All Fields Report

Program Overview

Program	CSIS CSIS
Does this program have a CTE component?	Yes
Academic Year	2020/2021
Review Period	6 Year
Service Areas	

Program Description and Goals

This section addresses the big picture. Prompts should help you describe your program and goals and the relationship to the institutional mission, vision and goals, and how the program is funded.

1. Describe the program and/or service area under review and how the program supports the mission of Santa Monica College.

The Computer Science & Information System department is comprised of three different disciplines:

Computer Science

The field of computer science at Santa Monica College serves two major populations equally: those who plan to transfer to four-year universities, mostly University of California and California State University, and those who seek employment through the workforce education program. The two programs intersect in that students may take courses from both career training paths, and still benefit in whatever goal (transfer or employment) they want to achieve.

In the academic path, we offer the core computer science courses required to transfer such as programming in C, C++, JAVA, Python, and other languages, Data Structures, Database Concepts, Computer Hardware and Networks, in addition to other courses. In the workforce education path, we offer, in addition to the above-mentioned courses, cloud computing technologies (including Amazon Web Services and Microsoft Azure), project management, cybersecurity, and Salesforce, among others.

Programs offered include:

• Transfer Preparation

• Computer Programming Associate Degree

• Computer Science Associate Degree

• Database Applications Developer Associate Degree

• Web Developer Associate Degree

• Computer Programming Certificate of Achievement

• Computer Science Certificate of Achievement

• Database Applications Developer Certificate of Achievement

• Web Developer Certificate of Achievement

• Cloud Computing Department Certificate

• Microsoft Azure Department Certificate

• Cybersecurity Department Certificate

• Entry Level Programmer Department Certificate

• Information Systems Management Department Certificate

• Mobile Apps Development – iPhone Department Certificate

• Networking Department Certificate

Computer Information Systems

Computer information systems managers oversee a variety of administrative, clerical, and accounting functions necessary to efficiently run and maintain computerized business systems. Office workers use a variety of software to produce correspondence, maintain databases, manage projects, organize meetings, manage financial records, and create presentations. With the Internet being an integral part of everyday life, webpage authoring and web application development have been other areas of high demand in the job market. The program expanded to offer the Business Information Worker curriculum. Students also transfer to four-year universities in related technology disciplines.

Programs offered include:

• Transfer Preparation

• Business Information Worker 2 Associate Degree

• Computer Business Applications Associate Degree

• Website Software Specialist Associate Degree

• Business Information Worker 1 Certificate of Achievement

• Business Information Worker 2 Certificate of Achievement

• Computer Business Applications Certificate of Achievement

• Social Media Assistant Certificate of Achievement

• Website Software Specialist Certificate of Achievement

• Digital Publishing Certificate of Achievement

• Website Creator Certificate of Achievement

• Website Development Management Department Certificate

Office Technology

Office workers are responsible for a variety of administrative and clerical duties necessary to run and maintain organizations efficiently. They use a variety of software, produce correspondence as well as organize meetings, manage records, and schedule appointments. Office workers find employment in a variety of settings, such as corporations, government agencies, schools, and hospitals.

Programs offered include:

• General Office Associate Degree

• Legal Administrative Assistant Associate Degree

• Medical Administrative Assistant Associate Degree

• Medical Coding and Billing Specialist Associate Degree

• General Office Certificate of Achievement

• Legal Administrative Assistant Certificate of Achievement

• Legal Office Clerk Certificate of Achievement

• Medical Administrative Assistant Certificate of Achievement

• Medical Coding and Billing Specialist Certificate of Achievement

• Medical Office Clerk Certificate of Achievement

• Clerical/Data Entry Department Certificate

• Electronic Medical Records Clerk Department Certificate

• Hospital Inpatient Coder Department Certificate

• Medical Billing/Coding Department Certificate

• Medical Records Clerk/Receptionist Department Certificate

• Medical Transcription Department Certificate

2. Identify the overarching goal(s) or charge/responsibilities of the program or service area. If appropriate, include ensuring/monitoring compliance with state, federal or other mandates.

Our department goals are to provide:

- an exceptional learning environment where students develop the skills and knowledge required for today's tech industry jobs and/or for transfer to four-year colleges and universities

- an awareness of how technology can be utilized within various STEM disciplines to promote a digitally-literate global citizen in the modern internet era

- current technology skills to our students by continuously updating our courses, certificates and degrees and developing new courses, certificates and degrees to meet industry needs based on the latest versions of various popular software applications and widely adopted industry platforms used in the industry today

- career-based learning opportunities by partnering with both internal campus resources (the Office of Workforce and Economic Development, Career Services Office, Internship Office) and external groups (employers, LAEDC, our Advisory Boards, regional programs and regional projects)

3. If applicable, describe how the Institutional Learning Outcomes (ILOs), Supporting Goals, and/or Strategic Initiatives of the institution are integrated into the goals of the program or service area.

Our department goals are mapped to the institutions ILOs, Goals and Strategic Initiatives in the following ways:

- Goal #1. Exceptional Learning Environment

X	**ILO # 1.**	Acquire the self-confidence and self-discipline to pursue their intellectual curiosities with integrity in both their personal and professional lives.
X	**ILO # 2.**	Obtain the knowledge and academic skills necessary to access, evaluate, and interpret ideas, images, and information critically in order to communicate effectively, reach conclusions, and solve problems.
	ILO # 3.	Respect the inter-relatedness of the global environment, engage with diverse peoples, and acknowledge the significance of their daily actions relative to broader issues and events.
	ILO # 4.	Take responsibility for their own impact on the earth by living a sustainable and ethical lifestyle.
X	**ILO # 5.**	Demonstrate a level of engagement in the subject matter that enables and motivates the integration of acquired knowledge and skills beyond the classroom.
X	**Initiative # 1.**	Close the gaps in educational outcomes among student groups
X	**Initiative # 2.**	Expand Santa Monica College's identity by enhancing and diversifying educational and career opportunities and pathways for students
	Initiative # 3.	Foster institutional effectiveness and innovation by improving long-term and integrated planning linked to resource allocation
	Initiative # 4.	Develop a human resource plan which support student success by achieving benchmark levels of full-time faculty, classified staff, and administrators

X	**Initiative # 5.**	Improve facilities and technology infrastructure, integration and staffing.
	Initiative # 6.	Assure an effective and dynamic college by ensuring long-term fiscal stability

- Goal #2. Digital Literacy

X	**ILO # 1.**	Acquire the self-confidence and self-discipline to pursue their intellectual curiosities with integrity in both their personal and professional lives.
X	**ILO # 2.**	Obtain the knowledge and academic skills necessary to access, evaluate, and interpret ideas, images, and information critically in order to communicate effectively, reach conclusions, and solve problems.
X	**ILO # 3.**	Respect the inter-relatedness of the global environment, engage with diverse peoples, and acknowledge the significance of their daily actions relative to broader issues and events.
	ILO # 4.	Take responsibility for their own impact on the earth by living a sustainable and ethical lifestyle.
X	**ILO # 5.**	Demonstrate a level of engagement in the subject matter that enables and motivates the integration of acquired knowledge and skills beyond the classroom.
X	**Initiative # 1.**	Close the gaps in educational outcomes among student groups
X	**Initiative # 2.**	Expand Santa Monica College's identity by enhancing and diversifying educational and career opportunities and pathways for students
	Initiative # 3.	Foster institutional effectiveness and innovation by improving long-term and integrated planning linked to resource allocation
	Initiative # 4.	Develop a human resource plan which support student success by achieving benchmark levels of full-time faculty, classified staff, and administrators
	Initiative # 5.	Improve facilities and technology infrastructure, integration and staffing.
	Initiative # 6.	Assure an effective and dynamic college by ensuring long-term fiscal stability

- Goal 3. Current Technology Skills

X	ILO # 1.	Acquire the self-confidence and self-discipline to pursue their intellectual curiosities with integrity in both their personal and professional lives.
X	ILO # 2.	Obtain the knowledge and academic skills necessary to access, evaluate, and interpret ideas, images, and information critically in order to communicate effectively, reach conclusions, and solve problems.
	ILO # 3.	Respect the inter-relatedness of the global environment, engage with diverse peoples, and acknowledge the significance of their daily actions relative to broader issues and events.
	ILO # 4.	Take responsibility for their own impact on the earth by living a sustainable and ethical lifestyle.
X	ILO # 5.	Demonstrate a level of engagement in the subject matter that enables and motivates the integration of acquired knowledge and skills beyond the classroom.

