

## Education Committee

### Agenda

April 26, 2019

- 1) Hector: Delivery consideration for four-course data science certification (CMSC 64X courses)
- 2) Jan: Upper Level Concentration Requirement: ACES minor to be allowed?
- 3) Tom and Ramani: Survey results on grad visit day, and UMDCS grad program
- 4) Tom: Managing course numbers, and moving to permanent offerings
- 5) Ramani: A discussion on a slightly new structure for managing grad admissions
- 6) Dave L: Allow grad courses to count for undergrad degree area requirements

Here's a few more details on the agenda items:

#1 - Delivery consideration for four-course data science certification (CMSC 64X courses). We have been in conversation with companies, Capital One in particular, about options for their employees taking these our data science certificate courses. One consistent request we have heard is the possibility of offering versions of these courses on-site. We will discuss this possibility and vote on it, in the meeting. [More details within 24 hours]

#2 - Upper Level Concentration Requirement: ACES minor to be allowed? All students, regardless of specialization, must complete a minimum of 12 credit hours of 300 - 400 level courses in one discipline outside of Computer Science with an average of C- or higher. No course that is in, or cross-listed as, CMSC may be counted in this requirement. Only 1 independent study or experiential learning course may be used. Students who are pursuing a minor or a second major can use those credits in this area.

(from: <https://undergrad.cs.umd.edu/degree-requirements-cs-major>)

When the ACES Minor was started, it was thought that this minor might have too much in common with computer science to add breadth, so it is the exception to the rule above about any minor counting. ACES is the Advanced Cybersecurity Experience for Students run out of the Honors College. (ACES is a 2+2 program - there is a living learning program for the first 2 years and a minor for the second 2 years where students can do one or the other or both.) The philosophy of both the ACES LLP and the Minor is to provide a multidisciplinary approach to cybersecurity, therefore the courses are quite different and yet compliment the computer science major very well. ACES has courses in things like Cyber Policy, International Cyber Policy, Cyber Psychology, Incident Management, etc in addition to ones that are more related to CS, but not taught in CS, like Reverse Engineering and Penetration Testing. Since ACES now has the broad selection of classes, we should revisit the fact that it is not allowed to count toward the upper level concentration. Another consideration is that ACES has a \$5M Scholarship for Service program from NSF which allows students completing the ACES minor to receive a full ride scholarship while working toward completing their degree.

We will vote on this proposal.

# 3 - Survey results on grad visit day, and UMDCS grad program. We have invited students who were admitted to UMDCS grad school to fill out a survey indicating reasons why they chose another school over UMD. We have also invited students who attended Visit Day to indicate what they thought about it. We will present results and thoughts from these surveys, and invite comment and ideas for improvement.

#4 - Managing course numbers, and moving to permanent offerings. We are offering a variety of grad and special topics courses, and in doing so we are running out of course numbers. This is because we are not allowed to retire numbers easily, since doing so would otherwise preclude a student from taking two courses with the same number but very different content. A solution to this problem is to migrate courses to more permanent numbers. OTOH, we may not want to commit to a particular set of course topics too soon. Ideas and thoughts will be presented and invited.

#6 - Background: One of the requirements to graduate with Honors is to take an honors option of a 400-level class \*or\* take a grad class. The former is confusing, time-consuming for professors, and not very useful. Grad classes, on the other hand, give some of our top students the feeling of attending a small liberal arts school. Case in point: my undergrad security course is about 200 students and my grad security course is about 20. I can do things in my grad class that I can't imagine doing in undergrad (like per-student attack presentations).

Problem: Grad classes just count as generic 400-level credits for undergrads. They don't satisfy area (breadth) requirements. As a result, some of our top students can't fit grad classes into their schedules to graduate on time.

Proposed change: Let undergrads count up to N masters-qualifying grad classes towards area requirements. Do not change any other prerequisites (they still have to get professor permission, etc.), and don't let N be too large — our grad classes are not one-for-one replacements for undergrad classes; they both have their merits. Fortunately, even just N=1 or 2 would make a big difference.