Instructional Program Review 2018/19 (Comprehensive)

Computer and Information Sciences

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General Information (Instructional Program Review 2018/19 (Comprehensive))

2018/19 Instructional Program Review

Program Review Data and Resources

Submission Information (REQUIRED)

- Name of Lead Writer: Tasha Frankie and Duane Wesley
- Name of Liaison: Bruce Naschak
- Department Chair: Duane Wesley
- Name of Manager/Service Area Supervisor: Danene Brown
- Is this a CTE program? Yes

Faculty/staff (REQUIRED)

- Number of T/TT Faculty: 6
- Number of Adjunct Faculty: 18
- Number of sections taught by T/TT Faculty: 17
- Percent of FTEF taught by T/TT Faculty: 5.2/14.2 = 36.6%
- Number of Pro-Rata Faculty: 2

This data is from the Fall 2018 snapshot updated on 9/6/2018

Program Mission (REQUIRED)

Program Mission:

San Diego Mesa College empowers our diverse CISC student body to reach their educational goals and shape the future. As a comprehensive community college committed to access and success, we promote student learning and achievement leading to CISC degrees and certificates in support of transfer education and workforce training, and lifelong learning opportunities. Faculty and staff collaborate with our students to foster scholarship, leadership, and responsibility to effect positive change within our community.

How does your program mission support the mission of the College?

In the past, our program mission has been identical to the mission of the College. This year, we modified it slightly to be CISC specific. We have plans to rewrite our mission in the next year.

Program Overview (REQUIRED)

Form: 2018/19 Comprehensive Program Review Instructional Program Overview Section (See appendix)

File Attachments:

1. **CISC Advisory Cmte Minutes 2-23-2018 (1).docx** (See appendix)
2. **SD4C Final Minutes - 181103.pdf** (See appendix)

Form: "2018/19 Comprehensive Program Review Instructional Program Overview Section"

Created with : Taskstream
Participating Area: Computer and Information Sciences

(REQUIRED) Program name

Computer and Information Science

(REQUIRED) Program strengths

Discuss strengths of the program.

The number of full-time faculty in our department has grown considerably in the past few years. Our full-time faculty are now reflective of the diversity that we would like to see in the entire computer and information sciences pipeline from elementary school to college to industry. We believe strongly in equity; everyone is welcome in our department, in our classes, and in our extracurricular activies such as student clubs: the Mesa Robotics Organization and the Computer Science Club.

Our faculty have an amazing amount of varied industry and academic experience and connections, which helps us to prepare students for jobs and for transfer. In addition to preparing students for life after Mesa, we also are actively involved in outreach to the K-12 community through partnerships with UC Davis and TreoBytes to help increase the number of qualified K-12 computer science faculty and to provide opportunities for middle and high school students to gain exposure to computer science in a college setting.

We are deeply aware of the importance of computer science to all disciplines, and are collaborative-minded, both within our department and with other departments. Additionally, we are cognizant of the ethical challenges and responsibilities that attend our discipline.

(REQUIRED) Program challenges

Discuss challenges to the program.

One of our strengths is that our department now has an amazing group of full time faculty. However, the growth of our department occurred at a very rapid pace, and one of our challenges is to bring together this new group of faculty so that we can ensure that all of our individual strengths are utilized for the benefit of the department. As a CTE field, we all individually have the challenge of remaining current technology, and keeping our courses updated as well. One way for faculty to remain current is to attend conferences, but travel costs can often make this prohibitive.

We are often faced with the challenge of updating the hardware and software on our classroom and office computers, as well as the campus computers that students have access to outside of class (e.g. in the LRC). Software updates don't occur on the schedule that is convenient for IT, and we are greatly appreciative to the IT department for working with us to ensure that the most up-to-date software is installed for students throughout the term. In addition to keeping software updated, we also need to keep track of which software we have licenses for, and when these licenses expire; it would be helpful to have someone (not a faculty member) who could be in charge of this task. It would also be helpful for all of the CISC faculty members to have administrative privileges on their computers to make it easier to install software as part of the process of staying up-to-date and determining which resources are best for students to use.

We have found that many students, including online students, report challenges with access to computers, installing appropriate software, and/or access to internet at home. We believe that this leads to some of the challenges that we have with success rates, especially in online classes. In addition, the costs of frequently updated textbooks and online practice resources, combined with few high-quality OER options leads to some students trying to take classes without purchasing a textbook.

We are working on updating certficates and creating an ADT; this will help increase enrollment in some of our courses, but we are concerned that it may negatively impact enrollment in other courses. The long, complicated process for approval for new course and degree/certificate development makes it challenging to keep our offerings current with what employers and 4-year institutions want. We would also like to offer cross-discliplinary courses, but we have found that while collaboration with other departments is something that we would like to do, in practice it is challenging to implement.

(REQUIRED) External influences

Discuss external influences (Collegewide and beyond).

We have collaborations with the following groups; some collaborations are ongoing and some are new:

- Cybersecurity degree (in collaboration with USD)
- C-STEM program (in collaboration with UC Davis)
- Summer Camp, and camps throughout the school year (in collaboration with TreoBytes)
- Pigeonhole Productions
- San Diego Unified

(REQUIRED) Areas of Focus

Describe one or more areas that your department is focusing on. You will refer to this response in the Program Analysis Section.

There are several things we are currently focusing on:

- ADT: complete the approval process and start offering the degree, and courses needed to support the degree
- Increase enrollment, retention, and success, especially in online courses
- Cybersecurity: creation of curriculum and degree/certificate
- Curriculum and certificate review, especially in updating how courses we offer fit into programs we offer
  - Examining articulation agreements, especially for newer courses, with top transfer institutions (e.g. SDSU, UCSD)

The Following Questions are for CTE Programs ONLY.

Enter "not applicable" if your program is not CTE.

____

(REQUIRED) Describe how the program's industry partners (including advisory committee) assist with program improvement including curriculum advice, obtaining equipment, providing internships and finding or providing other funding (limit 500 characters) (P.N. 1.b.). Please upload Advisory Committee minutes from the last year here.

Enter "not applicable" if your program is not CTE.

Mesa College CISC's Department involvement with the California Community Colleges' Economic and Workforce Development Division's events and meeting with local industry leaders and partners has helped us observe industry trends, and needs, and to adjust our pedagogy and curriculum content to more effectively target the needs of industry. We are planning to involve local industry figures as guest speakers, consultants, mentors, and internship sponsors.

(REQUIRED) Describe how your program connects to High Schools, Universities and Continuing Education, creating career pathways in your field. Include articulation, specific projects, collaboration with teachers/professors, etc. (limit 500 characters) (P.N. 3)

Enter "not applicable" if your program is not CTE.

Our expanding use of microcomputer, microcontroller, and robotics equipment and software enables increased outreach into local high schools, and help to engage interest and broaden knowledge. In our role as a C-STEM Affiliate with UC Davis, we are working with CE to offer annual workshops to high school and middle school teachers. These workshops train our teachers to integrate robotics with their teaching of Computer Programming and Math.

Form: "2018/19 Comprehensive Program Review Instructional Curriculum Section"

Created with : Taskstream
Participating Area: Computer and Information Sciences

(REQUIRED) Program Name

Computer and Information Sciences

(REQUIRED) What degrees and certificates are offered?

Certificate of Performance: Computer Programming

Certificate of Achievement: Computer and Information Sciences

Associate of Science Degree: Computer and Information Sciences

(REQUIRED) How many of each degree and certificate have been earned in the past 4 years?

Certificates: 44

Associate of Science Degree: 41

(REQUIRED) If you have no (or very few) degrees/certificates, what other paths do you offer? (for example, GE, transfer)

Many students transfer to 4-year universities. Additionally, we hope to start offering an ADT in Fall 2020.