X	Initiative # 1.	Close the gaps in educational outcomes among student groups
X	Initiative # 2.	Expand Santa Monica College's identity by enhancing and diversifying educational and career opportunities and pathways for students
	Initiative # 3.	Foster institutional effectiveness and innovation by improving long-term and integrated planning linked to resource allocation
	Initiative # 4.	Develop a human resource plan which support student success by achieving benchmark levels of full-time faculty, classified staff, and administrators
X	Initiative # 5.	Improve facilities and technology infrastructure, integration and staffing.

	Initiative # 6.	Assure an effective and dynamic college by ensuring long-term fiscal stability

- Goal #4. Work-Based Learning

X	**ILO # 1.**	Acquire the self-confidence and self-discipline to pursue their intellectual curiosities with integrity in both their personal and professional lives.
X	**ILO # 2.**	Obtain the knowledge and academic skills necessary to access, evaluate, and interpret ideas, images, and information critically in order to communicate effectively, reach conclusions, and solve problems.
	ILO # 3.	Respect the inter-relatedness of the global environment, engage with diverse peoples, and acknowledge the significance of their daily actions relative to broader issues and events.
	ILO # 4.	Take responsibility for their own impact on the earth by living a sustainable and ethical lifestyle.
X	**ILO # 5.**	Demonstrate a level of engagement in the subject matter that enables and motivates the integration of acquired knowledge and skills beyond the classroom.
X	**Initiative # 1.**	Close the gaps in educational outcomes among student groups
X	**Initiative # 2.**	Expand Santa Monica College's identity by enhancing and diversifying educational and career opportunities and pathways for students
	Initiative # 3.	Foster institutional effectiveness and innovation by improving long-term and integrated planning linked to resource allocation
	Initiative # 4.	Develop a human resource plan which support student success by achieving benchmark levels of full-time faculty, classified staff, and administrators
X	**Initiative # 5.**	Improve facilities and technology infrastructure, integration and staffing.

Initiative # 6.	Assure an effective and dynamic college by ensuring long-term fiscal stability

4. If your program receives operating funding from any source other than District funds identify the funding source. If applicable, note the start and end dates of the funding (generally a grant), the percentage of the program budget supported by non-District funding, and list any staff positions funded wholly or in part by non-District funds. Do not include awards for non-operational items such as equipment (ex. VTEA) or value added activities (ex Margin of Excellence).

The CSIS Department does not receive any non-District operating funds.

Populations Served

In this section you will provide information that describes who your program or service area serves. When comparing data from different periods, use a consistent time frame (ex. Compare one fall term to another fall term)

Saved Information For Populations Served

Area/Discipline Information Pertains To

All Disciplines (answered once)

1. Describe your students in terms of ethnicity, race, gender, age, residency status, citizenship, educational goal, enrollment status, and full/part-time status. Note any changes in student or enrollment data since the last six-year program review and the possible reasons for the changes.

The following information about our department was supplied to us by Institutional Research.

Age

The following table is a comparison of age in our students and the college as a whole. In recent years, our department has worked quite well with that college administrators that run our Dual Enrollment program. This partnership accounts for the significant growth in 19 & Younger students over the past six years. Our Career Education mission appears to attract a slightly older demographic.

WHOLE COLLEGE					CSIS			
	Fall 2014	%	Fall 2019	%	Fall 2014	%	Fall 2019	%
19 & Younger	8659	26.44%	8946	29.00%	578	21.46%	700	26.42%
20-24	12566	38.37%	9905	32.11%	1085	40.29%	845	31.89%

25-29	3811	11.64%	3959	12.84%		411	15.26%	447	16.87%
30-39	2677	8.18%	2860	9.27%		333	12.37%	372	14.04%
40-49	1145	3.50%	1166	3.78%		139	5.16%	165	6.23%
50 & Older	3888	11.87%	4008	12.99%		147	5.46%	121	4.57%
Unknown	0	0.00%		0.00%			0.00%		0.00%
TOTAL	32746		30844			2693		2650	

Education Status

The following table is a comparison of status in our students and the college as a whole.

WHOLE COLLEGE						**CSIS**			
	Fall 2014	*%*	**Fall 2019**	*%*		**Fall 2014**	*%*	**Fall 2019**	*%*
Adult School	179	0.56%	123	0.40%		17	0.63%	4	0.15%
AA Degree	977	3.03%	977	3.21%		83	3.09%	96	3.58%
BA Degree or higher	4679	14.52%	5238	17.23%		413	15.39%	443	16.51%
High School graduate	25313	78.53%	22735	74.80%		2146	79.96%	1912	71.24%
Not High School Graduate	401	1.24%	355	1.17%		25	0.93%	32	1.19%
Special Admit	309	0.96%	742	2.44%		0	0.00%	158	5.89%
Unreported	375	1.16%	226	0.74%		0	0.00%	0	0.00%

TOTAL	32233		30396			2684		2645	

Gender

The following table is a comparison of gender in our students and the college as a whole. Historically, our department has served significantly more men than women and these trends have continued in the past six year period.

WHOLE COLLEGE						CSIS			
	Fall 2014	**%**	**Fall 2019**	**%**		**Fall 2014**	**%**	**Fall 2019**	**%**
Female	17959	54.91%	17274	56.14%		1006	37.38%	890	33.60%
Male	14749	45.09%	13041	42.39%		1685	62.62%	1711	64.59%
Unreported	0		452	1.47%		0	0.00%	48	1.81%
TOTAL	32708		30767			2691		2649	

Ethnicity/Race

The following table is a comparison of ethnicity in our students and the college as a whole.

WHOLE COLLEGE						CSIS			
	Fall 2014	**%**	**Fall 2019**	**%**		**Fall 2014**	**%**	**Fall 2019**	**%**

Asian	4598	14%	3254	11%		551	21%	403	15%
Black	2829	9%	2426	8%		267	10%	254	10%
Latinx	11593	35%	11423	37%		808	30%	888	34%
Native American	65	0%	62	0%		4	0%	2	0%
Pacific Islander	86	0%	61	0%		4	0%	2	0%
Two or more	1194	4%	1256	4%		103	4%	129	5%
Unreported	2425	7%	3500	11%		274	10%	412	16%
White	10193	31%	8967	29%		673	25%	555	21%
TOTAL	32983		30949			2684		2645	

Residency Status
The following table is a comparison of residency in our students and the college as a whole. Historically, our department has always served a significant number of F-1 international students. In the COVID period we are in now, this reliance on international students is a concern. We are mindful that enrollment patterns may change as a result of the current political and health climate.

WHOLE COLLEGE					**CSIS**			
	Fall 2014	*%*	**Fall 2019**	*%*	**Fall 2014**	*%*	**Fall 2019**	*%*
California	26712	82.75%	25344	83.35%	2096	78.01%	2161	80.42%
Foreign Country	3185	9.87%	2563	8.43%	448	16.67%	334	12.43%

Out of State	2384	7.39%	2499	8.22%		143	5.32%	151	5.62%
TOTAL	32281		30406			2687		2646	

Enrollment Status

The following table is a comparison of enrollment in our students and the college as a whole.

WHOLE COLLEGE					CSIS				
	Fall 2014	%	Fall 2019			Fall 2014	%	Fall 2019	%
Continuing	19441	59.92%	17137	56.00%		1652	61.55%	1502	56.70%
First Time In College	5589	17.23%	5591	18.27%		382	14.23%	345	13.02%
First Time Transfer	3710	11.44%	3725	12.17%		346	12.89%	325	12.27%
Returning	3394	10.46%	3409	11.14%		298	11.10%	319	12.04%
Special Admit	309	0.95%	742	2.42%		6	0.22%	158	5.96%
Unreported	0	0.00%	0	0.00%			0.00%		0.00%
TOTAL	32443		30604			2684		2649	

Educational Goal

The following table is a comparison of goal in our students and the college as a whole. Given our Career Education focus, our department currently serves more students seeking a career objective, certificate or educational development goal than the college as a whole.

WHOLE COLLEGE					CSIS			
	Fall 2014	%	Fall 2019	%	Fall 2014	%	Fall 2019	%
Associate Degree	2038	6.26%	1136	3.71%	216	8.07%	129	4.87%
Career Objective	1762	5.42%	2037	6.64%	231	8.63%	238	8.98%
Certificate	464	1.43%	571	1.86%	84	3.14%	104	3.93%
Educ. Development	1713	5.27%	1192	3.89%	94	3.51%	100	3.78%
Other	217	0.67%	551	1.80%	0	0.00%	76	2.87%
Transfer	21561	66.27%	19502	63.61%	1891	70.61%	1713	64.67%
Undecided	1506	4.63%	1478	4.82%	90	3.36%	134	5.06%
University Student	1000	3.07%	579	1.89%	72	2.69%	48	1.81%
Unreported	2272	6.98%	3613	11.78%	0	0.00%	107	4.04%
TOTAL	32533		30659		2678		2649	

Full/Part-Time Status

The following table is a comparison of status in our students and the college as a whole. Our department serves a much higher percentage of full-time students than the college as a whole. We believe this reflects positively on our response to the Guided Pathways effort as well as the College Promise program which serve many of our students.

