

Cybersecurity Specialization

Background

We currently offer a cybersecurity specialization, but few students are taking advantage of it: only **8 students** graduated in FY16–17 with this specialization, even though the first ACES class graduated that year and, in 2015, there were 150 students who had indicated interest in the specialization.

For this reason, it seems worthwhile to revisit the specialization and decide whether we want to reduce the requirements for obtaining it.

Current Requirements

The current requirements are 7 courses as follows:

- Required courses: CMSC 412 (operating systems), CMSC 414 (computer security), CMSC 417 (networks), CMSC 433 (programming languages), and CMSC 456 (cryptography).
- One of CMSC 411 (computer systems) or CMSC 430 (compilers).
- One of CMSC 420 (data structures) or CMSC 451 (algorithms).

Suggestion

The proposed change to the requirements reduces the number of required courses to 6, removes CMSC 420/451 (which seem least relevant), and provides more flexibility.

Proposal

Allow students to obtain a specialization in cybersecurity if they pass the following courses:

- CMSC 414 (computer security) and CMSC 456 (cryptography).
- Four courses from among CMSC 411 (computer systems), CMSC 412 (operating systems), CMSC 417 (networks), CMSC 430 (compilers), or CMSC 433 (programming languages).