# Minutes

Committee Name: Merced College Computer Science and Drone Technology Advisory Committee - Approving curriculum changes, new classes, and Computer Programmer Certificate

Date: March 3, 2022

Time: 5:00 pm

Location: Zoom Meeting

Attendees:

**Dr. Melanie Martin,** Stanislaus State, Professor, Computer Science

**Dr. Megan Thomas,** Stanislaus State, Professor and Co-Chair, Computer Science

**Dr. Tom Carter,** Stanislaus State, Professor and Co-Chair, Computer Science

**Dr. Martin Ceberio,** University Texas El Paso, Professor of Computer Science and CAHSI member

**Dr. Elsa Villa,** UTEP College of Education Director of the Center for Education Research and Policy Studies

**Annette Haugen,** Professor of Business, Merced College

**Svetla Gargove,** Professor of Engineering, Merced College

**Dr. Graciela Perara,** Northeastern Illinois University, Associate Professor of Computer Science

**Dr. Nayda Santiago,** University of Puerto Rico Mayaguez, Professor of Electrical and Computer Engineering

**Curt Nelson**, Certis USA Regional Manager-Central San Joaquin Valley of California

**John Neil**, Engineering Manager at Google Inc.

**Svetla Gargova**, Merced College, Professor of Engineering

**Thuy Alejandro,** Buhach Colony High School, CS Instructor

**Jorge Alejandro,** Buhach Colony High School, CS Instructor

**Maricela Alvear,** Livingston High School, CS Instructor

**Shawne Arnold,** Pitman High School, CS Instructor

**Alisson Ross,** Merced College Computer Science student, CAHSI Advocate

**Dr. Doug Kain,** Dean of Instruction Science, Technology, Math, and Engineering

1. **Introductions**

*Meeting called to order at 5:10 pm by Kathy Kanemoto.*

*Kathy explained the purpose of advisories is to receive feedback from members regarding the curriculum changes, new classes, and Computer Programmer Certificate.*

1. **About Merced College and the CS Department**

*Used an informational graphic to show the CS pathways that we are creating at Merced College through the Computer Science department.*

*A little background on Merced College and the CS department: https://app.lucidchart.com/invitations/accept/51164491-4109-4fd6-a499-82e516eda35f*

*We also have websites that highlight some of the things we are doing to create Computational Science pathways for our students:*

*https://cspathways.us/*

*http://stem4me.com/*

*https://cspathways.us/news/*

1. **Our CS Program Learning Outcomes**

*Went through the CS Program Learning Outcomes and how they relate to the Drone Certificates.*

*A. Increase Enrollment*

*B. Continue to Grow our Student Success Number​​​​​​​*

*C. Get Students Internships and Jobs in the CS Industry*

*D. Have more students graduate with a degree or certificate*

*E. Up our Hispanic and Female Computer Science graduates and enrollment and success in our classes.*

*F. Create more pathways for our Drone Technology classes. Including an Ag and GIS Path.*

*G. Create and implement the ICT transfer AS-T degree.*

*H. Make more of our classes online, and up the success rate in these classes.*

1. **Our relationship with Alliances like CAHSI**

*We are a member of CAHSI; Computing Alliance of Hispanic Serving Institutions, which provides a network of other CS instructors that assists with broadening participation in CS, our biggest goal, https://cahsi.utep.edu/*

1. **Went over the current Computer Science AS-T degree**

*CS degree and course data was shown; and we are still increasing in success rates with the number of students transferring and receiving certificates and degrees still increasing. The CS classes are still increasing in enrollment, despite the college’s overall low enrollment rates.*

*Requirements for the degree have not changed, and are based on the California Community College c-id standards. Added in industry standards as a Student Learning Outcome in our courses. Covering Research and Career pathways is now a required Student Learning Objective in our courses. Updated the language to better match the corresponding classes from UC Merced so that they will transfer there. Updated the Distance Education Standards for our CS classes. Implementing these standards proves to allow equity and inclusion through serving underrepresented minorities in CS. Data gathered from CAHSI best practices in teaching underrepresented minorities*