WHOLE COLLEGE					CSIS			
	Fall 2014	%	Fall 2019	%	Fall 2014	%	Fall 2019	%

Full-time	10481	32.13%	10677	34.81%		1166	43.33%	1167	43.37%
Part-time	18762	57.51%	16504	53.81%		1525	56.67%	1484	55.15%
Noncredit	3381	10.36%	3492	11.38%		0	0.00%	0	0.00%
TOTAL	32624		30673			2691		2651	

2. Compare your student population with the college demographic. Are your students different from the college population?

From the data provided by Institutional Research and summarized in the tables above, we see that CSIS attracts a slightly different student population in the following ways:

- Many more students aged 25-49 (37% for CSIS versus 25% for the college as a whole). We don't find this result all that surprising, given our Career Education focus and our significant reskilling student population.

- Many more men (64.5% for CSIS versus 42% for the college a whole). This finding identifies the significant gender inbalance we see in CS classes. Addressing this imbalance is one of steps outlined below in **Future Planning and Recommendations**.

- More Asians and African-Americans (15% and 10% for CSIS versus 11% and 8% for the college as a whole)

- Fewer Whites and Hispanics (21% and 34% for CSIS versus 29% and 37% for the college as a whole)

- More non-resident/F1 students (19.5% for CSIS versus 16.6% for the college as a whole). We don't find this result all that surprising, as our department has a long history of serving F1 students. The data quoted above was from 2019. In prior years under a different presidential administration, this difference was even greater. For example, in 2014, 22% of CSIS was non-resident/F1 whereas the college itself served 17% in this category.

- Slightly more transfer-focused (64.67% for CSIS versus 63.61% for the college as a whole). We don't find this result all that surprising, given the 100s of students that successfully transfer to a four-year program each year in one of our disciplines.

- More full-time students (43.37% for CSIS versus 34.81% for the college as a whole)

- More Special Admit status students (5.96% for CSIS versus 2.42% for the college as a whole). We don't find this result all that suprising, given our long and successful history with dual enrollment classes

3. What percentage of students in your program place in basic skills and, if applicable, how does this impact your program goals and/or curriculum.

From the data provided by Institutional Research, the three disciplines in CSIS perform differently with respect to so-called "basic skills students". Both OFTECH and CIS perform better on measures of retention and success than does the College as a whole while CS performs worse.

CSIS faculty need to further study the specific course taking patterns and outcomes of its student. Any attempt to address equity gaps will have to entail possible different strategies to address differences not only among the courses themselves but also make faculty conscious of the different audiences in their classroom and their particular needs. CSIS has started journey to close equity gaps through a number of the steps outlined below in **Future Planning and Recommendations**.

Program Evaluation

In this section programs/units are to identify how, using what tools, and when program evaluation takes place. Evaluation must include outcomes assessment as well as any other measures used by the program. Please use Section D to address program responses to the findings described in this section.

Programs/units with multiple disciplines or functions may choose to answer the following questions for each area. If this is your preferred method of responding, begin by selecting a discipline/function from the drop down, answer the set of questions and click "Save", your answers will be added to the bottom of page. Do this for each discipline/function. If you would like to answer the questions once, choose "Answer Once" from the drop down.

How would you like to answer these questions?

Saved Information For Program Evaluation

Area/Discipline Information Pertains To

All Disciplines (answered once)

1. List the specific SLOs your program or discipline has chosen to focus on this year for discussion of program improvement.

SLOs are specific, measurable statements of 'what a student should know, be able to do, or value when they complete a course'. An SLO focuses on specific knowledge, attitudes, or behaviors that students will demonstrate or possess as a result of instruction.

As part of this six-year review process, the CSIS Department has chosen to focus on all of the department and program level SLOs for discussion of program improvement. This approach works well because all of our course level SLOs are aligned with one or more of our department and program level SLOs.

2. Describe how the program assesses SLOs and uses the results for program improvement including:

- **how outcomes are assessed and how often**
- **how and when the program or discipline reviews the results and engages program/discipline faculty in the process**

Faculty assess course level SLOs each term. A reminder on conducting SLO assessments is sent to all faculty by the Department Chair at the beginning of each semester. A second reminder is sent out as well at the end of the semester once final grades become due. Faculty typically use course assessments (projects, quizzes, exams, assignments) to determine whether a student has met or has not met the standard of a specific SLO. In section D, we address our response to these findings and our action plans moving forward.

3. If your program or discipline issues a degree or certificate list each degree or certificate and the core competencies students are expected to achieve on completion.

Core competencies focus on the body of knowledge, attitudes, and behaviors a student will have acquired upon completion of a program or certificate and are assessed by either a capstone course or success rates on SLOs for core courses.

The CSIS Department offers 11 different Associates degrees and 30 certificate programs across our three disciplines of Computer Information Systems, Computer Science and Office Technology.

Program Name	Degree	Certificate	Core Competencies
General Office	X		Written and Oral Communication Collaboration Creative Thinking Critical Thinking Information Literacy Teamwork Planning and Organization
Legal Administrative Assistant	X		Written and Oral Communication Collaboration Creative Thinking Critical Thinking Information Literacy Teamwork Planning and Organization
Medical Administrative Assistant	X		Written and Oral Communication Collaboration Creative Thinking Critical Thinking Information Literacy Teamwork Planning and Organization
Medical Coding and Billing Specialist	X		Written and Oral Communication

			Collaboration
			Creative Thinking
			Critical Thinking
			Information Literacy
			Technological Fluency
			Quantitative Reasoning
			Teamwork
			Planning and Organization
Computer Programming	X		Software and Application Development
			Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Computer Science	X		Software and Application Development
			Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Database Applications Developer	X		Software and Application Development
			Technological Fluency
			Quantitative Reasoning

			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Web Developer	X		Software and Application Development
			Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Business Information Worker 2	X		Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Computer Business Applications	X		Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork

Website Software Specialist	X		Technological Fluency Quantitative Reasoning Creative Thinking Critical Thinking Information Literacy Quantitative Reasoning Teamwork
Computer Programming Computer Science		X	Software and Application Development Technological Fluency Quantitative Reasoning Creative Thinking Critical Thinking Information Literacy Quantitative Reasoning Teamwork
Database Applications Developer		X	Software and Application Development Technological Fluency Quantitative Reasoning Creative Thinking Critical Thinking Information Literacy Quantitative Reasoning Teamwork
Web Developer		X	Software and Application Development Technological Fluency Quantitative Reasoning

			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Cloud Computing		X	Software and Application Development
			Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Microsoft Azure		X	Software and Application Development
			Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Cybersecurity		X	Software and Application Development
			Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking

			Information Literacy Quantitative Reasoning Teamwork
Entry Level Programmer		X	Software and Application Development Technological Fluency Quantitative Reasoning Creative Thinking Critical Thinking Information Literacy Quantitative Reasoning Teamwork
Information Systems Management		X	Software and Application Development Technological Fluency Quantitative Reasoning Creative Thinking Critical Thinking Information Literacy Quantitative Reasoning Teamwork
Mobile Apps Development – iPhone		X	Software and Application Development Technological Fluency Quantitative Reasoning Creative Thinking Critical Thinking Information Literacy Quantitative Reasoning Teamwork

Networking		X	Software and Application Development
			Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Business Information Worker 1		X	Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Business Information Worker 2		X	Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Computer Business Applications		X	Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking

			Information Literacy
			Quantitative Reasoning
			Teamwork
Social Media Assistant		X	Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Website Software Specialist		X	Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Digital Publishing		X	Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Website Creator		X	Technological Fluency
			Quantitative Reasoning

			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
Website Development Management		X	Technological Fluency
			Quantitative Reasoning
			Creative Thinking
			Critical Thinking
			Information Literacy
			Quantitative Reasoning
			Teamwork
General Office		X	Written and Oral Communication
			Collaboration
			Creative Thinking
			Critical Thinking
			Information Literacy
			Teamwork
			Planning and Organization
Legal Administrative Assistant		X	Written and Oral Communication
			Collaboration
			Creative Thinking
			Critical Thinking
			Information Literacy
			Teamwork
			Planning and Organization

Legal Office Clerk		X	Written and Oral Communication
			Collaboration
			Creative Thinking
			Critical Thinking
			Information Literacy
			Teamwork
			Planning and Organization
Medical Administrative Assistant		X	Written and Oral Communication
			Collaboration
			Creative Thinking
			Critical Thinking
			Information Literacy
			Teamwork
			Planning and Organization
Medical Coding and Billing Specialist		X	Written and Oral Communication
			Collaboration
			Creative Thinking
			Critical Thinking
			Information Literacy
			Teamwork
			Planning and Organization
Medical Office Clerk		X	Written and Oral Communication
			Collaboration
			Creative Thinking
			Critical Thinking
			Information Literacy
			Teamwork

