

**EL CAMINO COLLEGE MATHEMATICAL SCIENCES
COMPUTER SCIENCE ADVISORY BOARD MEETING**

November 4, 2016

Present: Leslie Aaronson, Dave Akins, Edwin Ambrosio, Carl Broderick, Kimberly Davis, Greg Fry, Massoud Ghyam, Arturo Hernandez, Ray Huffacker (Raytheon), Kevin Judge (John Deere), Matthew Mata, Kevin O'Connell (Security Pen-Testers), Thong Nguyen (Internet Brands) Solomon Russell, Greg Scott, Jacquelyn Sims, Satish Singhal, Dave Smallberg, Ralph Taylor, Claudio Vilchis (ITS)

REVIEW MINUTES

M. Ghyam motioned to approve the minutes from the 5/20/16 CS Advisory Board Meeting. A. Hernandez seconded the motion. The minutes were unanimously approved.

CTEA APPLICATION

Computer Science is considered a CTE Program. Because of this, the department can apply for various grant money.

The department will apply for two laptop carts through the CTEA Grant. We cannot afford to lose an entire lecture room to convert it into a lab. The laptop carts allow for a room to be used as either a lecture or a lab.

C. Vilchis discussed ITS' plan to enhance the wireless throughout the campus starting in February 2017.

Security for laptop carts is something that will need to be discussed.

Battery life is also a concern. If labs are scheduled back-to-back, the laptop battery may not be able to sustain. S. Singhal recommended purchasing laptops with premium battery life.

C. Vilchis recommended working with Thurman Brown regarding models. He also recommended discussing what level of support ITS can give (i.e. a virtual environment to maximize memory).

PROGRAM PLANS

Program Plans are recommendations from the last Program Review. Some of the recommendations have been met, and some will be moved forward to request funding.

The department will continue with the recommendation for a full-time CS faculty member.

A. Hernandez discussed the budget cut in MESA. MESA works with students in the STEM areas that plan to go to 4-year universities. There has been an increase in CS majors, so the department will forward the recommendation for CS Facilitators.

An additional recommendation made is the latest version of Visual Studio

S. Singhal recommended that the computers in labs MBA 120, 220 and 320 be replaced with Windows 10.

Recommendation to also set up a routine cycle to update the equipment in the labs.

Dean J. Sims will forward recommendations to the full division where they will be prioritized.

NEW COURSE PROPOSAL – CS 45 COMPUTER PROGRAMMING IN ANDROID FOR COMPUTER SCIENCE

Dean J. Sims discussed the outlines for two new courses.

The Business Division is challenging the CS 45 Android course. We are proposing an Android operating system using Java. The student demographic for our Android course is completely different from the Business Android course.

Dean J. Sims discussed that the vocabulary in the course description sounds similar to the CIS 136 course.

S. Singhal discussed another difference between the two courses: the CIS course is copying and pasting from existing coding while CS 45 includes developing code, testing and debugging. CIS 136 does not require a programming background. The two courses will not be in competition with each other. We are not looking at the same target group of students.

M. Ghyam recommended changing the name of the course to “Advanced Java Programming in the Android Environment.”

D. Smallberg recommended that we point out how their outline does not fit their course description.

E. Ambrosio recommended bringing documentation comparing the target audience for CS 45 to CIS 136.

NEW COURSE PROPOSAL - CS 0 THE BEAUTY OF COMPUTER SCIENCE PRINCIPLES

CS 0 is designed to reach out to people that are intimidated by CS or may not know if they want to learn about it. The idea behind this course is to offer it to students that are not interested in STEM. Also, the goal is to increase the number of underrepresented students in this field.

CS 0 is an initiative, which is pushed by National Science Foundation. There are seven big ideas in this course, some of which include, programming, the Internet, big data, etc.

CS 0 provides an overview of CS and the social impacts of computing and ethical issues. It is a high level view of computing and there is a variety of programming.

The department will need to figure out a clear path between this course and the other courses we are offering.

S. Singhal discussed that he is planning to propose an SQL database course that could be a transition after CS 0. SQL does not require much math, but it requires knowledge of computer science principles.

CS 0 looks at the social implications in privacy, copyright law, etc.

R. Huffacker recommended that CS 0 be a companion course. It would not be ideal to replace the Trigonometry requirement with CS 0, because in order to be a competent software engineer, a person will eventually need Trigonometry plus more.

PROPOSAL BY KEVIN O'CONNELL- PROACTIVE CYBER-SECURITY ROLE FOR EL CAMINO COLLEGE

K. O'Connell proposed the CS Department to look into secure coding.

Secure coding lifestyle is a huge topic. It includes how to keep people from breaking into your browser, how to find ports, scan and domain. Instead of writing code, you're breaking code.

There are a number of things the CS Department can do to support this topic, like host cyber security activities or create a club.

M. Ghyam wouldn't mind being an advisory for this club.

E. Ambrosio discussed that there is a CIS instructor teaching an ethical hacking class here so this club might be an opportunity to do some collaboration and bridge the gap.

T. Nguyen recommended the course to be integrated into a UNIX course or a more advanced course.

Dean J. Sims discussed possibly making this into a Cyber Security certificate where Business and Math could join together. The goal is to be more collaborative with Business and this may be an opportunity.

CS 12 FULLY ONLINE

CS 12 is currently being offered as a hybrid course. Students often think the course is fully

online because the system doesn't distinguish the course as hybrid. The enrollment is fairly strong but when students find out there are in person meetings, students drop.

CS 12 is a high level course and the students are motivated to do the work on their own. M. Ghyam conducted a survey with current students. 53% want the class fully online, 27% want the class to be a hybrid, and 20% would like the course to be on campus fully.

We are looking at the possibility of switching CS 12 from hybrid to fully online.

G. Scott recommended the class be online with three face-to-face meetings for orientation, midterm and final.

VOTING

A vote was taken for the following topics:

- Applying for two laptop carts through the CTEA Grant – unanimous approval.
- Moving forward with CS 45 Computer Programming In Android For Computer Science – unanimous approval.
- Moving forward with the CS 0 The Beauty Of Computer Science Principles – unanimous approval.
- Converting CS 12 to a fully online class – unanimous approval.

CS HIGH SCHOOL OFFERINGS

K. Davis, one of our new adjunct instructors, is teaching CS 1 at Redondo Union High School this semester. There are 14 students enrolled and a majority of them have taken Java.

The department will offer CS 2 at the same high school during the spring 2017 semester.

We have received many requests from other high schools to offer courses on their campus.

HIRING PRIORITIZATION FORMS AND CS JOB DESCRIPTION HIRING

The department did request to hire two more full-time CS faculty.

The ratio of FT to PT is 57% to 43%. The state requirements are 75% FT to 25% PT.

Since fall 2014, the number of students has increased dramatically. We have 30% growth in FTES.

Dean J. Sims presented this information at the hiring meeting.

Our capacity issues hinder our growth.