Computer Science Minor – Concentration in Information Security

No catalog changes or curriculum approval will be needed since this follows the Computer Science minor in the 2011/13 catalog. This is a purely advisory minor.

2011/13 catalog requirements: The Computer Science minor requires at least 20 units of 200-level or higher coursework. The student MUST take CMPS 223, ten units of upper-division courses and one of the following: CMPS 215, CMPS 222, CMPS 224, or CMPS 295.

Courses required by the Computer Science minor are underlined in the following advisory curriculum.

Computer Science courses (26-30 units):

Required lower-division courses (10 units):
- CMPS 221 – Programming Fundamentals (5) Pre: See * note Every Term
- CMPS 223 – Data Structures and Algorithms (5) Pre: CMPS 221 Every Term

Required lower-division second course – Choose one from the following list (3-5 units). Choose the course that is a prerequisite to desired Information Security electives:
- CMPS 215 – Unix Programming Environment (3) Pre: none Fall
- CMPS 295 – Discrete Mathematics Pre: CMPS 221 F13, S14

Upper-division course – Choose one course from the following list (5 units). Choose the course that is a prerequisite to desired Information Security electives:
- CMPS 350 – Programming Languages (5) Pre: CMPS 223 Winter
- CMPS 376 – Computer Networks (5) Pre: CMPS 223 S13, W14

Information Security Electives – Choose two courses from the following list (8-10 units). At least 5 units of electives must be upper division to satisfy the minor requirements:
- CMPS 216 – Unix System Administration (3) Pre: CMPS 215 Ind. Study
- CMPS/MATH 475 – Applied Cryptography (5) Pre: See ** note F14
- CMPS 451 – Vulnerability Analysis (5) Pre: CMPS 350 2014/15

* CMPS 221 has a pre-req of mathematics readiness (exempt from entry-level mathematics or passed MATH 85). CMPS 221 also has a strongly recommended co-req of either CMPS 150 or CMPS 215.

Note: MATH majors cannot count CMPS 221 towards their minor since it is required for their major, but since there are six courses as part of this advisory minor, they would still have sufficient units to fulfill the minor requirements even without CMPS 221.

** MATH 475 has pre-reqs of CMPS 221 and either CMPS 295 or MATH 300. Students who wish to take this class should take CMPS 295 instead of CMPS 215 as the lower division elective.
Example Course Lists

These course lists are examples of how to coordinate the electives with the core courses. Other combinations are possible. Consult an advisor for more details.

Digital Forensics Focus (26-28 units):
- CMPS 215
- CMPS 216 or CMPS 476
- CMPS 221
- CMPS 223
- CMPS 340
- CMPS 376

General Computer Security Focus (26-28 units):
- CMPS 215
- CMPS 216 or CMPS 340
- CMPS 221
- CMPS 223
- CMPS 376
- CMPS 476

Vulnerability Analysis Focus (26-30 units):
- CMPS 215 or CMPS 295
- CMPS 216 or CMPS 340
- CMPS 221
- CMPS 223
- CMPS 350
- CMPS 451

Cryptography Focus (30 units):
- CMPS 221
- CMPS 223
- CMPS 295
- CMPS 376
- CMPS/MATH 475
- CMPS 476