**Lower-Division Core**
Courses taken graded:
- CIS 210, 211 and 212 -- Computer Science I, II and III.
- MATH 231, 232 -- Discrete Math I and II)

**Upper-Division Core**
Courses taken graded:
- CIS 313 -- Intermediate Data Structures
- CIS 314 -- Computer Organization
- CIS 315 -- Introduction to Algorithms

**Calculus and Additional Math**
Complete 8 graded credits from among these three sequences – courses taken graded:
- MATH 251, 252 -- Calculus I, II OR
- MATH 261, 262 -- Calculus with Theory I, II OR
- MATH 246, 247 -- Calculus for the Biological Sciences

Choose 8 credits from the following – courses taken graded:
- MATH 233 – Elements of Discrete Mathematics III
- MATH 253 – Calculus III OR MATH 263 – Calculus with Theory III
- MATH 341 – Elementary Linear Algebra
- MATH 425 – Statistical Methods I OR
  MATH 343 – Statistical Models/Methods

**Science**
Take 12 credits from one of the following options; these classes may be taken Pass/No Pass or graded:
- Physics: PH 201, 202, 203 - General Physics OR PH 251, 252, 253 - Foundations of Physics
- Chemistry: CH 221, 222, 223 - General Chemistry OR CH 224H, 225H, 226H - Honors General Chemistry
- Biology: CH 111 - Introduction to Chemical Principles OR CH 113 - The Chemistry of Sustainability OR CH 221 - General Chemistry OR CH 224 - Honors General Chemistry, BI 211 - General Biology, and BI 212 - General Biology OR BI 213 - General Biology

Choose 8 credits from the following:
- Psychology: PSY 201 - Mind & Brain, PSY 202 - Mind & Society, and PSY 304 - Biopsychology OR PSY 330 - Thinking OR PSY 348 - Music & the Brain
- Geography: GEOG 141 - The Natural Environment, and two from GEOG 321 - Climatology, GEOG 322 - Geomorphology, or GEOG 323- Biogeography

Note: Students are encouraged to complete the accompanying lab courses.

**Writing**
In addition to the university’s writing requirement, take one from the following (may be taken Pass/No Pass or graded):
- WR 320 Technical Writing
- WR 321 Business Communications

---

**Additional track requirements continued on back**
Major Requirements – Major Progress Review Form

Each major must meet with his/her advisor and file the Major Progress Review form after completing Intermediate Data Structures (CIS 313) and Computer Organization (CIS 314).

Business Information Systems Track Requirements (24 credits)

Complete three courses selected from the following. These courses must be taken graded:

- CIS 410 – Probabilistic Methods
- CIS 432 – Introduction to Networks
- CIS 433 – Computer and Network Security
- CIS 443 – User Interfaces
- CIS 445 – Modeling and Simulation
- CIS 451 – Database Processing
- CIS 452 – Database Issues
- CIS 453 – Data Mining
- CIS 490 – Computer Ethics
- CIS 399 – Unix System Administration (summer only)

Complete 8 additional upper-division CIS elective credits.

Choose electives from CIS upper-division courses, including Individualized Study Courses. CIS 399 and 410 must have regular class meetings, homework assignments and a prerequisite of 313 or higher.

A maximum of 8 credits may be taken from courses numbered 399-409, and a maximum of 4 credits in any one course numbered 400-409.

Complete 4 upper-division math elective credits.

Choose any math course with a prerequisite of MATH 252 or higher, or CIS 413, 420, 427, 410 Cryptography, 410 Probabilistic Methods. CIS courses used to complete mathematics elective cannot be used toward upper-division CIS elective credits.

Any student who receives two grades below C- in upper-division core courses, or three grades below C- in any upper-division courses, may be removed from the major.