

# Computational Design, Minor

## Minor in Computational Design

Available to both architecture majors and non-architecture majors  
(minimum 54 units total)

### Overview

Carnegie Mellon Architecture offers several options for undergraduate students to pursue minors in addition to their primary degree. Contact academic advisor Heather Worker Midgley (haw5@cmu.edu) for more information.

The minor in Computational Design is intended for students who wish to engage with computation as a vehicle of generative, material, and spatial design exploration. It brings together courses from the School of Architecture and the College of Fine Arts to offer students hands-on experience, and a deep understanding, of computation as a resource in creative design practices. Students minoring in computational design will be eligible for advanced standing in the School of Architecture's Master of Science in Computational Design (MSCD) program. The minor offers students the possibility of exploring three areas of computational design: designing, making, and theory. Please refer to this document ([https://static1.squarespace.com/static/54c2a5c7e4b043776a0b0036/t/5f4eb94ce17d4e73ccbbd371/1598994764926/cd\\_minor\\_20200829.pdf](https://static1.squarespace.com/static/54c2a5c7e4b043776a0b0036/t/5f4eb94ce17d4e73ccbbd371/1598994764926/cd_minor_20200829.pdf)) for the latest information.

### Curriculum

#### Required Courses (non-architecture majors)

|        |                                      | Units |
|--------|--------------------------------------|-------|
| 48-120 | Digital Media I                      | 6     |
| 48-125 | Digital Media II                     | 6     |
| 48-214 | Generative Modeling                  | 9     |
| 48-247 | Fundamentals of Computational Design | 9     |

#### Selective Courses

|                          |                                              | Units |
|--------------------------|----------------------------------------------|-------|
| <b>Designing</b>         |                                              |       |
| 48-568                   | Advanced CAD, BIM, and 3D Visualization      | 9     |
| 51-367                   | Design Center: Computational Design Thinking | 9     |
| 62-315                   | Shaping Environments: Biomatter              | 12    |
| <b>Making</b>            |                                              |       |
| 48-530                   | Human-Machine Virtuosity                     | 12    |
| 48-545                   | Design Fabrication                           | 9     |
| 48-555                   | Introduction to Architectural Robotics       | 9     |
| 54-399                   | Decoding Media                               | 9     |
| 54-405                   | Digital Narratives                           | 5     |
| 60-212                   | Intermediate Studio: Creative Coding         | 12    |
| <b>Theory</b>            |                                              |       |
| 48-727                   | Inquiry into Computational Design            | 9     |
| 48-749                   | Special Topics in Computational Design       | 6     |
| <b>Independent Study</b> |                                              |       |
| 48-599                   | Independent Study                            | Var.  |

Minimum units required for the Minor in Computational Design: 54