COMPUTER SCIENCE MINOR (WEINBERG COLLEGE)

The program offers a minor in computer science for students who wish to develop a strong competence in computer science while majoring in another area.

**Course** | **Title** | **Prerequisites**
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MATH 220-1 & MATH 220-2 | Single-Variable Differential Calculus and Single-Variable Integral Calculus | 
or MATH 218-1 & MATH 218-2 & MATH 218-3 | Single-Variable Calculus with Precalculus and Single-Variable Calculus with Precalculus and Single-Variable Calculus with Precalculus |
MATH 230-1 | Multivariable Differential Calculus | or MATH 228-1 |
MATH 240-0 | Linear Algebra |

**Minor Requirements (9 units)**

**6 core courses**

- COMP_SCI 111-0 Fundamentals of Computer Programming ¹
- COMP_SCI 150-0 Fundamentals of Computer Programming 1.5
- COMP_SCI 211-0 Fundamentals of Computer Programming II
- COMP_SCI 212-0 Mathematical Foundations of Comp Science
- COMP_SCI 213-0 Introduction to Computer Systems
- COMP_SCI 214-0 Data Structures & Algorithms

³ breadths courses in 3 separate breadth areas (see below)

¹ Students without programming experience may want to first take COMP_SCI 110-0 Introduction to Computer Programming, ideally in the Python programming language.

**Breadth Courses**

Majors must take one course from each area. Minors must take one course from each of any three areas.

**Theory**

**Course** | **Title**
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COMP_SCI 335-0 | Introduction to the Theory of Computation
COMP_SCI 336-0 | Design & Analysis of Algorithms

**Systems**

**Course** | **Title**
---|---
COMP_SCI 322-0 | Compiler Construction
COMP_SCI 339-0 | Introduction to Database Systems
COMP_SCI 340-0 | Introduction to Networking
COMP_SCI 343-0 | Operating Systems
COMP_SCI 345-0 | Distributed Systems
COMP_SCI 350-0 | Introduction to Computer Security
COMP_SCI 354-0 | Computer System Security
COMP_SCI 440-0 | Advanced Networking
COMP_SCI 441-0 | Resource Virtualization
COMP_SCI 443-0 | Advanced Operating Systems
COMP_SCI 446-0 | Kernel and Other Low-level Software Development
COMP_SCI 450-0 | Internet Security
COMP_ENG 303-0 | Advanced Digital Design
COMP_ENG 346-0 | Microprocessor System Design

Students should begin the minor before the end of the first quarter of their junior year.