Effective Fall 2020

Computer Security Track

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
- CIS 330 -- C/C++ & Unix
- CIS 415 -- Operating Systems.
- CIS 422 -- Software Methodology I
- CIS 425 -- Principles of Programming Languages

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
- 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
- Psychology: PSY 201 Mind and Brain and choose two from [301 Scientific Thinking, 304 Biopsychology, 305 Cognition, 348 Music and 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

Students must earn no grade below B- for automatic advancement to the upper-division courses. Students with at most one C in the lower-division core courses may submit a prerequisite override request form to continue in the major.

Additional track requirements continued on back
Computer Security Track Requirements (24 credits)

Complete the following course. This course must be taken graded:

- CIS 433 – Computer and Network Security

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

- CIS 432 – Introduction to Networks
- CIS 445 – Modeling and Simulation
- CIS 472 – Machine Learning
- CIS 490 – Computer Ethics
- MATH 458 – Cryptography

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.

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).

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.