | Introduction to Art History                                                  | 12    |
- **4.602** | Modern Art and Mass Culture                                                  | 12    |
- **4.635** | Early Modern Architecture and Art                                            | 12    |
- **4.636** | Topics in European Medieval Architecture and Art                             | 12    |
- **4.641** | 19th-Century Art: Painting in the Age of Steam                               | 12    |
- **4.651** | Art Since 1940                                                              | 12    |
- **4.657** | Design: The History of Making Things                                         | 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 and Architecture                               | 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 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
  - **33-36**
4.021 Design Studio: How to Design
or 4.02A Design Studio: How to Design Intensive
4.022 Design Studio: Introduction to Design Techniques and Technologies
4.031 Design Studio: Objects and Interaction
or 4.032 Design Studio: Information and Visualization

Electives
Select 30-36 units of the following (from any category): 30-36

Objects
2.00A Fundamentals of Engineering Design: Explore Space, Sea and Earth
2.00 Introduction to Design
2.007 Design and Manufacturing 1
2.009 The Product Engineering Process
4.031 Design Studio: Objects and Interaction
4.041 Design Studio: Advanced Product Design
4.043 Design Studio: Advanced Interactions
4.110 Design Across Scales and Disciplines
4.118 Creative Computation
4.125 Furniture Making Workshop
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

Information
4.032 Design Studio: Information and Visualization
4.051 The Human Factor in Innovation and Design Strategy
4.053 Visual Communication Fundamentals
4.500 Design Computation: Art, Objects and Space
4.502 Advanced Visualization: Architecture in Motion Graphics
4.520 Visual Computing
CMS.405 Visual Design
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.603 Introduction to Design for the Theater
CMS.362 Civic Media Collaborative Design Studio
CMS.634 Designing Interactions

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
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:

History of Architecture and Design
4.603 Understanding Modern Architecture
4.605 A Global History of Architecture
4.614 Building Islam
4.657 Design: The History of Making Things

History of Art
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

**Tier III**
Select one of the following: 12

4.609  Seminar in the History of Art and Architecture

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 |

* Can satisfy part of Tier I or Tier II requirement, but not both.

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