(REQUIRED) Have you developed any new courses in the past 4 years? Please give details.

Recently developed courses we are expecting to offer include:

- Python Programming (CISC 179)
- Introduction to the Linux Operation System (CISC 152)
- Intermediate Java Programming (CISC 191)
- Discrete Mathematics for Computer Science (CISC 246)
- Work Experience (CISC 270)
- Computer Organization and Assembly Language (CISC 211)

(REQUIRED) Have you made other curricular changes? (for example, renumbering, sequence change, co-reqs or pre-reqs)

We are in the process of reviewing courses to verify that they are up-to-date and that the co-reqs and pre-reqs are accurate. No changes have been made yet.

The Following Questions are for CTE Programs ONLY.

Enter "not applicable" if your program is not CTE.
____

(REQUIRED) List any licensure and/or accreditation associated with your program.

Enter "not applicable" if your program is not CTE.

WASC accreditation

(REQUIRED) Indicate the program TOP codes for your AA, AS, COA and COPs.

Please find TOP Code Link in the Directions.

Enter "not applicable" if your program is not CTE.

0702.00 Computer Information Systems

0706.00 Computer Science (transfer)

0707.00 Computer Software Development

????

(REQUIRED) Indicate the SOC codes and title associated with your program's AA, AS, COA and COPs.

Please find SOC Code Link in the Directions.

Enter "not applicable" if your program is not CTE

15-0000 Computer and Mathematical Occupations

(REQUIRED) Select the sector associated with your program.

Link to sectors list: In process of being developed

- Information & Communication Technologies (ICT)/Digital Media

Form: "2018/19 Comprehensive Program Review Instructional Outcomes and Assessment Section"

Created with : Taskstream
Participating Area: Computer and Information Sciences

(REQUIRED) Program name

CISC

(REQUIRED) We are halfway through our 6-year cycle. Is your department/program on target to complete CLO assessment by Spring 2022? Please attach your schedule for CLO assessment, with explanations as needed.

Refer back to Direction #3 on how to attach documents.

We have 4 CLOs that we assess across the various courses of our program. We choose one CLOs each academic year for assessment, cycling through the entire set of CLOs every four years.

Year 1	2016-2017	CLO #1
Year 2	2017-2018	CLO #2
Year 3	2018-2019	CLO #3
Year 4	2019-2020	CLO #4
Year 5	2020-2021	CLO #1
Year 6	2021-2022	CLO #2

(REQUIRED) Please list your PLOs.

Students who complete the Computer and Information Sciences Program will gain facility with:

- Technological Awareness: Students will be able to evaluate and apply appropriate technology to support specific business activities and business solutions.
- Critical Thinking: Students will be able to analyze specific business or information technology problems or situations and identify possible solutions, including predictive analysis, synthesis of information, resourcefulness, and troubleshooting.
- Communication: Students will be able to choose the appropriate mode of communication for a specific situation and then communicate ideas, concepts, and solutions through effective written and oral communication.

(REQUIRED) What progress have you made in your PLO assessment? Please attach your schedule, with explanations as needed.

Refer back to Direction #3 on how to attach documents.

Every year we review our course offerings with respect to how they address our PLOs. Our CLOs are designed to directly support our PLOs.

Year 1	2016-2017	PLOs 1 - 3
Year 2	2017-2018	PLOs 1 - 3
Year 3	2018-2019	PLOs 1 - 3
Year 4	2019-2020	PLOs 1 - 3
Year 5	2020-2021	PLOs 1 - 3
Year 6	2021-2022	PLOs 1 - 3

Each year we verify that our CLOs and PLO mappings are successfully addressing the PLO content.

(REQUIRED) What have your completed assessments revealed about your courses or program?

Our assessments reveal that our CLOs and PLOs are germane and supportive to our discipline, our program, and our department mission. Our CLOs and PLOs are establishing a useful focus for our program and our faculty members. The assessment activity encourages reflection and brainstorming with respect to the direction of program.

(REQUIRED) If issues or problems were identified, what is your plan for implementing change?

No significant issues or problems have been identified as part of our assessment cycle at this time.

(REQUIRED) Based on your assessments, have you identified resource needs?

- None

Please provide any other comments.

While our assessments have not identified any needs, the continued success of our program demands substantial planning and resources. We constantly need to update our hardware and software resources for students and faculty. Professional development of our faculty members is essential and must meet the needs of our fast-paced and evolving industry. Ensuring equitable access to computing resources is an ongoing challenge. We are also looking at how we can create and sustain a "classroom live" model that empowers the development of a broad range of pedagogical and curricular components that can be captured and deployed in a variety of modalities.

Form: "2018/19 Comprehensive Program Review Instructional Program Analysis Section"

Created with : Taskstream
Participating Area: Computer and Information Sciences

(REQUIRED) Program name

Computer and Information Sciences

(REQUIRED) Using the data dashboards, discuss how students are doing in your program. Please refer to indicators of success, retention, persistence, etc.

Our online and hybrid courses lag behind our on campus courses in success rates, in some courses by as high as 20%, and the overall success rates of our courses (62% using data from all of the terms available in the dashboards) is below the Mesa target goal of 74%.

We are serving men and women equally well (with 62% and 63% success rates). This is great news as computer science needs more women in industry.

Black/African American and Latinx students have lower-than-average success rates (equity gap of 7-10%). This is a challenge that we need to address; we hope that the recent opening of the STEM center in the LRC will assist in encouraging these students to form study groups. Additionally, we are increasing outreach opportunities for K-14 students both in the San Diego region and cross-border.

(REQUIRED) How does your program help to prepare students for success beyond your classrooms?

Students in our courses learn real-world skills that are sought after by employers. In addition to computer and information science knowledge, students also gain the skills necessary to be effective students and workers, including critical thinking, problem solving, and digital literacy. Additionally, students gain so-called "soft skills" through group projects and classroom collaborations, and learn how to work in diverse environments. Our students learn how to become students of the world.

(REQUIRED) Given your stated area(s) of focus in your program overview section, has your program introduced new or different actions that may have affected changes in these indicators? Please describe.

We are awaiting approval to start offering an ADT; we expect this will increase enrollment since students will no longer need to attend other institutions in order to successfully transfer to SDSU. To increase retention and successes in courses, we are working on ways to effectively collaborate about teaching strategies between instructors, so that we may learn from each other what leads to success for our students.

(REQUIRED) Has your program introduced any new actions specifically focused on issues of equity? Please describe.

In response to the need for full-time workers to gain computer skills, we have begun offering more online and hybrid courses to better serve these students.

We have also increased our outreach to middle and high school students through our partnership with TreoBytes to offer summer camps and weekend camps during the academic year.

We have increased our support of the tutoring center, with a faculty member now collaborating with tutoring through reassigned time.

We have begun sharing information about OER resources, and are looking to use more as the CS Education community begins to develop them.

(REQUIRED) Describe the trends in enrollment for your program. What changes might you foresee in the next 2-3 years?

When our proposed ADT comes online (expected Fall 2020), we expect to see an increase in the number of students enrolling. Additionally, we are looking into creating new certificates and expanding into cybersecurity; we expect to see more returning students from industry.

We also expect to see a bigger split between skill levels of incoming students (low skills vs. high skills) as computer science starts being offered unevenly in K-12 schools. Through our outreach efforts, we hope to be part of the solution in reducing the number of students who arrive with low skills, and to increase the diversity of the students enrolled.

Historically, enrollment in our discipline has been highly dependent on the current state of the economy, with an inverse relationship. We hope that through continued collaboration with the work-based learning coordinators that we will be able to help place students in jobs and internships during their schooling.

(REQUIRED) Are there any data sets that are not already provided in the dashboards that you could use to inform your program?