			Planning and Organization
Clerical/Data Entry		X	Written and Oral Communication Collaboration Creative Thinking Critical Thinking Information Literacy Teamwork Planning and Organization
Electronic Medical Records Clerk		X	Written and Oral Communication Collaboration Creative Thinking Critical Thinking Information Literacy Teamwork Planning and Organization
Hospital Inpatient Coder		X	Written and Oral Communication Collaboration Creative Thinking Critical Thinking Information Literacy Teamwork Planning and Organization
Medical Billing/Coding		X	Written and Oral Communication Collaboration Creative Thinking Critical Thinking

			Information Literacy
			Teamwork
			Planning and Organization
Medical Records Clerk/Receptionist		X	Written and Oral Communication
			Collaboration
			Creative Thinking
			Critical Thinking
			Information Literacy
			Teamwork
			Planning and Organization
Medical Transcription		X	Written and Oral Communication
			Collaboration
			Creative Thinking
			Critical Thinking
			Information Literacy
			Teamwork
			Planning and Organization

4. What other evaluation measures does your program or discipline use to inform planning? (For example, student surveys, enrollment trends, student success, retention, degrees/certificates awarded, job placement, transfer rates, TIMS report, tutor usage etc.) Note trends and differences in performance by group (ethnicity, gender, age) or enrollment type (day/evening, on-ground/on-line).

The CSIS Department uses a variety of measures to evaluate its effectiveness. We regularly review enrollment data, success and retention rates, degree and certificate completions and our Advisory Board recommendations as part of the evaluation process.

Equity Data

In conjunction with this self-study, our department carefully studied completion, retention and success data to identify equity gaps in achievement. Numerous department meetings were spent discussing the data, identifying additional information that could help us understand the problem better and build an action plan. We reviewed data focusing on

various characteristics including race/ethnicity, gender and veteran populations. We studied the department as whole, our three individual disciplines and our "gateway" courses. The following tables below provide this information. In each table, success and retention are reported as percentages, while counts are plain numbers.

RACE/ETHNICITY

(*Italics*/*Underline* show the highest value and **Bold** shows the lowest value in a particular term)

CIS OVERALL		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
success	**Asian**	*78.9*	73.5	*78.7*	82.8	81.0	*83.6*
retention		87.2	89.8	88.4	90.5	90.2	87.5
count		313	332	267	274	205	128
success	**Black**	**45.5**	**55.5**	**38.3**	**55.9**	**51.5**	**59.1**
retention		**73.0**	**71.1**	**60.0**	**71.3**	**72.3**	**76.5**
count		189	218	175	136	130	115
success	**Latinx**	63.7	68.5	62.6	69.5	64.4	67.0
retention		80.2	79.5	75.8	84.5	79.7	81.4
count		449	438	372	326	315	361
success	**White**	72.3	70.0	68.6	71.7	74.6	*83.6*
retention		85.2	79.9	80.1	78.9	82.6	*89.6*
count		358	374	347	247	264	201
success	**2 or More**	64.9	57.8	57.7	56.8	71.1	65.1
retention		80.7	**71.1**	63.5	72.7	88.9	76.7

count		57	45	52	44	45	43
success	**Unreported**	74.5	*75.0*	72.0	*84.6*	*87.0*	77.9
retention		*89.4*	*89.9*	89.6	*92.3*	*94.7*	86.0
count		188	148	125	91	131	136

CIS GATEWAY		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
success	**Asian**	*76.4*	75.3	*83.1*	*87.3*	83.9	*85.7*
retention		85.0	89.3	*90.9*	*93.1*	91.2	87.8
count		235	268	196	203	109	74
success	**Black**	**44.7**	**51.6**	**40.1**	**53.1**	**49.4**	**51.4**
retention		**71.1**	**72.3**	67.3	**68.3**	**71.2**	**74.0**
count		117	135	123	70	61	59
success	**Latinx**	66.6	69.8	66.2	72.8	66.5	71.1
retention		84.0	80.2	77.9	88.8	80.4	82.5
count		336	325	260	181	173	194
success	**White**	73.1	69.5	76.0	82.8	74.5	82.6
retention		86.6	81.9	86.2	86.9	81.7	88.1
count		199	223	185	116	129	92
success	**2 or More**	71.2	59.3	53.3	84.5	67.2	69.3

retention		84.6	77.5	**62.7**	84.5	91.7	78.4
count		45	37	31	20	28	23
success	**Unreported**	75.7	*78.3*	76.5	85.7	*90.1*	84.2
retention		*90.4*	*91.2*	90.3	92.4	*97.6*	*90.6*
count		160	110	97	73	87	95

CS OVERALL		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
success	**Asian**	76.6	*79.0*	79.9	*77.3*	69.6	72.0
retention		84.2	88.7	87.2	86.5	80.4	83.5
count		291	372	398	414	460	382
success	**Black**	**49.4**	62.5	**57.4**	62.7	**39.6**	**50.8**
retention		73.6	75.9	74.8	75.4	76.2	**64.0**
count		87	112	115	118	134	197
success	**Latinx**	59.4	**58.1**	59.5	**62.5**	55.1	57.1
retention		78.6	**72.2**	**74.2**	**73.0**	**70.5**	74.1
count		384	449	481	563	691	706
success	**White**	75.5	78.4	73.8	74.6	69.2	75.0
retention		83.6	86.9	78.9	81.6	78.7	83.5

count		428	464	450	544	610	508
success	**2 or More**	59.6	64.1	70.6	69.7	69.9	*62.5*
retention		**70.2**	75.0	77.9	80.9	81.2	78.3
count		57	64	68	89	133	120
success	**Unreported**	*79.2*	77.2	*80.2*	75.5	*73.5*	*75.9*
retention		*93.4*	85.1	*90.1*	*91.2*	88.3	*89.8*
count		106	101	101	147	196	394

CS GATEWAY		**Fall 2014**	**Fall 2015**	**Fall 2016**	**Fall 2017**	**Fall 2018**	**Fall 2019**
success	**Asian**	84.0	*85.6*	*87.1*	*86.4*	60.4	77.5
retention		91.2	*95.1*	*90.9*	93.9	68.9	73.9
count		146	151	189	197	144	103
success	**Black**	73.7	**59.8**	68.9	70.3	**31.1**	65.3
retention		85.2	**70.6**	81.1	82.1	71.0	**72.9**
count		43	46	37	60	48	54
success	**Latinx**	69.8	66.2	**62.8**	**61.8**	45.4	**56.1**
retention		86.1	78.0	**75.1**	**69.9**	**62.6**	80.9
count		221	251	264	301	305	164
success	**White**	79.7	83.8	79.9	76.3	61.0	75.5

retention		90.0	89.6	83.6	82.9	69.3	84.1
count		165	226	209	241	226	146
success	**2 or More**	**65.3**	81.7	84.7	78.4	65.5	79.1
retention		**72.5**	81.7	86.1	87.1	77.2	89.7
count		25	30	33	43	46	40
success	**Unreported**	*86.8*	*78.0*	*79.4*	*79.9*	*76.5*	*84.8*
retention		*96.9*	*87.0*	*90.4*	*95.8*	*88.1*	*96.2*
count		52	35	45	70	82	135

OFTECH OVERALL		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
success	**Asian**	70.3	*88.5*	*78.9*	75.5	71.0	*84.6*
retention		78.4	*92.3*	84.2	*93.9*	83.9	*96.2*
count		37	26	38	49	31	26
success	**Black**	*43.8*	48.1	**42.5**	**41.3**	**39.0**	**51.1**
retention		**75.0**	**73.1**	**75.0**	**78.3**	85.4	86.7
count		48	52	40	46	41	45
success	**Latinx**	73.0	67.0	77.9	*69.4*	59.1	76.2
retention		87.4	86.1	93.3	90.1	**75.7**	87.6
count		111	115	104	121	115	105

success	White	*80.4*	73.2	75.0	73.9	72.5	75.0
retention		88.2	80.4	92.9	80.4	86.3	81.8
count		51	56	56	46	51	44
success	**2 or More**	77.8	**25.0**	78.6	76.2	46.2	75.0
retention		77.8	75.0	*100.0*	95.2	92.3	**75.0**
count		9	4	14	21	13	4
success	**Unreported**	69.2	73.7	72.7	85.7	*90.0*	73.3
retention		84.6	84.2	90.9	85.7	*100.0*	90.0
count		13	19	11	7	10	30

