Division of Mathematical Sciences
Department of Computer Science
Computer Science Advisory Board

Facilitators: Marlow Lemons (Dean)
Gerson Valle (Associate Dean)

Date: May 9, 2024
Time: 1:15pm - 2:15pm

Location: MBA 103 (Hybrid)

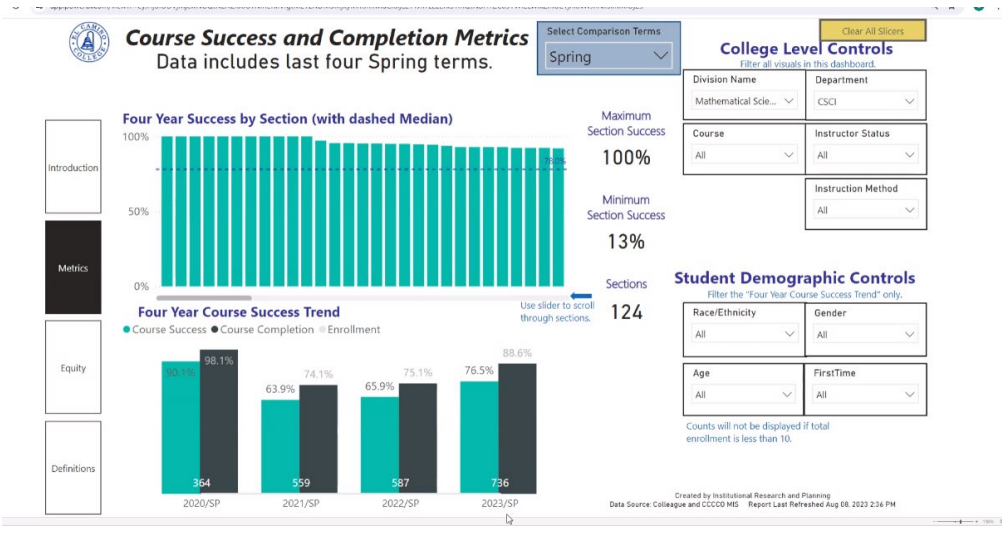
Attendees:

X	Edwin Ambrosio	X	Solomon Russell
X	Jose Anaya	X	Satish Singhal
X	Rafael Diaz	X	Marcello Magno
X	Linda Forester	X	David Smallberg
X	Rob Gould	X	Jonathan Arenberg
X	Arturo Hernandez		
X	Mitch Middler		
X	Victor Matos		

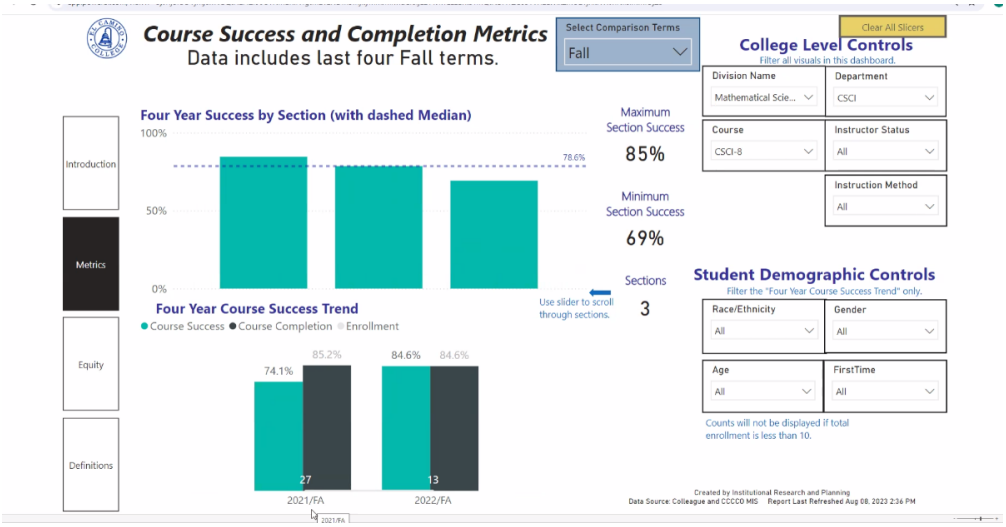
Minutes:

1. Welcome and Introductions — All

2. Statistics on Computer Science courses — G. Valle
    a. Enrollment and Success
        a. Fall 2019 – 2022
        b. Took a little bit of dip during the pandemic but numbers started to increase after.
        c. Big increase last spring.
        d. Online courses increased.
        e. We've been asking for more faculty.
            i. We got Mitch Middler.



b. Success Rates
    a. We did start our CS9 class but we still don't have numbers yet because last semester was the first time we offered it.
    b. These are CS8 rates.
    c. Enrollment has decreased a little bit but we are still trying to build that Data Science program.
    d. A lot of it is going to go through the dual enrollment courses and agreements with the high schools that we have feeding both into our campus.



3. Some Updates
    a. NSF Warrior-Toro Computer Science cohort
        a. Daniela not in meeting.
    b. Faculty Hiring
        a. It's been 2 years that we did the faculty review and we've been acting on the recommendations that were created.
            i. One of the items was hiring.
            ii. We hired a full time faculty.
            iii. This year we tried to hire another full time faculty but because of current budget situation with our school, that position is rescinded.
            iv. Trying next year to see if we can get another FT faculty.
            v. We are addressing the concerns from the recommendations that will raise from our external review.

c. Annual Plans
    a. Instructional laptops got approved to purchase them now.
    b. Funded by Strong Work Force.
        i. Anyone that has CTE program computer science, we can request funds through this.
            1. They provide funding for instructional equipment.
            2. Anything that can be used in the classroom, they have support.
    c. If you have any particular specs, let's get them all together to get them ordered.
    d. Some want Macs, some want PC's.
        i. Check if IT supports Macs.
            1. If they don't, they'll probably ask us to get a warranty with technical assistance.
d. CS Lab 320 trying to make it Hi-flex.
    a. Have them work on it this summer to put in the camera and microphone.

4. Student Requests: Industry Visits — M. Lemons
    a. M. Lemons spoke with two classrooms of CS students and asked them what would be most beneficial for you to stay motivated to major in computer science and transition to a university.
        i. Students said visits. Industrial Visits to CS companies and universities.
            1. M. Lemons asked if we can make this our goal for this upcoming year.
            2. We will provide the transportation.
            3. S. Singhal to provide contact person from San Diego Super Computer Center for M. Lemons to write formal letter to visit.
                a. Tour is about an hour and after that they can visit UC San Diego.
            4. Maybe we can set up a session like a panel of data scientist that can come and speak.
            5. Maybe Northrup might have a STEM day where they can invite us.
            6. Those of you who are industry or university partners, let's make this the goal for this year.

7. These tours/visits would drive the spark for students to pursue.
8. Reach out to M. Lemons if anyone can make that happen.

5. Approval of the Data Science Certificate of Achievement — S. Russell
    a. The paperwork is in process. We have an action item we all have to partake in.
    b. We have to get approval with the advisory committee.
    c. Send the documentation to LARC and get their approval.
    d. Then once we get LARC's approval, we send it to chancellor's office to official become a CTE program.
    e. We decided to start at a certificate level.
        a. 2 Data Science courses, CS8 and CS9.
            i. CS8 is also offered at UC Berkeley.
            ii. We've offered CS8 since spring 2021.
            iii. CS9, practical Data Science, is being offered this semester. S. Russell and a former student, who got her Master's degree in Data Science Communication from USC, teach the course.
                1. They are putting this class together using some materials from an upper division course from UC Berkeley and UC San Diego's course.
            iv. It's important to give students the ability to actually work with industry standard tools here in the community college.
            v. We also have 2 classes of programming CS14 is in Python, CS3 is in Java.
            vi. We also have CS1 and CS2 which may not be as applicable to some Data Science stuff but students get background of programming.
            vii. We have Math 150, largest Statistics class offered here on campus along with English. Com. 180 course which is more data driven.
            viii. We also have the psychology and sociology versions of our statistics courses.
            ix. This is our version, which is 20 or 21 units.
            x. We have it passed through the curriculum committee here on campus and now we are in the process talking to the regional partners and get their approval to be able to offer it possibly as early as fall 2025.