We would like to access the data by individual instructor (anonymized if necessary). It would also be helpful for us to have access to the raw data that Tableau uses to generate reports.

(REQUIRED) In what ways can the college support your program in our effort to encourage major and career exploration early on in a student's college experience?

We think that it would be helpful for all students to be required to take a computer literacy course; we would work with the college to adjust an existing course or to create a new course as needed. All students would benefit from this course, since computer science is integral to all fields in today's world; students who had never been exposed to computer science would have the opportunity to learn more about the field and would be more likely to select it as their major.

Our students would benefit from career fairs with STEAM emphasis, and an increase in paid internship opportunities. Additionally, more workshops targeted toward our students (like the IRL has been doing) would be helpful in exposing students to career opportunities. Additionally, better publicity of our courses and promotion of our First Friday Speaker Series would help students be aware of their options.

Providing students with a .edu address opens many possibilities for them to explore computer science online (many sites offer discounts or free registration to students with .edu addresses). Having a CISC student e-mail distribution list would also be helpful for us to announce workshops and speakers. It would also be helpful for us to have an e-mail alias for full time CISC faculty and for all CISC faculty (full time and part time), so that it would be easier for us to communicate with each other.

The Following Questions are for CTE Programs/Services ONLY.

Enter "not applicable" if your program/service is not CTE.

(REQUIRED) For CTE programs ONLY: Provide specific labor market information showing: 1) Number of jobs available or projected in San Diego County 2) Number of other institutions offering the program 3) How many Mesa students completed the program in the last three years 4) The pay rates for those in the industry (limit 500 characters) (P.N.2.A)

Enter "not applicable" if your program is not CTE.

#jobs in SD County: Projected 30% increase nationally, from 2016 to 2026. According to Cal-passplus.org, ~20,000 (as of 2015).

#institutions offering program: 8 community colleges in San Diego / Imperial County; 53 in CA.

#Mesa students completed program in last 3 years: 35 students with AS degree, 74 students total for degrees and certificates.

Pay rates: $100,000 (according to the Bureau of Labor and Statistics).

(REQUIRED) For CTE Services ONLY: How are CTE students identified and tracked for service? (limit 500 characters) (P.N.2.B)

Enter "not applicable" if your service is not CTE.

not applicable

(REQUIRED) For CTE programs/services ONLY: Upload the report from Launchboard that includes at least three (3) of the following Strong Workforce metrics for your BASELINE year.

Please use the Cal-PASS Plus Launchboard Link available in the Directions.

Refer back to Direction #3 to #6 on how to attach documents.

Strong Workforce Program Metrics
a. Number of Enrollments
b. Number of students Who Got a Degree or Certificate
c. Number of Students Who Transferred
d. Percentage of Students Employed in Two Quarters After Exit
e. Percentage of Students Employed in Four Quarters After Exit
f. Median Earnings in Dollars Two Quarters After Exit
g. Percentage of Students Who Achieved a Job Closely Related to Field of Study
h. Percentage Change in Earrings
i. Percentage Who Attended a Living Wage.

Enter "not applicable" if your program/services is not CTE.

The Cal-PASS data is insufficient due to small sample size, and is therefore not useful.

(REQUIRED) For CTE programs/services ONLY Upload the report from the CCCO Perkins site for the College Aggregate Core Indicator Information by 6 digit TOP Code.

Please use the Core Indicator Reports Link available in the Directions.

Refer back to Direction #3 to #6 on how to attach documents.

Enter "not applicable" if your program/service is not CTE.

see attachment

Curriculum (REQUIRED)

Form: 2018/19 Comprehensive Program Review Instructional Curriculum Section (See appendix)

Outcomes and Assessment (REQUIRED)

Form: 2018/19 Comprehensive Program Review Instructional Outcomes and Assessment Section (See appendix)

Program Analysis (REQUIRED)

Form: 2018/19 Comprehensive Program Review Instructional Program Analysis Section (See appendix)

File Attachments:

1. **Cal-PASS Plus - Community-College-Pipeline_DegreesAttained.pdf** (See appendix)
2. **Cal-PASS Plus - Community-College-Pipeline_EarningsAfterCompletion.pdf** (See appendix)
3. **Cal-PASS Plus - Community-College-Pipeline_NumberOfEnrollments.pdf** (See appendix)
4. **Cal-PASS Plus - Community-College-Pipeline_Transfers.pdf** (See appendix)
5. **Perkins_CoreIndicator_Form1PartF%2D6DigitTOPCodeCollege.pdf** (See appendix)

Program Goals (REQUIRED)

2018/19 CISC Goals

Goal

Goal	Mapping
Collaborate with local industry / four year schools / local high schools Work with industry subject matter experts and boards to collaborate, build, and share content of rapidly changing fields such as robotics, cyber security, and data science including big data and analytics.	**CA- Mesa College Strategic Directions and Goals:** Strategic Goal 1.1, Strategic Goal 1.2, Strategic Goal 1.3, Strategic Goal 1.5, Strategic Goal 1.6, Strategic Goal 2.1, Strategic Goal 2.2, Strategic Goal 2.3, Strategic Goal 2.4, Strategic Goal 3.1, Strategic Goal 3.2, Strategic Goal 3.3, Strategic Goal 4.1, Strategic Goal 4.2, Strategic Goal 5.2, Strategic Goal 6.2, Strategic Goal 6.3, **CTE 2018/19:** Perkins Core Indicator Activity 1, Perkins Core Indicator Activity 2, Perkins Core Indicator Activity 3, Perkins Core Indicator Activity 5, Perkins Core Indicator Activity 6, Perkins Permissive Use 10.1, Perkins Permissive Use 10.10, Perkins Permissive Use 10.11, Perkins Permissive Use

	10.12, Perkins Permissive Use 10.13, Perkins Permissive Use 10.15, Perkins Permissive Use 10.16, Perkins Permissive Use 10.2, Perkins Permissive Use 10.3, Perkins Permissive Use 10.4, Perkins Permissive Use 10.5, Perkins Permissive Use 10.6, Perkins Permissive Use 10.8, Perkins Permissive Use 10.9, Perkins Requirement 2, Perkins Requirement 4, Perkins Requirement 5, Perkins Requirement 1, Perkins Requirement 3, Perkins Requirement 7, Perkins Requirement 8, Perkins Requirement 9, Strong Workforce Recommendation 1, Strong Workforce Recommendation 10, Strong Workforce Recommendation 11, Strong Workforce Recommendation 15, Strong Workforce Recommendation 2, Strong Workforce Recommendation 3, Strong Workforce Recommendation 7, Strong Workforce Recommendation 9, **Institutional Learning Outcomes 2016/17:** Communication, Critical Thinking, Global Consciousness, Information Literacy, Professional & Ethical Behavior
Faculty Training to ensure that faculty are current with technology and education. We need to train our faculty by sending them to conferences and workshops. These events should include, but are not limited to, education, health information sciences, software development, cybersecurity, and robotics.	**CA- Mesa College Strategic Directions and Goals:** Strategic Goal 1.1, Strategic Goal 1.2, Strategic Goal 1.4, Strategic Goal 1.5, Strategic Goal 1.6, Strategic Goal 2.1, Strategic Goal 2.2, Strategic Goal 2.3, Strategic Goal 4.1, Strategic Goal 4.2, Strategic Goal 5.1, Strategic Goal 5.2, Strategic Goal 6.1, Strategic Goal 6.2, Strategic Goal 6.3, **CTE 2018/19:** Perkins Core Indicator Activity 1, Perkins Core Indicator Activity 2, Perkins Core Indicator Activity 3, Perkins Permissive Use 10.12, Perkins Permissive Use 10.13, Perkins Permissive Use 10.8, Perkins Requirement 4, Perkins Requirement 5, Perkins Requirement 1, Perkins Requirement 3, Perkins Requirement 7, Perkins Requirement 8, Perkins Requirement 9, Strong Workforce Recommendation 1, Strong Workforce Recommendation 11, Strong Workforce Recommendation 15, Strong Workforce Recommendation 7, Strong Workforce Recommendation 9, **Institutional Learning Outcomes 2016/17:** Critical Thinking, Information Literacy
Integrate robotics and	**CA- Mesa College Strategic Directions**