OFTECH GATEWAY		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
success	**Asian**	66.7	50.0	**62.5**	*100.0*	*100.0*	*100.0*
retention		**66.7**	*100.0*	**75.0**	*100.0*	*100.0*	*100.0*
count		15	10	19	21	18	9
success	**Black**	20.0	**33.3**	**75.0**	**66.7**	60.0	**40.0**
retention		80.0	**66.7**	**75.0**	**66.7**	*100.0*	90.0
count		14	26	14	11	15	19
success	**Latinx**	**60.0**	*68.8*	85.7	78.6	**40.0**	63.6
retention		70.0	87.5	*100.0*	*100.0*	**60.0**	**72.7**

count		46	52	33	47	52	40
success	**White**	66.7		*100.0*	*100.0*	75.0	*100.0*
retention		**66.7**		*100.0*	*100.0*	*100.0*	*100.0*
count		17		26	17	16	20
success	**2 or More**	*100.0*		*100.0*	*100.0*	*100.0*	
retention		*100.0*		*100.0*	*100.0*	*100.0*	
count		3		2	5	6	
success	**Unreported**			*100.0*	*100.0*		*100.0*
retention				*100.0*	*100.0*		*100.0*
count				8	6		14

GENDER

CSIS AS A WHOLE		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
success	**Female**	67.0	70.0	70.0	70.0	66.0	70.0
count		1209	1307	1148	1191	1218	1217
success	**Male**	69.0	69.0	67.0	71.0	66.0	68.0
count		2045	2175	2152	2100	2322	2277
success	**Unreported**				83.0	67.0	67.0

count						6	42	64

CIS DISCIPLINE		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
success	**Female**	67.0	69.0	67.0	72.0	73.0	76.0
count		688	740	611	556	540	485
success	**Male**	69.0	68.0	63.0	72.0	70.0	70.0
count		877	823	739	565	546	494
success	**Unreported**				100.0	71.0	64.0
count					5	7	14

CIS GATEWAY		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
success	**Female**	67.0	71.0	71.0	81.0	72.0	78.0
count		463	479	383	298	251	250
success	**Male**	71.0	68.0	66.0	77.0	73.0	73.0
count		632	611	510	367	335	282
success	**Unreported**				50.0	50.0	62.0
count					1	2	8

CS DISCIPLINE		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
success	**Female**	69.0	73.0	73.0	69.0	60.0	64.0
count		284	335	329	426	493	546
success	**Male**	69.0	70.0	69.0	71.0	65.0	67.0
count		1073	1232	1288	1453	1701	1717
success	**Unreported**					65.0	68.0
count						34	47

CS GATEWAY		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
success	**Female**	75.0	81.0	83.0	74.0	54.0	65.0
count		148	168	161	204	215	188
success	**Male**	76.0	75.0	74.0	73.0	55.0	70.0
count		504	574	618	709	617	552
success	**Unreported**					63.0	62.0
count						13	8

OFTECH DISCIPLINE		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
success	**Female**	70.0	65.0	73.0	67.0	62.0	72.0
count		201	186	176	209	185	186

success	**Male**	65.0	70.0	70.0	70.0	56.0	71.0
count		72	87	89	82	75	66
success	**Unreported**				0.0	100.0	67.0
count					1	1	3

OFTECH GATEWAY		**Fall 2014**	**Fall 2015**	**Fall 2016**	**Fall 2017**	**Fall 2018**	**Fall 2019**
success	**Female**	61.0	57.0	74.0	69.0	56.0	80.0
count		69	77	64	84	66	66
success	**Male**	76.0	62.0	80.0	78.0	60.0	80.0
count		42	51	46	45	47	40
success	**Unreported**						
count							

VETERAN POPULATIONS

CSIS AS A WHOLE		**Fall 2014**	**Fall 2015**	**Fall 2016**	**Fall 2017**	**Fall 2018**	**Fall 2019**
overall success		67	72	63	58	54	57
count		98	125	120	108	110	124
male count		81	98	107	95	84	90

male success	65	73	64	59	55	57
female count	18	28	17	13	21	28
female success	72	68	53	54	62	71
unreported count		3	3		5	

CIS DISCIPLINE		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
overall success		70	68	60	52	57	53
count		37	50	40	33	30	40
male count		30	32	29	26	24	28
male success		73	69	59	54	63	39
female count		7	18	11	7	6	12
female success		57	67	64	43	33	83

CS DISCIPLINE		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
overall success		63	75	69	58	51	59
count		46	68	70	67	72	81
male count		45	65	68	66	58	59
male success		62	75	69	59	52	64

female count	1	3	2	1	9	16
female success	100	67	50	0	78	63
unreported count					5	6

OFTECH DISCIPLINE		Fall 2014	Fall 2015	Fall 2016	Fall 2017	Fall 2018	Fall 2019
overall success		73	86	50	88	63	67
count		15	7	10	8	8	3
male count		5	1	8	3	2	3
male success		60	100	63	100	50	67
female count		10	6	2	5	6	
female success		80	83	0	80	67	

5. If applicable, discuss achievement rates on state licensure exams.

Our program does not offer any curriculum that leads to state licensure.

6. Career Technical Education (CTE) programs are required to have active industry advisory boards which meet at least once a year. (Attach minutes from each meeting since the last program review report). List advisory board membership, how often it meets, and indicate involvement with the program.

We have three different advisory boards that meet annually to review, discuss, guide and advise each of our disciplines in our department. We regularly assess their recommendations and act upon them. Minutes have been attached and membership is documented below.

Computer Science Advisory Board Members:

SMC Attendees: Howard Stahl, Edwin Ambrosio, Scott Bishop, Fariba Bolandhemat, Nancy Cardenas, Jinan Darwiche, Mark Edmonds, Mary Eshaghian, Sira Hotsinpiller, Dan Hurley, Koda Kol, David Morgan, Vicky Seno, Joseph Su

SMC Students: Nashir Janmohamed, Ariel Young

Non-SMC Attendees:

Charlotte Augenstein (State Chancellor's Office ICT Sector Navigator)

Matt Gray (Honey)

Richard Korf (UCLA Computer Science)

Cord Thomas (RAND Corporation)

Christian Williamson (Amazon Web Services)

Computer Information Systems Advisory Board Members

SMC Attendees**:** Kiersten Elliott, Howard Stahl, Brenda Rothaupt, Gina Jerry, Odemaris Valdivia, Ann Marie Leahy, Maria Leon-Vazquez, Sasha King, Nancy Cardenas, Tricia Ramos, Sue Canada, Fariba Bolandhemat, Sal Veas, Jacqueline Scott, Antoinette Simmonds, Steven Sedky, Maral Hyeler

Non-SMC Attendees:

Manual Gomez

Eden Weinberg

John Guitierrez

Ted Dahle

Wayne Fernandez

Office Technology Advisory Board Members:

SMC Attendees: Howard Stahl, Fariba Bolandhemat, Odemaris Valdivia, Dione Carter, Ashley Mejia, Justin Vyor, Katherine Maschler, Liz Koenig, Jacqueline Scott, Antoinette Simmonds, Alaisen Reed

Non-SMC Attendees:

Reginald Clark (Clark Inc)

Danielle Kelley (DePuy Synthes Companies)

7. Describe any program response to advisory board recommendations. Give specific examples.

We have three different advisory boards that meet annually to review, discuss, guide and advise each of our disciplines in our department. We regularly assess their recommendations and act upon them. For example, in Spring 2020, the CS

Advisory Board recommended we consider offering a Data Science certificate program. This program was proposed in Fall 2020 inside Meta and we are awaiting the Curriculum Committee's further review of this new program. In Spring 2020, the CIS Advisory Board recommended a number of changes to the Social Media Assistant certificate program. In support of these recommendations, this certificate program was revised in Fall 2020 and we are awaiting the Curriculum Committee's further review of these changes.

D1: Past year's Objectives

As part of the planning process, programs are expected to establish annual objectives that support the program's goals. Please document the status of the program/function's previous year's objectives. Add comments if you feel further explanation is needed.

Objectives

Objective: Launch Azure Web Services Classes and Certificate in Fall, 2020 Status: Completed Comments: Azure is Microsoft's cloud computing platform. We are excited to offer this learning opportunity to our students and believe many will find jobs once they acquire these technology skills	
Objective: Support Certification Exams For Completers In Various Programs With Perkins Funding Status: Completed Comments: The new Perkins rules allows the college to fully fund the cost of industry recognized certification exams. We believe students in each of our three disciplines will have a much greater likelihood of being hired in industry if they can pass certification exams upon completing their certificate or degree.	
Objective: Launch non-credit offerings in CIS in Fall, 2020 Status: Completed Comments: Launching In Fall, CIS has created two non-credit classes and created a non-credit Certificate of Completion. We are working with the Dean of Non-Credit and External Programs so that these classes might be offered at other locations via a new partnership with Job Center of California - JVS Work Source. Additionally, we are partnering with ESL Non-Credit and its Workforce Innovation grant to serve their students.	
Objective: Develop Program Maps in support of the redesign effort Status: Completed Comments: Finished and sent to the Curriculum Committee for further review	
Objective:	

Approve all identified courses requiring Emergency Distance Education approval

Status: Completed

Comments:
Finished and sent to the Curriculum Committee for further review

Looking Back

In this section, please document what you did last year as a result of what you described in Section C.