1. **Overview of the Computer Programmer Certificate and new classes**

*Went over the new Computer Programmer certificated pathways, the new C++ data structures course and the 2 new engineering programming classes. These pathways are meant to expose students to hands-on, project-based learning centered around computational thinking and utilizing programming to solve problems. Thereby, the Computer Programmer Certificate pathways are designed to give students a good foundation in programming and problem solving in a team environment. The Computer Programmer Certificate validates that a student has the skills and knowledge of an entry-level Computer Programmer. These classes can lead the students down a Computational Science pathway such as Computer Science, Engineering, Electricty-Electronics, Robotics, or Computer Technology and Information Systems. Jobs in these sectors are also varied and in high demand. If the student does not choose to get these degrees the student still benefits in lifelong learning and understanding computers. Link to graphic showing the pathways to earn a Computer Programmer Certificate - pics of this graphic were shown and explained in the meeting:*

<https://app.lucidchart.com/invitations/accept/141e0993-3550-4343-bec7-38caae29d8b4>

*Note: It was suggested by John Neil from Google that we have a software development pathway, and not just hardware pathways in the certificate. This was taken into consideration and a web application development class was re-added to our curriculum.*

1. **Overview of how the classes and Certificates align to industry and HIgh School standards**

*Went over how the Certificate’s goals and objectives are meant to meet this growing need for a Computer Programming skilled workforce. Showed how the Computer Science classes align to the industry Certificates; Oracle Certified Foundations Associate, Java and C++ Certified Associate from the CPA Institute. Showed a visual of how our classes align to the College Boards AP Computer Science Principles (CSP) standard, and the Oracle Certified Foundations Associate, Java.*

1. **Overview of changes to CPSC-05a Application Development and Programming**

*Went over the naming convention changes to this programming language independent class and how this change will assist the High Schools in articulation of their classes in the future. Will have different tracks using different programming languages; which will better differentiate what programming language the student is learning.*

*Note: Thuy Alejandre from Buhach Colony High School commented to make sure we include a Block Programming version of CPSC-05a to include those classes which are taught with code.org, scratch, or another Block programming language; which we will make sure to do.*

1. **Overview of Drone Technology Certificates**

*Went over the Drone Technology and Media Certificate and the PLOs for these classes. No changes were made to these certificates. Went over the need to have our drone program and certificates in our community and how no other Drone Technology Programs are at a Community College in the Central Valley. Went over creation of the Ag Tech pathway within Drone Technology.*

1. **Opened up meeting for participant comments and suggestions**

*Asked all of the participants their thoughts, suggestions, critiques and approval of the curriculum updates, new classes, and Computer Programmer Certificate. Suggestions were noted and written into the changes report.*

*Elsa Villa/UTEP/CAHSI : Great work, Merced College and Kathy! These certificates provide great opportunities for students to enter the technical workforce while providing them with coursework to enter into 4-year institutions, should they choose to do that!*

1. **Curriculum updates, new classes, and Computer Programmer Certificate**

*Kathy asked Board Members if they agree with creating the curriculum updates, new classes, and Computer Programmer Certificate at Merced College; was voted on and approved*

*i. Graciela Perera motioned to approve the new Computer Programmer Certificate at Merced College and the new Computer Programmer Certificate at Merced College*

*ii. Martine Ceberio seconded*

*iii. 11 Ayes, 0 Nayes*

*iv. Motion approved*

1. **Adjournment**

*Meeting adjourned at 6:05 pm by Kathy Kanemoto*

Meeting Chair: Kathy Kanemoto

Recorder: Zoom

Here is the recorded meeting link: <https://drive.google.com/file/d/1VfSdci-GP34xG85lGKwz7evayfShKOg3/view?usp=sharing>

Here is a link to the slides that were used for the presentation during the meeting: <https://drive.google.com/file/d/1aW-6XZ6xw0q-GCyGY5pZTerpnRj18h33/view?usp=sharing>