microcontrollers with our curriculum as fully as sensible and possible. We need to purchase and maintain active Ch software licenses in order to support our programming courses. We also need to purchase robotic and microcontroller equipment and software to support the development of a microcontroller curriculum, Mesa Robotics Organization, and outreach to local high schools.	**and Goals:** Strategic Goal 1.1, Strategic Goal 1.2, Strategic Goal 1.3, Strategic Goal 1.4, Strategic Goal 1.5, Strategic Goal 1.6, Strategic Goal 2.2, Strategic Goal 3.1, Strategic Goal 3.2, Strategic Goal 3.3, Strategic Goal 4.1, Strategic Goal 4.2, Strategic Goal 5.1, Strategic Goal 5.2, **CTE 2018/19:** Perkins Core Indicator Activity 1, Perkins Core Indicator Activity 2, Perkins Core Indicator Activity 3, Perkins Core Indicator Activity 4, Perkins Core Indicator Activity 5, Perkins Core Indicator Activity 6, Perkins Permissive Use 10.12, Perkins Permissive Use 10.13, Perkins Permissive Use 10.20, Perkins Requirement 2, Perkins Requirement 4, Perkins Requirement 1, Perkins Requirement 3, Perkins Requirement 7, Strong Workforce Recommendation 10, Strong Workforce Recommendation 11, Strong Workforce Recommendation 2, Strong Workforce Recommendation 7, **Institutional Learning Outcomes 2016/17:** Communication, Critical Thinking, Global Consciousness, Information Literacy, Professional & Ethical Behavior
Increase the success rates of our online/hybrid courses Our online/hybrid courses have a lower success rate than our on campus classes. We need to effectively share online teaching strategies and also help students to understand that online courses are as rigorous and require as much time as on campus courses.	**CA- Mesa College Strategic Directions and Goals:** Strategic Goal 1.1, Strategic Goal 1.2, Strategic Goal 1.3, Strategic Goal 1.4, Strategic Goal 1.5, Strategic Goal 1.6, Strategic Goal 2.3, Strategic Goal 4.1, Strategic Goal 4.2, Strategic Goal 5.1, Strategic Goal 5.2, Strategic Goal 6.2, **CTE 2018/19:** Perkins Core Indicator Activity 1, Perkins Core Indicator Activity 2, Perkins Core Indicator Activity 3, Perkins Permissive Use 10.12, Perkins Permissive Use 10.4, Perkins Permissive Use 10.9, Perkins Requirement 4, Perkins Requirement 1, Perkins Requirement 6, Perkins Requirement 7, Perkins Requirement 9, Strong Workforce Recommendation 11, Strong Workforce Recommendation 15, Strong Workforce Recommendation 2, Strong Workforce Recommendation 9, **Institutional Learning Outcomes 2016/17:** Communication, Critical Thinking, Global Consciousness, Information Literacy, Professional & Ethical Behavior

Action Plans for Non CTE Programs (REQUIRED)

Project Plan for CTE Programs Only (REQUIRED)

Form: 2018/19 Comprehensive Program Review Instructional CTE Project Plan Section (See appendix)

Closing the Loop (REQUIRED)

Form: 2018/19 Comprehensive Program Review Instructional Closing the Loop (See appendix)

Form: "2018/19 Comprehensive Program Review Instructional CTE Project Plan Section"

Created with : Taskstream
Participating Area: Computer and Information Sciences

(REQUIRED) Program or Service Name

CISC

Strong Workforce

(REQUIRED) Description: Describe your project and your project outcomes.

Our project is to skillfully develop and curate the academic student projects that students create and the academic pathways we offer to students to make sure they are relevant, feasible to complete, set up well to interface with industry needs. We are currently focusing on several sub-projects related to this overarching goal:

- Increase pathways to employment and transfer.
  - We are in the approval process for an ADT, and are also looking at adding certificates that are desirable to employers.
  - We are developing Cybersecurity degree in collaboration with USD.
  - We are exploring the utilization of virtual reality as an application for students to learn how to program.
- Increase student success in online courses.
  - We are designing new ways for faculty to collaborate and communicate about their online teaching.
- Build a sense of community amongst students.
  - We offer two students clubs: Mesa Robotics Organization and Computer Science Club.

(REQUIRED) What needs motivate this project?

Our project is driven by industry needs and transfer requirements. We want our program to be robustly designed to ensure that our students are qualified to become junior software engineers after obtaining an AA, so that our students have the ability to work while earning a Bachelors Degree or to support themselves and their families without the need to obtain a 4-year degree.

Regardless of whether students intend to be computer science majors, almost all jobs now require some level of familiarity with technology and computer literacy; students need the skills that our courses provide, and we train students to be ready for the jobs of the future.

(REQUIRED) Risks: Describe the associated risks that may prevent successful completion of your project.

- Cybersecurity degree

    - We may have trouble finding qualified faculty to teach the courses we create, as there is a high demand for people with cybersecurity skills in industry, and industry can offer higher compensation.
- All projects
    - Funding to buy equipment is always a challenge. Technology changes quickly, and we need to be able to upgrade our computer hardware and software quickly in order to offer courses that teach the technology skills employers currently need. Additionally, CISC faculty need administrative permissions on their computers so that they can install and update software necessary to remain current with programming languages and technology, and can develop relevant instructional materials.
    - Developing infrastructure as well as curricular framework. With rapidly changing technology, we need a way to quickly create, modify, and offer new courses, certificates, and degrees based on industry needs. This is challenging with the current course approval process.

(REQUIRED) Investments: Briefly describe investments you will make and explain how these will result in improved performance in the Strong Workforce Metrics.

We are making investments designed to improve student success, certificate completion, and transfer rates. In our new building, we have access to some labs that resemble an actual work environment. However, several of our classrooms were designed in such a way that they do not support computer access for all students in the classroom; we will need to modify these rooms to have the necessary electrical wiring to support a computer lab. Additionally, we need computer equipment, updated software, new software, and continued purchased of licenses for software. We are also incorporating robotics, virtual reality, and other similar technology as pedagogical aids that additionally offer students resume-building hands-on experience with real-world technology; we need to purchase this technology, and keep it updated as technology changes.

Outside of the classroom, instructors need both Windows and Mac laptops to be able to stay current with technology and to be able to support students using either platform. These laptops need to have dedicated graphics cards, as much new technology relies on utilizing the GPU in these graphics cards.

We would also like to build a sense of community amongst our students, as this increases student engagement and networking, and leads to increased student success. We hope to utilize space in the new building to have a cowork style of space, like students might encounter in the real world. It would also be nice to have something that entices students to come to and remain in the building; perhaps a snack center, lounge, or even an arcade game in the building would be helpful.

(REQUIRED) Major Activities & Outcomes

- C-STEM workshops. Train local K-12 math and computer science teachers to teach math and computer science with robotics. This will result in incoming students having a higher level of preparation for our courses, and should increase student success.
- Other K-12 outreach, including summer camps in partnership with Treobytes. This gives students opportunities to experience learning on a college campus while still in K-12, which we hope will lead to an increase in students enrolling at Mesa, especially first generation college students.