1. Describe any accomplishments, achievements, activities, initiatives undertaken, and any other positives the program wishes to note and document.

Thank you for the opportunity to note some of our accomplishments.

- Significant increase in awarded certificates and degrees (up more than 300% in the past 6 years)

- Significant curriculum development (modified 3 AA degrees, 3 CoAs, 4 departmental certificates - created 5 new departmental certificates, 3 new CoAs and 20 new courses)

- Sponsor of three active and vibrant student clubs

- Participate in many grants including NSF STEM, NASA CIPAIR, JPL SIRI, POCR, NETLab/Cybersecurity grants

- Lead the regional Cloud Computing Strong Workforce project

- Interact with many industry partners including AWS Educate, Microsoft Learn, Bixel Exchange and Apple One

- Partner with local youth organizations such as the Boys and Girls Club of Santa Monica and Venice YouthBuild

- Provide free and reduced cost certification exam vouchers to students who complete our various certificate programs

- Prepare hundreds of students each year for transfer to four-year universities

2. Summarize how the program or service area addressed the recommendations for program strengthening from the executive summary of the previous six-year program review.

Prior program review recommendations for program strengthening and our response are presented below.

1. Identify strategies to address the equity gap that can be implemented using existing resources and partnerships with other institutional programs and efforts.

   We continue to work to close equity gaps. In the Future Planning section of this report, we outline a number of new additional steps we are taking that we expect will improve our results in this area.

2. Compare gender, equity, and success data with regional and national data in the field to determine whether our data is significantly out of alignment to inform goals for improving departmental data.

   We continue to scrutinize our gender, equity and success data. In the Future Planning section of this report, we outline a number of new additional steps we are taking that we expect will improve our results in this area. Our newly formed Equity Workgroup will seek out regional and national comparable data to inform our work.

3. Conduct follow-up studies to identify challenges underrepresented students face inhibiting successful completion of CSIS courses.

We continue to work to improve completions of CSIS courses. In the Future Planning section of this report, we outline a number of new additional steps we are taking that we expect will improve our results in this area.

4. Explore options for linking backend computer skills with new user design interface courses.

   Since the most recent program review, the iXD program has selected both CIS 54 and CS 7 (Programming for Non-Majors) to be part of the baccalaureate program. In addition, at various times, certain CSIS classes have been scheduled at the CMD campus.

5. Determine departmental will to engage in pre-requisite validation and enforcement.

   Since the most recent program review, we engaged in a departmental discussion regarding pre-requisites. The Computer Science decided to enforce pre-requisites in its two most advanced programming classes, CS 20A and CS 20B.

6. Identify a primary focus for the OFTECH program.

   Since the most recent program review, we successfully hired a new full-time faculty member in the OFTECH program. Professor Reed's background is in billing and coding which has become the major focus of the program. Under her leadership, the program is flourishing and serving local underrepresented students from our Venice YouthBuild partnership as well as the Boys and Girls Club of Santa Monica.

3. Describe any changes or activities your program or service area has made that are not addressed in the objectives, identify the factors (e.g., licensure requirements, state or federal requirements, CCCO mandates, regulations, etc.) that triggered the changes, and indicate the expected or anticipated outcomes.

Not applicable to CSIS.

4. If your program received one time funding of any kind indicate the source, how the funds were spent and the impact on the program (benefits or challenges).

Not applicable to CSIS.

5. Describe departmental efforts to improve the teaching and learning environment.

We recognize that our teaching and learning environment has a direct effect on student achievement and retention. Since the last program review, we have:

   - Replaced the carpet in all our computer classrooms and computer lab

   - Replaced the chairs in all our computer classrooms and computer lab

   - Fixed the significant roof leaks in the Business building

   - Upgraded all our computers in the computer classrooms and computer lab

   - Performed mold remediation in Business 201

   - Upgraded all our faculty instruction equipment and provided laptops to those faculty requesting them

   - Supported IT in its efforts to create VCL (the Virtual Computer Lab) which has pushed out all software titles to

students remotely in the age of COVID

- Distributed a number of higher-end laptops to students requiring better equipment to successfully complete their coursework than the standard-issued Chromebooks provided by the college

- Replaced all the overhead projectors with 4K HD equipment

Furthermore, we have begun working with Facilities to outline the parameters for a replacement building. The college is developing a proposal to seek funding from the state for a replacement for the Business building. While many of us currently working will likely be retired by the time this construction begins, we are working diligently on this long-term project.

6. If there is a tutoring component or other learning support service associated with the program, describe the relationship between the service(s) and the instructional program. If applicable, discuss any data you have compiled regarding student participation and the impact on student success.

The College supports our department with a tutoring coordinator position shared with the Business department that schedules tutoring in the CSIS Computer Lab (BUS 231) as well as in the Tutoring center (BUS 150) throughout the academic year. Like all other campus services, starting in Summer 2020, all tutoring sessions are being conducted remotely. There is no on-ground tutoring during the COVID-19 pandemic. Students make online tutoring appointments via Corsair Connect. Our tutoring program is managed by Aline Baumgartner under the direction of Wendi Demorst, Associate Dean of Student Instructional Support.

The CSIS Tutoring lab has been an important part of our program for many years. An automated system helps track students who visiting the tutoring lab for assistance. Institutional Research tracked tutoring visits for specific students over many semesters and was able to correlate these visits to the courses in which these students were enrolled in. While not every student visiting the tutoring lab specified a course for which they were seeking assistance, data shows the magnitude of the need and breadth of the CSIS tutoring services provided by the tutoring program. We continue to believe that tutoring has a positive impact on student success and retention. The Department will continue to advocate for the use tutoring services by our students. We place tutoring information in the syllabi, advertise it in our classes, and remind students of the impact that using tutoring services has on their class performance.

The Department continues to work closely with the tutoring coordinator. Because we share a common facility, we see each other often in the hallways. Our interactions are frequent and collegial. Faculty are easily able to update the LRC staff of any curricular, textbook, or other relevant changes. Staff are also able to talk with faculty regarding questions or concerns that arise in their work with CSIS students. Faculty often refer students to work in the Tutoring program.

When asked, faculty report a high level of satisfaction with tutoring services and staff. However, faculty continue to advocate for a classified tutoring position. This position is needed because currently all of our tutors are students taking 12 or more units who have completed some of the classes in prior terms. It is fairly easy to find tutors for our beginning classes using this method, but it is very difficult and almost impossible to find qualified student tutors for the vast majority of the classes we offer. We would like either a full-time or even a part-time tutor to add professionalism, reliability and consistency to our tutoring program.

7. Describe any grants, VTEA, or other funding received since the last review [in the past year] and how it was used to improve the program.

- Perkins grants have supported various professional development activities over the past year in Cybersecurity and Cloud Computing

- Perkins grants have support classroom/lab computer upgrades to solid-state hard drives which greatly extended the useable life of the equipment

- Perkins grants have support new 4K-HD overhead projectors for all our classrooms

- Strong Workforce funding has supported the Cloud Computing program at SMC and the regional project in numerous ways including supporting a part-time counselor, project manager, faculty stipends, professional development, marketing videos, loanable computer laptops for students, as well as funding Cloud Day and Cloud Init programs.

- DE Conversion Stipends related to COVID/Remote Instruction were paid to 11 full-time faculty and to 23 part-time faculty using a formula adopted by the department through a collegial process of consultation and discussion

8. Describe faculty engagement in activities, training, or professional development to remain current with industry trends.

Given the continuously changing nature of the IT industry, our faculty regularly seek out training and professional development opportunities by attending events of all kinds including @ONE training, academic conferences like SIGGRAPH and others, industry seminars such as AWS re:Invent, Microsoft Azure webinars, Tableau training/webinars, hosting and leading local meetup groups, participating and leading campus workshops and technology training related to remote instruction. Our department regularly lacks enough funding for all the events faculty wish to attend.

