

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

November 3, 2017

Present: Dave Akins, Tahir Aziz (LBCC), Edwin Ambrosio, Carl Broderick, Thurman Brown (ITS), Kimberly Davis, Arturo Hernandez (MESA/STEM), Kevin Judge (John Deere), Alvaro Monge (CSULB), Kevin O’Connell (Security Pen-Testers), Thong Nguyen (Internet Brands), David Padlipsky (Student Rep), Tim Parker (Apple), Michael Perry (Student Rep), Solomon Russell (via conference call), Greg Scott, Jacquelyn Sims, Satish Singhal, Dave Smallberg (UCLA), Nidhi Tilak, Jon Wada (Raytheon)

REVIEW OF MINUTES

S.Singhal motioned to approve the minutes from the 5/19/17 CS Advisory Board Meeting. G. Scott seconded the motion. The minutes were unanimously approved.

CTEA FUNDING AWARD AND RECOMMENDATIONS FOR FUTURE REQUESTS

Career Technical Education Association (CTEA) provides many institutions with money to support programs that provide students with hands-on training.

The CS Department applied for funding last year, and was awarded \$87,000 for a laptop cart that could convert any classroom into a lab. We chose laptop carts because we don’t have enough classroom space to designate one full room to a computer lab.

The laptop computers will help us to increase our section offerings and add new courses. Based on the classes we are currently offering, we’re looking at using the carts for 2-3 lab sections in the morning, and 2-3 lab sections in the afternoon.

In our Program Review, we will request computer replacements on a regular cycle because technology moves so quickly. Also, there is a lot of “wear-and-tear” on the machines because of the heavy usage.

Dean J. Sims discussed that the department is still currently exploring options on what to apply for the next CTEA cycle. We need to finalize this information by next week so suggestions are welcome.

HIRING PRIORITIZATION

In order to hire more full-time faculty, each division must go through a process where all the divisions compete and write a proposal on their specific faculty needs. This year, the CS Department was placed in the top 20 for faculty need, and usually the top 20 are granted a full-time faculty hire.

We need more full-time CS instructors because of the growing demand for CS classes. We currently have four full-time CS professors. Less than half of our CS class are taught by full-time faculty.

During the fall 2017 semester, our fill rate for CS classes was at 96%.

HS OFFERINGS

Kim Davis taught an ECC Computer Science course at Redondo Union High School and discussed her experience. Students already had Java programming experience, but they didn't know the fundamentals.

We received offers from five of our local high schools requesting CS courses to be offered on their campus.

This fall semester, we had to cancel the course scheduled at Redondo Union High School due to low enrollment as the high school couldn't find a large enough group of students for the course.

We offered four sections of Python this semester, but only one section filled. We are looking at ways to better advertise the course.

Our Articulation Office is also working on ways the course can be transferred to more universities.

CURRICULUM UPDATES AND CIS CHALLENGE

For the past year, faculty in the CS Department have been working on two courses that have now been forwarded to the campus curriculum committee for approval.

These courses include:

1. CS 7 - CS Principles is a course that College Board and NSF are endorsing to be offered at high schools and colleges. CS 7 will follow the Beauty and Joy of Computing curriculum at Berkeley. The course is meant to be a first-year class for students with non-majors that have an interest in CS. (See attached CS 7 course outline of record)

2. CS 23 – Advanced Java Programming and the Android Operating System. This course is a “reactivation” of a course that hasn’t been taught in 12 years. The former title of the course was Advanced Programming in Java. the Android Operating System was added to the title to better represent the advances in the field of Java and to catch the attention of CS students who are looking for some exposure to Android. Other updates were included in the course again because of the stalemate in offering this course for 12 years. The course outline of record was revised and updated to make it current. (See attached CS 23 course outline of record)

As part of our curriculum process, we consulted with the Computer Information Systems department which is in a different division than Computer Science, and the CIS department is challenging the CS 23 (Advanced Java Programming and the Android Operating System) course expressing that the content has significant overlap with their mobile apps course, CIS 136 (Building Mobile Apps). While we have responded to their concerns (see attached CIS concerns on CS 23 and CS response), we are still moving ahead with both of our courses going through the campus wide curriculum committee for voting and approval. We expect that we will have to present our case to this committee, and that the other department may continue with their challenge.

