

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

MINUTES
May 18, 2018

Present: Dave Akins, Edwin Ambrosio, Datuki Bonner (Raytheon), Carl Broderick, Massoud Ghyam, Arturo Hernandez (MESA/STEM), Ray Huffaker (Raytheon), Kevin Judge (John Deere), Winston Kwong (John Deere), Daissa Lee, Kevin O'Connell (Security Pen-Testers), Thong Nguyen (Internet Brands), Michael Perry (Student Rep), Catherine Schult Roman, Greg Scott, Jacquelyn Sims, Satish Singhal, Dave Smallberg (UCLA), Nidhi Tilak, Jon Wada (Raytheon)

MINUTES FROM NOVEMBER 3, 2017 MEETING

S. Singhal motioned to approve the minutes from the 11/3/17 CS Advisory Board Meeting. M. Ghyam seconded the motion. The minutes were unanimously approved.

CTEA CART UPDATE

The CS Department was awarded HP Zbooks last year through the CTEA grant. The laptops will help allow us to increase our section offerings since all of our courses include labs.

MATH AND COMPUTER SCIENCE (MACS FOR CS)

The CS Department purchased a classroom set of Mac Book Pros through a campus wide fund. This will allow students to have access to more than one platform.

M. Ghyam proposed a course on an Apple programming language called Swift.

Mac computers use can be expended to every programming language.

J. Wada discussed the importance of embedded language. Companies want employees who have a diverse understanding of computer programming.

D. Smallberg discussed how people generally go into other programming languages easier and more quickly if they understand C++.

NSF GRANT WITH MONTEREY BAY

The NSF Grant partnership with CSU Monterey Bay (CSUMB), Hartnell College and CSU Dominguez Hills (CSUDH) is a guided pathway that would allow students to receive a Bachelor's degree in CS within four years.

This CS Pathway began at CSUMB and Hartnell College where it has seen huge success. Originally, students were completing their Bachelor's degree within three years including summer courses. Now, we have it for four years so students can do summer internships.

The NSF grant covers financial need for incoming freshman students so they can focus on completing their degree requirements without having to work.

ECC submitted the application for the grant. If we are accepted, we will be in partnership with CSU Dominguez Hills (CSUDH). Students in the program would take courses at ECC and CSUDH.

HIRING UPDATE

The CS Department was awarded the opportunity to hire one full-time faculty.

There has been a 300% increase in CS faculty within the past four years.

HIGH SCHOOL REQUESTS/DUAL ENROLLMENT

C. Schult Roman provided an update on dual enrollment for CS.

We offered a CS course at Redondo Union high school for the students that already passed the AP Java exam.

Currently, we have four requests to offer CS classes in high schools throughout South Bay for the fall semester. However, scheduling to find instructors to teach these high school offerings becomes difficult.

Some high schools are beginning to introduce CS Principles as an AP course.

CURRICULUM (EDWIN AMBROSIO)

CS 23 has been approved and will be offered during the spring 2019 semester at the earliest.

CS 7 will be offered during the fall 2019 semester.

New courses in programming languages on Matlab, Cloud Computing and Swift are on the radar to be put into the pipeline.

It was recommended that Cloud Computing be integrated into one of the current CS classes instead of creating an entirely new course dedicated to just that language.

Cloud Computing is the way of the future, and CS should focus on the principles behind it. J. Wada recommended that virtualization and distribution be the focus on the underlying teaching component of this language.

Dean J. Sims highlighted the department's goal of increasing female and underrepresented students. Calculus requirements can sometimes be a deterrent. However, lowering the math requirement could possibly effect articulation.

The math prerequisite helps teach problem solving skills which is necessary for CS.

There is also a Physics requirement. E. Ambrosio used physics trajectory in his former industry positions so this is a useful requirement. Some industry jobs are more business oriented, so the usefulness of the requirements depends on the career an individual is pursuing.

AB705

The Chancellor's Office is now mandating that we can no longer place students into remedial math courses.

Currently, incoming students take a placement test, and about 70% are placing below transfer level. Statistics show students often get caught in these classes and never make their way out of the sequence to a transfer level course to graduate.

The state mandate is telling community colleges that we can no longer do placement tests but to consider a student's high school grades and highest level of math. The new mandate is being interpreted in many different ways.

This mandate effects CS because there are math prerequisites for CS.

There has been discussion as to the necessity of the Calculus prerequisite for a CS degree. R. Huffaker discussed the idea of a full stack Engineer, and how they will need to know Electro Optical systems so Calculus would be required for this kind of position. D. Smallberg discussed that even Discrete math would be helpful, but Calculus isn't necessarily essential.

D. Akins discussed that the Calculus was added as a requirement because if students want to transfer to a UC, they are required to take Calculus. It wasn't so much that they needed the Calculus for CS classes, but that it was for when they go to four-year school.

PROGFEST UPDATE

Our CS team won first place at ProgFest this year. CS students on this winning team included Michael Perry, Theodore Lee, and Emerson Jacobson.

M. Perry mentioned that ProgFest is a great opportunity for students to experience something like a real competition with real challenges. It gave practical experience and helped expand a student's vision.

CS HIRING QUESTIONS FOR FINAL INTERVIEW

ECC President allows us to submit questions for final interviews. Send M. Maaza any questions that might be appropriate for the final round of CS interviews.

CS CERTIFICATE UPDATE

ECC does not currently have a CS degree, however, students can receive a certificate.

The state of California came out with ADT's (Transfer Associate Degrees) and mandated that if a college were to have an A.S. degree, they also should have the ADT. The ADT are in collaboration with the CSUs in that if a student receives an ADT degree there is an automatic acceptance into a CSU. However, with the ADTs came regulations that would have required a substantial change to the curriculum and this would have affected the articulations especially those with the UCs.

After reviewing the amount of students receiving degrees in CS, it was decided that the degree would be inactivated and students could receive a certificate instead.

Recently, we learned that there are several community colleges that still have their AS degree and not their ADT degree. The department is now discussing the option to bring back the AS degree.

ACM CHAPTER (SATISH SINGHAL)

The ECC ProgFest is tomorrow, May 19, 2018.

ACM will hold interview workshops on 5/26/18.

ACM is also planning a campaign to increase female and underrepresented students in CS. Campaign ideas include talks from women in the industry to raise awareness to female students.