Moving Forward

Discuss and summarize conclusions drawn from data, assessments (SLO, UO) or other evaluation measures identified in Section C and indicate responses or programmatic changes planned for the coming year(s) including:

- **how the assessment results are informing program goals and objectives, program planning, and decision-making**
- **specific changes planned or made to the program based on the assessment results**

Computer Information Systems Discipline

There has been a decline in the overall number of sections over the past six-year period – 66 sections in Fall 2014 versus 44 in Fall 2019. Given this level of reduction, it is not surprising to see total course enrollments also fell from 1428 in Fall 2014 to 875 in Fall 2019. During this period, course completion rates improved, rising 5.3% from 67.9% to 73.2%. Similarly, course retention rates also improved, rising 0.5% from 82.9% to 83.4%. The overall number of degrees and certificates awarded remained fairly consistent from 20 awards in academic year 2014-2015 to 16 in academic year 2019-2020.

We remain concerned about the ongoing drop in enrollment in the CIS discipline. (-33% from 2014-2019). While it is not a universally held view, a number of CIS faculty believe their program would benefit from being reorganized under the Business department. We are waiting on Academic Affairs to determine if this option would be viable.

Computer Science Discipline

There has been an increase in the overall number of sections over the past six-year period – 42 in Fall 2014 versus 76 sections Fall 2019. With this increase in course offerings, total course enrollments have also increased from 1099 in Fall

2014 to 1680 in Fall 2019. During this period, course completion rates improved, rising 0.3% from 68.8% to 69.1%. Similarly, course retention rates remained relatively unchanged, moving down 0.2% from 81.8% to 81.6%. The overall number of degrees and certificates awarded grew dramatically from 33 awards in academic year 2014-2015 to 163 in academic year 2019-2020.

Office Technology Discipline

There has been a slight decline in the overall number of sections over the past six-year period – 23 sections in Fall 2014 versus 18 sections Fall 2019. Total course enrollments have remained fairly flat – 220 in Fall 2014 versus 216 in Fall 2019. During this period, course completion rates improved, rising 3.3% from 68.5% to 71.8%. Similarly, course retention rates also improved, rising 4.3% from 83.2% to 87.5%. The overall number of degrees and certificates awarded grew dramatically from 27 awards in academic year 2014-2015 to 79 in academic year 2019-2020.

D2: Coming year's Objectives (Moving Forward)

Objective #1
Objective:

Complete tenure review process

Area/ Discipline/ Function Responsible: All

Assessment Data and Other Observations:
 TIMS Report Data

External Factors:
 Other Factors
  Ongoing contractual process

Timeline and activities to accomplish the objective: Ongoing contractual process

Describe how objective will be assessed/measured: Ongoing contractual process

Comments: Scott Bishop, Mary Eshaghian, Alaisen Reed, Vicky Seno

Objective #2
Objective:

Complete the Cybersecurity position recruitment and hiring process

Area/ Discipline/ Function Responsible: CS: COMPUTER SCIENCE

Assessment Data and Other Observations:
 TIMS Report Data

External Factors:
 SMC Master Plan for Education

Timeline and activities to accomplish the objective: Recruitment
Paper Screening
Interviews
Superintendent/President Selection

Describe how objective will be assessed/measured: A process that culminates in the hiring of a new faculty member

Comments: This hiring committee got stopped in Spring 2020

Objective #3
Objective:

Identify ways that Credit For Prior Learning initiative can be integrated into our program

Area/ Discipline/ Function Responsible: All

Assessment Data and Other Observations:
 Institutional Research Data

External Factors:
 Other Factors
  Chancellor's Office Initiative

Timeline and activities to accomplish the objective: Evaluate prior learning options
Identify acceptable prior learning

Describe how objective will be assessed/measured: Students being awarded credit for prior learning

Comments: https://www.insidehighered.com/quicktakes/2020/10/16/prior-learning-credits-boost-completion-odds

Objective #4
Objective: Critically review and revise degrees and certificates

Area/ Discipline/ Function Responsible: All

Assessment Data and Other Observations:

External Factors:

Timeline and activities to accomplish the objective:

Describe how objective will be assessed/measured:

Comments:

Curriculum Review

To comply with accreditation standards, programs are required to update their curriculum outlines of record (CORs) every six years. Be sure to submit your updated outlines to the Academic Senate Joint Curriculum Committee in time for them to be reviewed prior to or at the Curriculum Committee's last scheduled meeting of the year (check the committee's submittal deadlines at (click here for dates and deadlines). The Program Review annual report will note whether course outlines are up to date.

1. Discuss how the department reviews, revises, and creates new curriculum. Include the following information:

- **The process by which department members participate in the review and revision of curriculum.**

- **How program goals and SLOS are integrated into course design and curriculum planning.**
- **The relationship of program courses to other college programs (cross-listing, overlapping content**
- **The rationale for any changes to pre-requisites, co-requisites and advisories.**
- **How the department ensures course syllabi are aligned with the course outline of record.**

Curriculum:

CSIS actively maintains and changes our courses and degrees and certificates to keep pace with industry changes. Faculty review and revise curriculum through discussion at department and unit meetings. Changes are presented and the rationale for the changes and the expected outcomes are discussed. Many of these changes are prompted by feedback from our Advisory Board meetings.

During the time covered by this Program Review cycle, CSIS's involvement with the Guided Pathways project has greatly influenced our curriculum planning. The Guided Pathways project helped us understand how to better align our degrees to existing transfer pathways. As a result, we have modified three AA degrees, three Certificates of Achievement , four department certificates and developed five new department certificates (Azure, Data Science, Business Information Worker, Cybersecurity, Receptionist – Non Credit), three new Certificates of Achievement (Azure, Data Science, Cybersecurity) and twenty new courses (CS 79E, CS 79F, CS 82A, CS 82B, CS 82R, CS 73A, CS 73B, CS 73C, CS 73L, CS 77A, CS 77B, CS 87B, CS 79X, CS 79Y, CS 79Z, CIS 30T, CIS 35B, CIS 36M, CIS 902, CIS 903), revised seven courses (CIS 1, CIS 30, CIS 32, CIS 35A, CIS 39, CIS 67, CIS 70) and sought Distance Education approval for eighteen courses (CS 20A, CS 20B, CS 33, CS 40, CS 41, CS 42, CS 51, CS 54, CS 56, CS 60, CS 61, CS 65, CS 70, CS 75, OFTECH 1A, OFTECH 1B, OFTECH 1C, OFTECH 9). The student response to these changes has been extremely positive. We are very proud that students are earning these revised degrees and certificates at such high levels.

CSIS	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Awarded Certificates And Degrees	80	99	94	135	155	258

Cross-listing:

Several courses in our department are cross-listed with other departments including:

- GIS 20 / CIS 20 : Introduction to Geographic Information Systems with the Geography Department

- CIS 70 / BUS 34B : Digital Marketing Applications

SLOs and Syllabi:

Faculty access course level SLOs every term. Our Department Chair reminds all faculty to conduct SLO assessments and

submit SLO outcome data in mProfessor along with final grades at the end of each term. Faculty typically use course assessments (project, quizzes, exams, assignments) to determine whether a student has met or has not met the standard of a specific SLO. Each term, faculty include course SLOs on their course syllabus to ensure that SLO information is communicated with their students. Syllabi are upload into mProfessor each term and our Department Chair reviews them to ensure SLOs are included. As part of this program review cycle, each course outline of record has been reviewed to ensure that it includes SLO information. As part of our faculty evaluation process, evaluators receive and review syllabi and verify SLO information as well.

2. Discuss the role of the advisory board and other industry bodies or input in updating curriculum to meet industry standards and the needs of students.

The CSIS Department maintains three different Advisory Board Committees: one for Computer Information Systems (CIS), one for Computer Science (CS) and one for Office Technology (OFTECH). All these meetings are held in the Spring, now virtually once the college went remote due to COVID. Advisory Board members include industry professionals, entrepreneurs, placement agencies, academic institutions that our students transfer to. We also recruit a student member to participate and share their perspective with the board. Each Advisory Board provides input on our courses, certificates, programs as well as provide us with job market information and strategic direction. Advisory Board members provide feedback on the relevance of course content based on current industry needs. We regularly follow board recommendations to guide changes and additions to our programs. Advisory Board members also helps us to establish internships for our students, provide mock interviews, review resumes and give our students career advice.

