

# Education Committee Meeting

## Friday, Nov 20, 2020

### Agenda

1. [DaveM] Permanent number for CMSC 389N [Discussion and possible Vote]
2. [Anwar/Mike] Making CMSC 330 a 4-credit course [Discussion and possible vote]
3. [Jan] Department's Broadening Participation in Computing (BPC) Plan [Information item]
4. [Jan] 1-credit course for TA Training [Information item]
5. [Ramani] Update on Graduate Admissions [Information item]
6. [DaveM.] Should advanced students be allowed to take intro courses to boost their GPA? [Discussion]

Regarding item 5, there will be a presentation and Q&A from 3:30 - 3:55pm by people from the Grad School.

### Additional Information:

1:

**CMSC389N** (Single Page Web Application Development With JavaScript) has been offered at least 14 times over the past 6 years and regularly attracts around 100 students. The proposal is to give it a permanent number.

**CMSC33?** (Title TBD)

**Prerequisites:** C- or better in CMSC 216 and CMSC 250

**Credits:** 3

**Course summary:** This course provides an introduction to the development of single page Web-based applications (SPA's) using JavaScript for both the front end client and back-end API/service. We will be developing applications using a micro-service architecture pattern and discussing throughout the evolution of web application architectures and current trends.

2:

**CMSC 330** has 150 minutes of lecture per week, but also a discussion section on top of that. It is also pretty heavy in terms of workload: 6-7 programming projects and 3 exams including the final. The semester in which students take 330 and 351 is pretty severe in terms of workload, and it makes sense to have the credit-load reflect that.

**CMSC330:** Organization of Programming Languages Syllabus Repository

**Credits:** 3

**Prerequisite:** Minimum grade of C- in CMSC250 and CMSC216.

**Course summary:** A study of programming languages, including their syntax, semantics, and implementation. Several different models of languages are discussed, including dynamic, scripting (e.g., Ruby, Python) functional (e.g., OCaml, Haskell, Scheme), and memory safe systems programming (e.g., Rust). Explores language features such as formal syntax, scoping and binding of variables, higher-order programming, typing, and type polymorphism. Introduces finite automata, context free grammar, parsing, lambda calculus, and basics of security attacks and software security.

3:

Here is a [link](#) to the Department's BPC document.

4:

Proposed course description:

**CMSC 371:** Fundamentals of Teaching CS

**Credits:** 1

**Prerequisites:** Minimum grade of B- in CMSC131; or permission of instructor.

**Restrictions:** Must be planning to work as a TA for CMSC; or permission of instructor.

**Course Description:** This is a 300-level 1 credit course for any student planning to become a TA or currently in their first semester of being a TA. Topics include legal and logistic issues of being a TA as well as pedagogical and curricular portions of being a TA in CMSC.

1. The objective of this course is to raise TA awareness of:
2. their legal obligations with FERPA and mandatory reporting.
3. their responsibilities to the instructor and to the students and the professional conduct expectations.
4. the classroom and information management tools available.
5. the differentiated instruction methods they should be applying.
6. the office hours, grading and recitation teaching processes, methods and tools that should be applied in a TA position.
7. the biases and impacts in the teaching environment.

**Possible Instructors:** Jan Plane; Dave Mount; Evan Golub

5:

[From Larry Herman:] A major issue with the department's intro course sequence is that there are far too many students taking these courses (particularly CMSC 132 and especially CMSC 131) despite knowing much or all of the course material already. There is a small number of advanced students who wish to go back and repeat CMSC 131 in the same semester, presumably to boost their GPAs.

Why this is a problem:

1. It's a waste of time for advanced students to be repeating CMSC 131/132.
2. We need the seats in the intro courses for students who really need to take them. (Since students register by credit- those with more credits register earlier- those who are repeating these courses typically are able to get seats before those taking them for the first time can register.)
3. Although it's just a small number of students who repeat these courses who are multiple semesters past taking them, it's nevertheless unfair for students taking these courses for the first time to be competing against more advanced students with more (often significantly more) experience. Even if it's a small number of students it's demoralizing for novice students to be competing against those whose knowledge and experience is already far greater.

We need to be able to allow students who legitimately need or want to repeat the intro courses to do so. If a student wants to take advantage of the "freshman forgiveness" policy they should be allowed to, but it is suggested that they only be given one semester past any of these courses to repeat it.

A proposal to address this could be to add these restrictions to courses:

1. Add to CMSC 131: "Not open to students who have successfully completed CMSC 132."
2. Add to CMSC 132: "Not open to students who have successfully completed CMSC 216 and 250."
3. Add to CMSC 216 and 250: "Not open to students who have successfully completed CMSC 330 and 351."

This would give students one semester past a course to repeat it. For example, with these restrictions a student who passed CMSC 131 but perhaps with a mediocre or barely passing grade could repeat it before taking CMSC 132, or could repeat it concurrently with CMSC 132, but not after completing CMSC 132.

(Of course like other departmental policies, a student who has a good reason for an exception could request one.)