- First Friday Speaker series. Presenters from local industry discuss STEAM related topics. This helps students understand job opportunities, pathways to these job opportunities, and how computer science is used in the real world.
- Mesa Hackathon. This gives students an opportunity to utilize coding skills and earn prizes while solving real world problems. Judges from industry are invited to meet students, and students can inquire about internships and employment.
- Student clubs. The Mesa Robotics Organization and the Computer Science Club offer students an opportunity to interact with each other while learning new robotics and programming skills.
- Tutoring. We encourage students to become tutors and to ask for help at tutoring in the Tutoring Center and the STEM Center.
- Cybersecurity program development. We are in the early stages of developing this program in partnership with USD. This will allow students to gain high-demand cybersecurity skills desired by industry.

Perkins

____

(REQUIRED) Describe the program project's intent and how it addresses SLO's and how it aligns with Program Review. (P.N.1.A) (limit 500 characters).

Our intent is to improve SLO assessments and student success while advancing program offerings and course instruction based on industry needs. We are introducing innovative pedagogical approaches to maximize student engagement, ensure equity, and increase success, including active learning, peer instruction, project-based learning, as well as microcontroller, robotics, and game programming.

(REQUIRED) Briefly describe program improvement issue(s) concerning the program's TOP code and cite specific examples. Include the specific deficits provided in the Perkins Core Indicator Report (CIR) data for the program by referring to those below the state negotiated levels and special populations (P.N.4.A) (limit 2000 characters).

The CISC Department engages with students from diverse backgrounds including traditional community college students, career professionals seeking retraining, displaced homemakers, single parents, and students seeking specific skills for employment. While many of our students are CISC or Engineering majors, a large portion of our students are Business majors. This presents a challenge for us with respect to how we teach: approaches that work well for CISC majors do not necessarily work well with Business majors.

Looking at our CIR data, the most salient feature is the sample size. The Count (7) and Total (12) values are so low that it is unlikely to be representative of our student population as a whole. Despite the low numbers overall, we are still concerned by the numbers in Core Indicator 1, Technical Skill Attainment that show we are below the negotiated level.

Again, it is difficult to know how much weight to ascribe to these figures. However, we must ensure that our students excel in technical skill attainment, so we will take that as a challenge, regardless. Another take-away from the CIR data is that the Core Indicator 5a, Nontraditional participation also ranked low. Again, with “Count” and “Total” values of 1 and 11, respectively, interpreting the data is difficult if not impossible, but it is perhaps suggestive that we may have a retention issue with nontraditional students.

(REQUIRED) Briefly describe how the issue(s) will be addressed (objectives) specifically referencing activities in Perkins. Explain how deficits described in the response above will be rectified by planned program improvements (P.N.4.B.1) (limit 2000 characters).

By broadening our educational resources in the way of microcomputers, microcontrollers, robotics, and VR/AR technologies, we will be enriching the educational experience overall. Robotics and VR/AR technologies are noteworthy since they are proving to be highly popular and engaging areas of study. We plan to integrate robotics into our CISC 181, Principles of Info Systems course. CISC 181 is an important transfer course that many Business majors take in order to prepare for transfer to San Diego State University (SDSU). We plan to use VR/AR technologies as part of our collaboration with the Multimedia Department (MULT). We are developing a Game Programming Associates degree requiring a combination of CISC and MULT courses. We also plan to use microcomputer and microcontroller equipment in support of our collaboration with the Fashion Department. Wearable Computing is the next major platform, and we need to make sure that our students are ready for it.

All of these technologies share some powerful commonalities. To some degree they are all engaging, immersive, thought-provoking, and lucrative. Each one also holds the promise of being a important pretext for interdepartmental collaboration and dialog with industry. The fact that each of these technologies will be lucrative will likely excite the interest of a Business student as much, if not more, as a CISC student. The enrichment of our curriculum will also help us improve our 'technical skill attainment' scores, and increase retention of nontraditional students and students overall. We must embrace and teach these technologies if we to be able to fulfill our mission of preparing our students for the future.

Perkins for Services ONLY

____

(REQUIRED) Describe the assistance this service will support the success of CTE students (P.N.2.C) (limit 500 characters).

not applicable

(REQUIRED) Explain what evaluation measures will show the success of the service (P.N.2.B and P.N.3.B) (limit 500 characters).

not applicable

(REQUIRED) Briefly describe the service improvement issue(s) that requires funding (P.N.4.A.2) (limit 2000 characters).

not applicable

(REQUIRED) Briefly describe how the service issue(s) will be addressed (objectives) specifically referencing activities. (P.N.4.B.2) (limit 2000 characters).

not applicable

Form: "2018/19 Comprehensive Program Review Instructional Closing the Loop"

Created with : Taskstream
Participating Area: Computer and Information Sciences

(REQUIRED) Program name

Computer and Information Sciences (CISC)

(REQUIRED) Which one(s) of the following were received in past year?

- BARC
- Perkins

(REQUIRED) How have these resources benefited your program and your students?

While we were approved to purchase some SD Cards through BARC, we are still in the process of submitting the order. We continue to use our Linkbots robots and Ch software licenses to support lab and special workshop activities. We are currently working with the NAO Robot and HTC VIVE platforms to develop and integrate engaging new approaches to our curricula.

Request Forms

- **BARC & Facilities Requests**
- **Classified Position Request**
- **Faculty Position Request**

Reviewers

Liaison's Review

Form: Instructional Program Liaison's Review 2018/19 (Comprehensive)

Manager's Review

Form: Instructional Program Manager's Review 2018/19 (Comprehensive)

Appendix

A. **2018/19 Comprehensive Program Review Instructional Program Overview Section** (Form)
B. **SD4C Final Minutes - 181103.pdf** (Adobe Acrobat Document)
C. **CISC Advisory Cmte Minutes 2-23-2018 (1).docx** (Word Document (Open XML))
D. **2018/19 Comprehensive Program Review Instructional Curriculum Section** (Form)
E. **2018/19 Comprehensive Program Review Instructional Outcomes and Assessment Section** (Form)
F. **2018/19 Comprehensive Program Review Instructional Program Analysis Section** (Form)
G. **Cal-PASS Plus - Community-College-Pipeline_DegreesAttained.pdf** (Adobe Acrobat Document)
H. **Cal-PASS Plus - Community-College-Pipeline_EarningsAfterCompletion.pdf** (Adobe Acrobat Document)
I. **Cal-PASS Plus - Community-College-Pipeline_NumberOfEnrollments.pdf** (Adobe Acrobat Document)
J. **Cal-PASS Plus - Community-College-Pipeline_Transfers.pdf** (Adobe Acrobat Document)
K. **Perkins_CoreIndicator_Form1PartF%2D6DigitTOPCodeCollege.pdf** (Adobe Acrobat Document)
L. **2018/19 Comprehensive Program Review Instructional CTE Project Plan Section** (Form)
M. **2018/19 Comprehensive Program Review Instructional Closing the Loop** (Form)

