

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

<u>CMPS 215 – Unix Programming Environment (3)</u>	Pre: none	Fall
<u>CMPS 295 – Discrete Mathematics</u>	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 340 – Digital Forensics (5)	Pre: none	S13, 2014/15
CMPS 476 – Adv. Net. & Computer Security (5)	Pre: CMPS 376	S12, S14
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