

CIS Curriculum Overview (Sample Path)

Preparation may be covered by high school courses and/or programming experience.

Prepare Before Entering Program:

Complete one or more of the following:
 CIS 105 Explorations in Computing and/or
 CIS 111 Intro to Web Programming and/or
 CIS 115 Multimedia Web Programming and/or
 CIS 122 Programming and Problem Solving (recommended)

MATH 112
 Elementary Functions

Students may begin the Introductory Computer Science sequence during Fall or Winter of their first or second year. This chart is a suggestion for moving through the curriculum requirements. Other course orders are possible.

Year 1 or 2: Introduction to Computer Science

CIS 210 Computer Science I	CIS 211 Computer Science II	CIS 212 Computer Science III
MATH 231 Discrete Math I	MATH 232 Discrete Math II	Calculus [Math 246, 251, or 261]

Three-term Laboratory Science Sequence in Biology, Chemistry, Physics, Geological Sciences, Geography or Psychology (see list on reverse side)

Year 2 or 3: Systems, Theory and Software Development

CIS 314 Comp. Organization	CIS 330 C/C++ & Unix	CIS 415 or CIS 425 or CIS 422 or CIS Elective
CIS 313 Data Structures	CIS 315 Algorithms	CIS 415 or CIS 425 or CIS 422 or CIS Elective
Calculus [MATH 247, 252, or 262]	Additional Math (see list on reverse side)	Additional Math (see list on reverse side)

Summer Internship
or Research Opportunity

Year 3 or 4: Tracks and Electives

CIS 415 or CIS 425 or CIS 422 or CIS Elective	CIS 422 Software Methods or CIS Elective	CIS 415 or CIS 425 or CIS 422 or CIS Elective
CIS Elective	CIS Elective	CIS Elective
MATH Elective or WR 320 or 321	MATH Elective or WR 320 or 321	(CIS/MATH Elective)

Math Core Requirements

Students must take Discrete Mathematics 231 and 232, and two terms of Calculus (I and II). In addition, students must take two of the following:

Additional Math

- MATH 233 Discrete Mathematics III
- *Choose 1:* [MATH 253 Calculus III OR MATH 263 Calculus with Theory III]

Additional Math

- MATH 341 Linear Algebra I
- *Choose 1:* [MATH 343 Statistical Models/Methods OR MATH 425 Statistical Methods I]

Laboratory Science Requirements

Students must complete one three-term sequence chosen from the following:

Science Course 1

Science Course 2

Science Course 3

- General Physics: PHYS 201, 202, 203
- Foundations of Physics: PHYS 251, 252, 253
- General Chemistry: CH 221, 222, 223
- Honors General Chemistry: CH 224H, 225H, 226H
- Geological Sciences: GEOL 201, 202, 203
- Geography: GEOG 141, *choose 2:* [GEOG 321, GEOG 322, GEOG 323]
- Biology: *choose 1:* [CH 111, CH 113, CH 114, CH 221, CH 224H],
BI 211, *then choose 1:* [BI 212, BI 213]
- Psychology: PSY 201, PSY 202, *choose 1:* [PSY 304, PSY 330, PSY 348]