xi. We have to vote to approve or not approve our Data Science proposal for a Data Science certificate of achievement.
xii. M. Lemons asked if there were any questions before voting.
    1. How long to get the certificate?
        a. Because some of these courses build on other ones, there's some pre-requisites we laid out. The pathway is 2 years.
    2. It's for anyone?
        a. S. Russel stated yes, we might have a student who already has a Master's degree then come and takes the foundations course because they want to be exposed to it.
            i. This is one of the reasons why we want to keep it without having a calculus basis to make it more accessible.
        b. R. Gould mentioned the enrollments for Data Sciences are still going up despite the little dip the technology industry is taking this year. Still the demand is strong.
        c. R. Gould also added they are also looking at the notion of when to do the linear Algebra.
            i. In additional to the engineering school, the math department and stats department have a joint data theory major.
                1. Math behind Data Science that has a lot of computation a lot of math but it's very heavy

on the linear Algebra.

d. A. Hernandez added if it's possible to bring back having the courses separate, based on his review on other colleges and working on other projects off campus.

xiii. We are creating a course where we're introducing them to Skyket, Pandas, also they're doing a presentation to present data they create.

xiv. Advisory Vote:

1. Motioned by Edwin Ambrosio and seconded by Russell Solomon.
2. The motioned passed unanimously.

6. Upcoming and Current Grants — S. Russell

a. NSF-ITYC Grant (pending)- $600K

a. Support for education and employment in Data Science.
b. S. Russell is very hopeful it will go through.
c. S. Russell is pi and Emma Niu, Math faculty, is co-pi.
d. R. Gould and Dr. Christine Own at UCLA has also agreed to be advisors for the project.
e. We could possibly use another industry advisory.
f. Pathway program for our local school districts.
    i. Sentinella Valley Unified High School District and Torrance Unified.
    ii. We would teach CS8 as a dual enrollment course for those high school students.
g. We said we were going to collaborate with our industry partners to provide data sets for CS9 course.
    i. Those data sets can be things they can work on, like claim things, communicate. There's a lot of different ways we can go.
    ii. Have industry events.
        1. Meet outside of campus. Some kind of meetup (data and donuts).
        2. Maybe meet 3 times a year.
        3. A way to build the community between our student and then also local industries.
    iii. NSF asked us to start the IRB process.

1. S. Russell is hopeful that means that they're going to approve us.
2. J. Anaya was very useful and helped us put together the grant and connecting us with local industries and getting commitment that they will work with us.

b. Enhancing Data Science- $350K
    a. We got last year.
    b. We are the lead institution, Berkeley is a sub award.
    c. We were the only community college to be the primary grant recipient.
    d. We are working with graduate and undergrad students to create Jupiter notebook.
        i. Little modules that we're going place in other disciplines.
        ii. We have 2 faculty that are working with it right now.
            1. A Chemistry faculty member.
            2. A Childhood Development faculty member.
            3. They are working with Berkeley students to create a day's lesson or 2 days lessons where students will go through their notebook.
                a. One is on pollution level.
                b. We also have professional development.

c. ZTC Data Science Pathway- $200K
    a. Zero textbook cost.
    b. Student's that take our classes won't have to pay for expensive books.
    c. They will take a CS1 course and will have resources that are free.

7. Other Announcements All
    a. J. Anaya stated we got 3 funded programs that basically are targeted toward industry employers and benefit our students.
        a. Learning aligned employment program.
            i. Subsidizes the ability for our students to go work with you.
                1. As long as they're taking 6 units, it covers 50% of the salary you might pay them.
        b. Internship/externship funded by the Department of Defense.

        i. If you as an employer are doing any work with the defense department, you get 2 of our students as interns paid by the Defense Department to work on some of your projects.
            1. Will pair them up with a faculty member.
            2. The faculty member will get paid.
c. We got funding to put together an apprenticeship program.
        i. Students go work for you in an apprenticeship program. Kind of a earn and learn model.
d. Email J. Anaya if you have questions.
e. A. Hernandez added a slight comment, talking about Linear Algebra, his recommendation would be to create course generic enough.
        i. So students working with engineering don't have to take Linear Algebra for Data Science only because their current units is already heavy for our students.