Success

STUDENTS EARNING AWARDS

NUMBER OF AWARDS

Number of Locally-Issued Certificates Awarded

Number of Chancellor’s Office Approved Certificates Awarded

Number of Associate Degrees Awarded

Number of Applied Baccalaureate Degrees Awarded

TRANSFER

SKILLS-BUILDERS

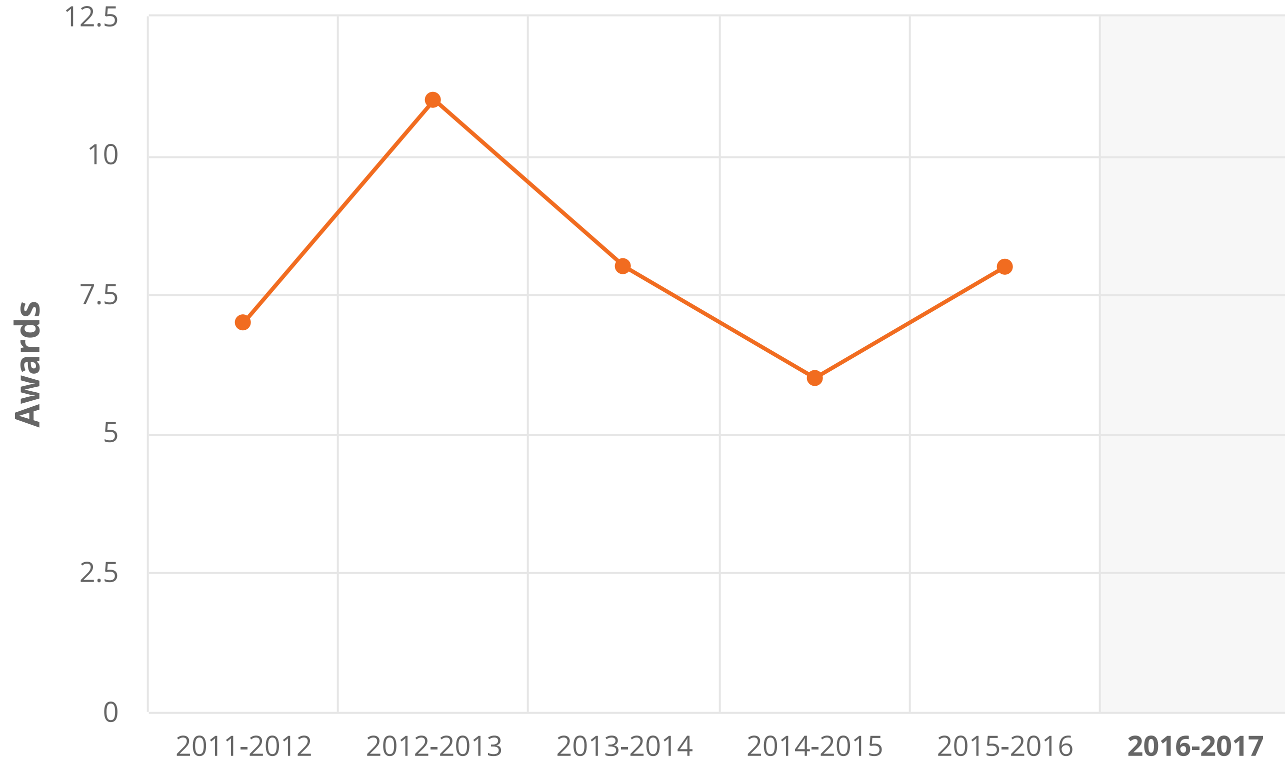
WHICH COLLEGES HAVE THE MOST EFFECTIVE PROGRAMS IN THE STATE?

CTE OUTCOME SURVEY RESPONSES

Associate Degrees Awarded

Count of associate degrees awarded

San Diego Mesa College, Computer Information Systems (0702), All Credit, 2016-2017



Resources

Find out more about the data in the LaunchBoard

Earnings

STUDENT EARNINGS

Median Earnings in the Second Fiscal Quarter After Exit (All Exiters)

Median Annual Earnings Before Exiting (All Exiters)

Median Annual Earnings After Exiting (All Exiters)

Median Change in Earnings (All Exiters)

Proportion of Students Who Attained a Living Wage (Completers and Skills-Builders)

LABOR MARKET DATA

WHICH COLLEGES HAVE THE MOST EFFECTIVE PROGRAMS IN THE STATE?

CTE OUTCOME SURVEY RESPONSES

Median Annual Earnings After Exiting

Among all exiters, the median earnings in the first, second, third, and fourth quarters after

There are insufficient data to calculate this metric.

Resources

Find out more about the data in the LaunchBoard

Offerings

Headcount of Students Who Took One or More Courses

Number of Sections Offered

Number of Enrollments

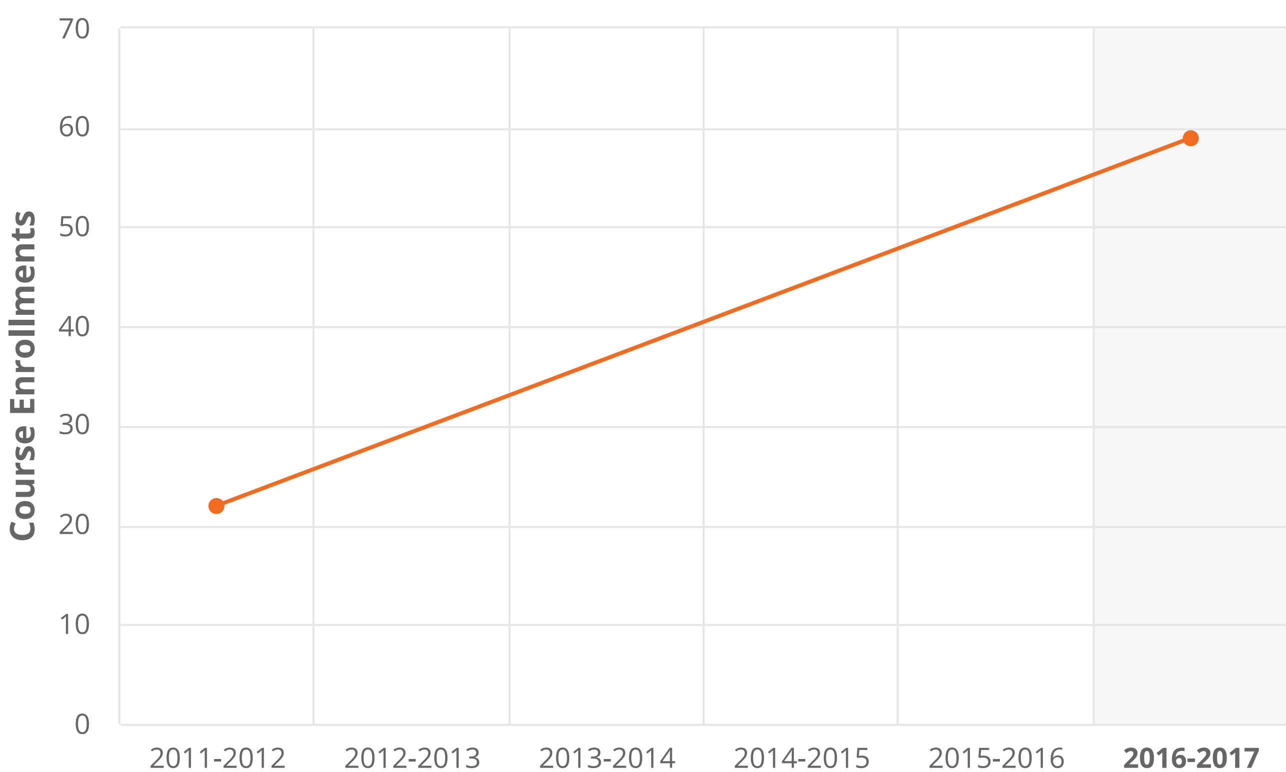
Full-Time Equivalent Students (FTES)

CTE OUTCOME SURVEY RESPONSES

Number of Course Enrollments

The number of enrollments in courses

San Diego Mesa College, Computer Information Systems (0702), All Credit, 2016-2017



Overall

Overall
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017

Resources

Find out more about the data in the LaunchBoard

Success

STUDENTS EARNING AWARDS

NUMBER OF AWARDS

TRANSFER

Students Who Transferred to a Four-Year Institution (Transfer)

SKILLS-BUILDERS

WHICH COLLEGES HAVE THE MOST EFFECTIVE PROGRAMS IN THE STATE?

CTE OUTCOME SURVEY RESPONSES

Number of Students Who Transferred to a Four-Year Institu

Students who took non-introductory courses or completed a CCCCO award who subsequen year institution the following year

There are insufficient data to calculate this metric.

