

# Requirements: Program in Computing

## Interdisciplinary

The Concentration in Computing integrates the study of computer science with computational strategies to engage with complex questions in the natural sciences, arts and humanities and social sciences.

If you like crossing disciplines to make new and insightful connections, consider a Concentration in Computing at Kenyon, which integrates the study of computer science with computational strategies to engage with complex questions in the natural sciences, arts and humanities and social sciences.

*The Kenyon College faculty voted to change from Kenyon units to semester hours. This change will go into effect for all students who start at the College in the fall of 2024.*

*Both systems will be used throughout the course catalog with the Kenyon units being listed first.*

## The Curriculum

The concentration in computing requires a total of 24 semester hours of Kenyon coursework.

COMP 118 (Introduction to Programming) serves as a foundation course for the program, introducing students to programming and other essential ideas of computer science. Students who already have substantial programming experience before coming to Kenyon should consult the program chair for an appropriate alternative.

Contributory courses are offered in studio arts, biology, chemistry, economics, environmental studies, the integrated program in humanities, mathematics and

statistics, political science, physics, and psychology. In these courses, computational methods form an essential means for investigating problems of various kinds.

Students in the concentration also take at least one intermediate program in computing course. The main focus of these courses is computational methods, which are developed or investigated extensively.

In addition to regular courses that are identified as contributory or intermediate, particular special-topics courses or individual studies in various departments may qualify in one of these two categories. Students who wish to credit such a course toward the concentration in program in computing should contact the program director at the earliest possible date.

The capstone course of the program is COMP 401 (Computing Seminar), a project-oriented, seminar-style course for advanced students.

## **Requirements for the Concentration**

### **Required Courses**

COMP 118: Introduction to Programming or PHYS 270: Introduction to Computational Physics

COMP 401: Computing Seminar

### **Contributory Courses**

ARTS 109: Creative Coding

BIOL 109Y–110Y: Introduction to Experimental Biology

CHEM 126: Introductory Chemistry Laboratory II

CHEM 336: Quantum Chemistry

CHEM 341: Instrumental Analysis

CHEM 370: Advanced Lab: Computational Chemistry

CHEM 374: Advanced Lab: Spectroscopy

ECON 205: Introduction to Econometrics

ECON 337: Portfolio Allocation and Asset Pricing

ENVS 261: Geographic Information Science

IPHS 200: Programming Humanity

IPHS 300: AI for the Humanities

IPHS 391: Interdisciplinary AI Frontiers

PHYS 103: Creating with Gadgets

PHYS 146: Introduction to Experimental Physics

PHYS 241: Fields and Spacetime Laboratory

PHYS 345: Astrophysics and Particles

PHYS 380: Introduction to Electronics

PHYS 381, 382: Projects in Electronics 1, 2

PHYS 385, 386, 387: Advanced Experimental Physics 1, 2, 3

PSCI 280: Political Analysis

PSYC 410: Research Methods in Human Neuroscience

STAT 106: Elements of Statistics

STAT 116: Statistics in Sports

STAT 206: Data Analysis

STAT 216: Nonparametric Statistics

**Intermediate Courses**

BIOL 230: Computational Genomics

COMP 218: Data Structures and Program Design

COMP 318: Software Development

COMP 348: Software System Design

COMP 493: Individual Study

MATH 258: Mathematical Biology

MATH 328: Coding Theory and Cryptography

MATH 347: Mathematical Models

STAT 226: Statistical Computing with R

STAT 416: Linear Regression Models

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