Proposal to Revise 400-level Course Prerequisites
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Current prerequisite structure

Several courses in systems, programming languages, and HCI have only CMSC330 as a prerequisite. Those courses are:

- CMSC411
- CMSC412
- CMSC414
- CMSC430
- CMSC433
- CMSC434
- CMSC436

Several courses in theory and bioinformatics have only CMSC351 as a prerequisite:

- CMSC423
- CMSC451
- CMSC452
- CMSC474

All other 400-level CMSC courses have both CMSC330 and CMSC351 as prerequisites, except numerical analysis classes that are cross-listed with Mathematics and have neither as a prerequisite.
The problem

A significant fraction of students take 400-level courses before taking both CMSC330 and CMSC351. Neil Spring performed data mining on a dataset provided by the college for fall 2010, where around 25% of students taking 400-level courses that semester had not yet completed both CMSC330 and CMSC351 (and were registered for one of those concurrently, in almost all cases). The 400-level courses were spread across all the listed ones, with CMSC433 and CMSC451 at around 20 students in that situation, but other classes had non-trivial numbers of students in that situation (several around 10 students).

This creates a problem with students able to take multiple 400 level courses before completing CMSC330 and CMSC351. That makes it very difficult to remove them from the major if they go beyond the two attempts allowed for either CMSC330 or CMSC351 (or any other class). Students can only take a class more than twice by getting a dean’s exception.

This is part of the bigger problem of our large number of majors. Too many of our students do not seem to have the maturity to progress through the program in a timely fashion without the right incentives, and having stricter prerequisites for the 400-level courses will not allow them to delay taking either of CMSC330 or CMSC351.

The proposal

The proposal is to limit the number of 400-level classes with only one of CMSC330 and CMSC351 as a prerequisite. The specific proposal is for CMSC411 and CMSC433 to have only CMSC330 as a prerequisite and for CMSC451 and CMSC452 to have only CMSC351 as a prerequisite. All other 400-level CMSC classes will have both CMSC330 and CMSC351 as prerequisites.

This would not apply to numerical analysis classes cross-listed with Mathematics, which currently do not have either CMSC330 or CMSC351 as a prerequisite.