Resources

Find out more about the data in the LaunchBoard

SAN DIEGO COMMUNITY COLLEGE DISTRICT

INFORMATION COMMUNICATION TECHNOLOGY, DIGITAL MEDIA, BUSINESS INFORATION WORKER INDUSTRY REGIONAL ADVISORY BOARD MEETING

San Diego/Imperial Valley Community Colleges
February 23, 2018. San Diego City College. Room MS140

MINUTES

MEMBERS PRESENT:	FACULTY PRESENT:
Evan Donaldson (TALENIX)	Leroy Brady (DSN, San Diego/Imperial County Region)
Tony Amat (NELSON PHOTO)	W. Duane Wesley (MESA COLLEGE)
Rick Belliotti (SDCRAA)	Theresa Savarese (CITY COLLEGE)
Jamal Rogers	Tom Luibel (SOUTHWESTERN COLLEGE)
Stephanie Johnston Austin, SDCOE	Rick Cassoni (MIRACOSTA COLLEGE)
Michelle Gray (CONTINUING ED)	George S. Jaseianakis (MESA COLLEGE)
Javier Ayala (GROSSMONT COLLEGE)	Curtis Sharon (CUYAMACA COLLEGE)
Jeanie Tyler (CITY COLLEGE)	David Kennemer (CITY COLLEGE)
	Gregg Baker (PALOMAR COLLEGE)
	Pippa Pierce (PALOMAR COLLEGE)
	Clifton Quinn (GROSSMONT COLLEGE)
	Rand Green (PALOMAR COLLEGE)
	Justin Bigley, (CITY COLLEGE)
	Robert Healey (CITY COLLEGE)

CALL TO ORDER.

Meeting was called to order by DSN Leroy Brady, at City College, Room MS140, at 4:20 pm, and introductions were made. He encouraged all to participate in discussions.

APPROVAL OF MINUTES. n/a

AGENDA ITEMS.

a. To inform our industry partners of any new college curriculum ready for region and state approval.

Dave Kennemer from City College stated that the Associate of Science and Certificate of Achievement in Cybersecurity was ready for the regional approval. There was some discussion on the need for Cybersecurity programs, and all were reminded there were no four-year programs in cyber in the San Diego area. Discussion followed on weighing job experience vs. certifications vs. education (2 or 4 year).

Dave asked about the possibility of offering courses in ITIL, cloud, and big data courses. Some discussion followed. Data analytics, Tableau, Dashboard, Intro to IOT, more coding (maybe Raspberry Pi) were ideas to consider. Dave also stated that he needs help in placing students in internships. Discussion followed from both faculty and business that there needs to be some guidelines and structure on both the college and industry on placing students, what is expected of an intern, etc.

Action/Decision/Assignment.

Jeanie Tyler will coordinate efforts in obtaining guidelines and structure on placing students and what is expected of an intern.

Theresa Savarese also from City College asked for support from industry on the following upcoming curriculum: Associate of Science and Certificate of Achievement in Computer Programming, Certificate of Achievement in C++, and a Certificate of Performance in Game Programming. (Theresa also informed the group that she will be hosting the SD4C Spring Meeting on Saturday, May 5 in the same room—this meeting is for CISC instructors throughout the region and includes the four-year local institutions.)

There were no other upcoming college programs for the advisors to approve. The advisory board approves the following program awards at San Diego City College effective starting Fall, 2019:

- Certificate of Performance in Game Programming--8 units
- Certificate of Achievement in C++--6 units
- Certificate of Achievement Computer Programming--24 units
- Associate of Science Computer Programming—24 units

The motion was moved by Michelle Gray and seconded by Rick Cassoni.

b. Reporting on the previous and upcoming "Tech Talks".

Leroy reported on the huge number of participants at Grossmont last semester. Mira Costa is scheduled for March 14 and Southwestern College after spring break.

Table discussions—"SpeedDating Discussion" followed. The group was divided into three tables and was given the list of topics on Leroy's agenda. Each 12-minute round was devoted to one of the topics; the next 12 minutes another topic; and then another.

Reports Included:

- Hard-to-fill positions: Cyber security cloud computing, ability to write network scripting for automation
- Over supply of positions: System administrators—too many in job market now; the industry has automated many network administration functions; help-desk technicians
- Will technology eliminate jobs: Yes, automation will eliminate some jobs, but there will always be a need to manage automation
- New technologies: Behavior of end user and smart learning; building scripts to automate existing duties/functions
- Career/Job skills needed: Basic skills will still be needed (internships help); survey of IT; critical thinking and reasoning; how to problem solve and being able to learn new versions of technologies
- How students can prepare for change in IT: By being uncomfortable with the norm on the job; being agile and able to adapt; keep the proper balance between technical and soft skills; pick up on the "culture" of the business
- Occupations being affected by automation: Transportation, contract lawyers, CPAs, many entry-level jobs

ADJOURNMENT. DSN Leroy Brady adjourned the meeting at 6:05 p.m.

Minutes submitted by: Theresa M. Savarese, Professor

College Core Indicator Information by 6-Digit TOP (2018-2019)

Perkins IV, Title I, Part C Local Application

Agreement # _______ **District/College: SAN DIEGO/SAN DIEGO MESA**

070200 - Computer Information Systems

Instructions: Print out forms. Complete and sign bottom of last page.

Cohort Year CTE Enrollments: 0 **CTE Headcount: 0**

(includes CTE enrollments above introductory level only) **(CTE students enrolled above introductory level only)**

Core Indicator 1 Technical Skill Attainment			Negotiated Level		College Performance	Percent Above or Below Negotiated Level
	Count	Total	State	District		
1 CTE Cohort*	7	12	91.00	86.40	58.33	-28.1
2 Non-Traditional	3	4	91.00	86.40	75.00	N/A
3 Displaced Homemaker			91.00	86.40	N/R	N/R
4 Economically Disadvantaged	4	8	91.00	86.40	50.00	N/A
5 Limited English Proficiency	1	1	91.00	86.40	100.00	N/A
6 Single Parent			91.00	86.40	N/R	N/R
7 Students with Disabilities	1	2	91.00	86.40	50.00	N/A
8 Migrant			91.00	86.40	N/R	N/R

Core Indicator 2 Completions - Credential, Certificate, Degree or Transfer Ready			Negotiated Level		College Performance	Percent Above or Below Negotiated Level
	Count	Total	State	District		
9 CTE Cohort*	12	12	88.00	87.84	100.00	12.2
10 Non-Traditional	4	4	88.00	87.84	100.00	N/A
11 Displaced Homemaker			88.00	87.84	N/R	N/R
12 Economically Disadvantaged	8	8	88.00	87.84	100.00	N/A
13 Limited English Proficiency	1	1	88.00	87.84	100.00	N/A
14 Single Parent			88.00	87.84	N/R	N/R
15 Students with Disabilities	2	2	88.00	87.84	100.00	N/A
16 Migrant			88.00	87.84	N/R	N/R

Core Indicator 3 Persistence and Transfer			Negotiated Level		College Performance	Percent Above or Below Negotiated Level
	Count	Total	State	District		
17 CTE Cohort*	12	12	90.00	90.00	100.00	10.0
18 Non-Traditional	4	4	90.00	90.00	100.00	N/A
19 Displaced Homemaker			90.00	90.00	N/R	N/R
20 Economically Disadvantaged	8	8	90.00	90.00	100.00	N/A
21 Limited English Proficiency	1	1	90.00	90.00	100.00	N/A
22 Single Parent			90.00	90.00	N/R	N/R
23 Students with Disabilities	2	2	90.00	90.00	100.00	N/A
24 Migrant			90.00	90.00	N/R	N/R

* If no district target is available then state targets will be used.