Our strategy is to explain why there is no overlap, and where it may be considered overlap, that the focus of the course is quite different.

CS Advisory board members are welcome to attend this meeting on 11/21/17 at 2:30pm to provide support and input. A. Hernandez recommended a student also attend and explain why they would take the CS course versus the CIS.

Summary of discussion from advisory board regarding CIS challenge of CS 23:

- 15-20% of CS 23 will focus on mobile applications. 85% of the inactive CS 23 course will be taken. Java Beans will be replaced with Android.
- J. Wada recommended adding Hadoop, Cassandra and Apache to get courses through curriculum.
- Dr. Monge discussed that by choosing to reactivate a course this may have decreased the departments chances, especially the point about making database programming. He recommended the department focus the course on being an advanced Java. He also recommended cleaning up the verbiage so it is easier for College Curriculum Committee to understand.

- M. Ghyam highlighted that the clientele taking the CS course is completely different from the CIS clientele and the requirements are also different.
- Dr. Smallberg recommended the use of an analogy during the CCC meeting to compare the CS course against the CIS course. This will allow more people to relate since CCC may not understand computer languages. Additionally, Dr. Monge suggested the department provide a demonstration by giving the CCC a sample code of what students will do in CS and then give an example of what CIS students will do.
- Kevin O’Connell discussed that Android be removed from the title if it is only 15% of the class.
- M. Ghyam explained that Android is in the title because students will look for this when searching for classes.
- E. Ambrosio added that the objective of the course is for students to learn advanced Java techniques in different areas, one of them being mobile apps. The department’s goal is to make sure students are able to meet the needs of industry.
- Dean J. Sims will send an email follow up regarding the title of the course, what topics to take out and anything else that the department can fix without changing the integrity of the course.

CIS Courses being Challenged by CS

Hours after we responded to CIS’s challenge of our course, we received information about three new courses they are proposing for curriculum. (See course outlines attached)

1. CIS 84 (MYSQL Database programming for the Web)
2. CIS 132 (HTML, CSS3 and Wordpress)
3. CIS 137 (Computer Networking Fundamentals)

While we had given them a month to review our course before our meeting with the college curriculum committee, their timing only provided us a few days to review. Dean J. Sims informed the curriculum chair that we needed more time to review and consult on these courses, so the CIS courses were pulled out of the curriculum queue.

The courses they are proposing appears to have significant overlap with our CS 12 course (Programming for Internet Applications Using PHP, JavaScript, and XHTML). There is a lot of design and algorithm from a CS point of view.

Dean J. Sims plans to try and schedule a meeting with the two departments so these issues can be resolved before going to the campus curriculum committee.

However, if the two departments cannot resolve, we are seeking the advisory board's support at the CCC meeting on Tuesday, Nov. 21, at 2:30 pm.

ACM CHAPTER REPORT (SATISH SINGHAL)

Last year, ACM was part of a programming contest. Also, students went to ProgFest and one of our teams won second place.

ACM took students to two different industry conferences, where Professor Solomon Russell was judged as best CS instructor for 2016.

Kevin O'Connell gave a talk at an ACM event.

S. Singhal recommended that CS Advisory members give a talk on industry specific courses to gauge student interest. This can help with curriculum development for the future.

INDUSTRY WEBINARS (KEVIN O'CONNELL)

Kevin O'Connell recommended that the CS Advisory Board create a plan to have students go out and look at industry trends to find out what companies are doing. The industry is offering opportunities for students but students aren't looking for it.

Students can watch webinars on www.brighttalk.com to see more about what is going on in industry.

PUBLIC RELATIONS FOR YOUR COMPANIES/INSTITUTIONS

Dean J. Sims would like to recognize CS Advisory Board members with their groups, institutions or companies. The information and advice we receive from members is invaluable, so contact Dean J. Sims if there is a way to highlight your work with ECC so your company can recognize this.

CS HONORS COURSE

M Ghyam discussed the Honors Program. In order for a current CS course to be designated as "honors," an extra component would need to be added to the course.

The department has been thinking of offering one honors section every year or each semester depending on demand.