College Core Indicator Information by 6-Digit TOP (2018-2019)

Perkins IV, Title I, Part C Local Application

Core Indicator 4 Employment			**Negotiated Level**		**College Performance**	**Percent Above or Below Negotiated Level**
	Count	Total	State	District		
25 CTE Cohort*	5	8	72.00	72.00	62.50	N/A
26 Non-Traditional	DR	DR	72.00	72.00	DR	N/A
27 Displaced Homemaker			72.00	72.00	N/R	N/R
28 Economically Disadvantaged	DR	DR	72.00	72.00	DR	N/A
29 Limited English Proficiency	DR	DR	72.00	72.00	DR	N/A
30 Single Parent			72.00	72.00	N/R	N/R
31 Students with Disabilities	DR	DR	72.00	72.00	DR	N/A
32 Migrant			72.00	72.00	N/R	N/R

Core Indicator 5a Nontraditional Participation			**Negotiated Level**		**College Performance**	**Percent Above or Below Negotiated Level**
	Count	Total	State	District		
33 CTE Cohort*	4	12	25.00	23.08	33.33	10.3
Non-Traditional	4	12	25.00	23.08	33.33	10.3
Displaced Homemaker			25.00	23.08	N/R	N/R
Economically Disadvantaged	3	8	25.00	23.08	37.50	N/A
Limited English Proficiency	1	1	25.00	23.08	100.00	N/A
Single Parent			25.00	23.08	N/R	N/R
Students with Disabilities		2	25.00	23.08	0.00	N/A
Migrant			25.00	23.08	N/R	N/R

Core Indicator 5b Nontraditional Completions			**Negotiated Level**		**College Performance**	**Percent Above or Below Negotiated Level**
	Count	Total	State	District		
34 CTE Cohort*	4	12	29.00	26.45	33.33	6.9
Non-Traditional	4	12	29.00	26.45	33.33	6.9
Displaced Homemaker			29.00	26.45	N/R	N/R
Economically Disadvantaged	3	8	29.00	26.45	37.50	N/A
Limited English Proficiency	1	1	29.00	26.45	100.00	N/A
Single Parent			29.00	26.45	N/R	N/R
Students with Disabilities		2	29.00	26.45	0.00	N/A
Migrant			29.00	26.45	N/R	N/R

*Note: Students meeting criteria for for this indicator with 12+ CTE units in a discipline (one course is above intro) in 3 years. See cohort specifications for full criteria.

The DR notation indicates privacy requirements - EDD requires that counts less than six not be displayed. N/A (Not Applicable) indicates denominators 10 or N/R (Not Reported) indicates categories where no participants were reported. These performance indicators include all vocational programs whether or not they are supported with Perkins Title IC Funds. For more detailed reports, see Core Indicators 'Summary' and 'Detail' Reports. Shaded areas are for your information and are not included as accountability measures.

By totaling each positive, negative, N/A, N/R outcome in the last column from items 1 - 34, I certify and acknowledge that performance in the 34 Core Indicator categories is as follows:

________ of the 34 are at or above the District negotiated level(s);
________ of the 34 are below the District negotiated level(s);
________ of the 34 are list as (N/A, N/R)

Department Chair (or authorized Designee) :____

* If no district target is available then state targets will be used.

SD4C Meeting of November 3, 2018

Notes by Julie Hansen (jhansen@sdccd.edu), John Couture (jcouture@sdccd.edu) and Clifton Quinn (Clifton.Quinn@gcccd.edu).

1. **Mailing List**
   a. Need to work on getting everyone on distribution list (freelists.org/list/sd4c) to make getting notes and announcements out easier
   b. contact person is Rick Cassoni (rcassoni@miracosta.edu)

2. **Regional Advisory committee**
   a. Proposed to do it via Zoom to increase attendance
   b. Contact Tom Luibel (tluibel@swccd.edu) at Southwestern College
   c. Tom agreed to organize a Regional Advisory Committee meeting in Computer Science via Video Conferencing in Feb 2019

3. **Presentation of Net Lab**
   a. Contact Curtis Sharon (Curtis.sharon@gcccd.edu) at Grossmont College
   b. Centralized virtual environment
   c. Sandbox, 24/7, Cisco
   d. Create virtual images for practicing hacking
   e. Rick Cassoni working on a contract for other colleges to piggy back
   f. Only need internet access, nothing to download on student part
   g. Built in labs for Windows, Linux, Security +, Hacking A+, Network +, Red Hat, Palo Alto, etc.

4. **CISC 106 (Introduction to Computer Science) at SDCCD**
   a. Contact Duane Wesley (wwesley@sdccd.edu) at Mesa College
   b. A lighter version of 181 (Intro to computers) without Excel and Access
   c. More like a Intro to CS and programming

5. **Upgrading to Microsoft Word and Office 365**
   a. Office 2019 Will be the last version PC installed version from Microsoft. After that it will be cloud based and known as Office 365
   b. Most colleges indicated that they will be converting their classrooms over in Fall 2020 mainly because the publishers are not ready.

6. **Dealing with students with multiple levels of competency in a single course.**
   a. Discussion on how faculty get students engaged in their courses even when there are large discrepancies of computer literacy.

7. **Data Analytics vs Statistics**
   a. Discussion on the emergence of Data Analytics as a programming course vs. a statistics course.
   b. Rick Cassoni (rcassoni@miracosta.edu) has a 3-credit analytics course at MiraCosta he's teaching
   c. Universities still require stats ... that may not change for a 3-5 years

8. Social Media

a. Python is the easiest way to webscrape (in real time). How to develop into a programming course
b. Good thing topic for Analytics to see efficacy of social media marketing
c. How to develop into a Business course and/or a programming course?

9. Cyber Security

a. Rich Glauser of Mt San Jacinto College works in the Cyber Security industry and provided a great overview
b. Ethical Hacking as a certificate is in huge demand
c. De-Compiling Code (malware decoding for example) – also in very high demand
    i. 60% of business who are compromised go out of business within a year (not my stat)
d. Data forensics (chain of custody) – also in high demand
e. SIP for VOIP the latest threat (as of TODAY)
f. Look into Palo Alto Academy – easy to join – good thing to do

10. Community College Funding

a. Discussion about how CCC funding is changing based on certifications
b. Feasibility of awarding certificates without students having to formally apply for them?
c. Do companies really care?
d. Financial aid gets impacted if students get certified

11. Next Meeting - May 4, 2019, Cuyamaca College, Curtis Sharon will be hosting

Members that attended Nov 03, 2018 meeting:

Last	First	College	Email Address
Cassoni	Rick	@miracosta.edu	rcassoni@miracosta.edu
Couture	John	@sdccd.edu	jcouture@sdccd.edu
Dey	P	@nu.edu	pdey@nu.edu
Gerstenberg	John	@gcccd.edu	
Glauser	Rich	@gcccd.edu	
Hansen	Julie	@sdccd.edu	jhansen@sdccd.edu
Heftmann	Rex	@sdccd.edu	reheftma@sdccd.edu
Jones	Sandra	@sdccd.edu	sjones001@sdccd.edu
Luibel	Tom	@swccd.edu	tluibel@swccd.edu
Mitchel	Roger	@gcccd.edu	
Norman	Ronald	@gcccd.edu	ronald.norman@gcccd.edu
Paulding	Michael	@miracosta.edu	
Porto	June	@miracosta.edu	jporto@miracosta.edu
Raney	David	@gcccd.edu	david.raney@gcccd.edu
Salemi	Behnam	@sdccd.edu	bsalemi@sdccd.edu
Sfakianakis	George	@sdccd.edu	
Sharon	Curtis	@gcccd.edu	curtis.sharon@gcccd.edu
Stiller-Shulma	Alex	@sdccd.edu	astiller@sdccd.edu
Wesley	Walter	@sdccd.edu	wwesley@sdccd.edu