Computer Science Advisory Board Members:

SMC Attendees: Howard Stahl, Edwin Ambrosio, Scott Bishop, Fariba Bolandhemat, Nancy Cardenas, Jinan Darwiche, Mark Edmonds, Mary Eshaghian, Sira Hotsinpiller, Dan Hurley, Koda Kol, David Morgan, Vicky Seno, Joseph Su

SMC Students: Nashir Janmohamed, Ariel Young

Non-SMC Attendees:
Charlotte Augenstein (State Chancellor's Office ICT Sector Navigator)
Matt Gray (Honey)
Richard Korf (UCLA Computer Science)
Cord Thomas (RAND Corporation)
Christian Williamson (Amazon Web Services)

Computer Information Systems Advisory Board Members

SMC Attendees**:** Kiersten Elliott, Howard Stahl, Brenda Rothaupt, Gina Jerry, Odemaris Valdivia, Ann Marie Leahy, Maria Leon-Vazquez, Sasha King, Nancy Cardenas, Tricia Ramos, Sue Canada, Fariba Bolandhemat, Sal Veas, Jacqueline Scott, Antoinette Simmonds, Steven Sedky, Maral Hyeler

Non-SMC Attendees:
Manual Gomez
Eden Weinberg
John Guitierrez
Ted Dahle

Wayne Fernandez

Office Technology Advisory Board Members:

SMC Attendees: Howard Stahl, Fariba Bolandhemat, Odemaris Valdivia, Dione Carter, Ashley Mejia, Justin Vyor, Katherine Maschler, Liz Koenig, Jacqueline Scott, Antoinette Simmonds, Alaisen Reed

Non-SMC Attendees:
Reginald Clark (Clark Inc)
Danielle Kelley (DePuy Synthes Companies)

Community Engagement

In the prompts that follow, please delineate the partnerships you have with the rest of the SMC community as well as those you have with external organizations.

1. If applicable, describe how your department staff members engage in institutional efforts such as committees and presentations, and departmental activities.

With regards to institutional engagement, our department has always had a very strong and active commitment toward college governance. Members of our department have been active in the Academic Senate and the Faculty Association, serving on Program Review, Curriculum, Distance Education, DPAC, Information Services, Career Education, the Institutional Review Board and the Student Relief Fund among others. Members of our department also regularly participate in the Cool Careers program sponsored by the Career Center. More recently, our department also became Faculty Ambassadors to enrich our CTE courses with relevant industry speaker opportunities. Supported with Perkins funding, this important project has helped our students meet and network with employers in industry today.

Our department faculty sponsor three student clubs: COMTECH (which explores emerging trends in Computer Science), the SMC Robotics Club (which build robots and competes in local competitions) and the Game Developers Unite club (which helps students participate in local game development competitions).

Our department regularly participates in Welcome Day to promote our programs. We also regularly work with the Student Success Committee presenting various technology workshops throughout the semester. Our department faculty also serve as technology mentors to further support faculty with various technology tools.

In recent years, our department has become involved in various grant activities. Our department faculty are part of the NSF STEM grant to foster equity-minded student success. Our department faculty are leading regional projects with the Office of Workforce and Economic Development in Cloud Computing and participating in the Strong Workforce project that focuses on NETLab and Cybersecurity. Many of our students have benefited from our ongoing relationship with NASA and JPL. Our department was awarded the NASA CIPAIR grant to improve our curriculum by partnering faculty and students together in summer fellowships to complete research projects. We work with JPL and its SIRI program to foster student independent research with staff members of JPL. We also work with NASA to mentor students in the NCAS program.

Since Summer of 2019, several CIS faculty have participated in Peer Online Course Review (POCR) grant and two faculty, Gina Jerry and Fariba Bolandhemat, are among campus POCR certified reviewers. The POCR grant is part of the OEI-CVC, Chancellor's office that supports online initiatives. To become a POCR certified reviewer, faculty took the online 4-week POCR course and became a resource to all faculty in aligning to adapted existing Course Design Rubric by reviewing online course shells, participating in virtual office hours to assist faculty with their questions, attending POCR related activities.

2. If applicable, discuss the engagement of program members with the local community, industry, professional groups, etc.)

Our department faculty are involved in many different community efforts. In the past year, faculty have served as judges on Congressman Ted Lieu's Congressional App Challenge. A number of our faculty serve as Cloud Ambassadors on councils and workgroups sponsored by AWS Educate. Many of our faculty (Howard Stahl, Vicky Seno, Koda Kol, Munir Samplewala) coordinate the Amazon Web Services project across the Southland. This past year, more than 600 students participated in two Cloud Day events promoting the program. More than 1,000 students were enrolled in AWS courses run at 19 community colleges in the region. We also have established a relationship with Microsoft Learn to support our new Microsoft Azure courses.

During the period covered by this program review cycle, we joined the regional Cybersecurity project being organized by Rio Hondo College this past year. A job placement company named Bixel Exchange has been helping students with employment and internships in the industry. Data and feedback from Bixel Exchange has shown that our CS student cohort is the largest and best prepared of any of the participating colleges.

The students in our department greatly benefit from our partnership with Apple One. This firm has been working to place our students into both paid and unpaid industry positions. They have been working with our students by reviewing their resumes and helping them complete mock interviews. In conjunction with our Career Services staff, this partnership has been working out well for our students.

Our Office Technology area has also worked with a number of different community groups including the Boys and Girls Club of Santa Monica as well as YouthBuild in Venice. We are preparing youth from these organizations for gainful employment through different certificate programs in our department.

There were also community events since the last program review. CIS faculty Brenda Rothaupt organized the SMC Google Women Techmakers Conference. The conference was held in March 2016 in partnership with Google and offered the 150 attendees an opportunity to hear from a panel of computer science and technology female executives from companies, such as SpaceX, JPL, Amgen, Universal Music Group, iPayment and Gas Technology. The panelists discussed their roles, experiences, education and background that lead to their career paths, along with topics relevant to the female executive experience in male dominated industries. Attendees also met with the panelists in breakout sessions to discuss topics specific to their industry.

Because of the increasing significance of skills certification for employment, in addition to education, our CIS unit is aligning with two organizations, Certiport and NexusEdge, to offer certification. Through Certiport, we can offer students training, testing and certification in Quickbooks, Microsoft Office, and Adobe. Once completed, these certificates can be directly loaded to a student's LinkedIn profile to display their skills to future employers. SMC has become a certified

testing center for the certificate exams offered through Certiport. During COVID, we have moved to online testing in compliance with requirements. By coordinating with McGrawHill, we are able to offer students discounted pricing to sit for the Microsoft Office exams.

NexusEdge offers students Google Suite applications' certificates through modules and testing embedded in Canvas. These modules can be utilized in courses that review the Google applications. NexusEdge also offers our CSIS students pursuing the Social Media Assistant certificate of achievement an opportunity to complete digital marketing modules in Canvas that lead to internship and employment opportunities. This embedded Canvas feature has recently been added, so we look forward to offering these certification opportunities in the coming months.

Changes to Perkins funding requirements have made it possible to request financial support for certification testing for all three of our disciplines. These requests have been approved and supported by the Career Educational committee.

3. Discuss the relationship among and between full and part-time faculty, involvement of part-time faculty in departmental activities, and part-time faculty access to resources and support.

Our department has had a long history of supporting its part-time faculty. A number of our part-time faculty have been employed at the college for twenty years or more. Part-time faculty regularly attend department meetings and we welcome their active participation. New part-time hires are regularly mentored by our full-time faculty. Part-time faculty have access to all of the resources that our full-time faculty access, including office space, computer access, email, publisher resources, room keys, mailboxes, copier access and the like.

Current Planning and Recommendations

The following items are intended to help programs identify, track, and document unit planning and actions and to assist the institution in broad planning efforts.

1. Identify any issues or needs impacting program effectiveness or efficiency for which institutional support or resources will be requested in the coming year. [This information will be reviewed and considered in institutional planning processes but does not supplant the need to request support or resources through established channels and processes].

Computer Lab Availability and Utilization

For more than five years, the Business Computer lab has been closed on Sundays and shuts down early on Saturdays at 4:30 PM. Student surveys and demographic data from 2018-2019 show 56.3% of our students are part-time students who work during the week. These individuals miss the opportunity to use the lab to complete their assignments, thus impacting their success. In the past, we have collected signatures from hundreds of students who are seeking to open the Business Computer lab on Sundays. We believe our level of student success and engagement is harmed from the lack of District support on this issue.

However now that we are living through COVID, IT created the Virtual Computer Lab (VCL) to support students remotely. This project has been extremely successful and calls into questions a number of our assumptions about our Computer Lab utilization once things return to somewhat normal. We hope the VCL can continue to be supported even when we return to campus. Since it provides 24x7 access, it greatly improves our working student's ability to complete their assignments.

Classroom Environment

Our existing classrooms regularly need to be refreshed. In the recent past, we have acquired new moveable whiteboards, replaced carpet, repainted, installed new desks and chairs and refreshed all our existing iMacs. This past year, we got funding to replace our overhead projectors with 4K 7,000 lumen projectors. Additionally, we got funding to upgrade our lab computers with solid state drives. Both the projectors and the drives will need to get installed once we return to campus.

2. If applicable, list additional capital resources (facilities, technology, equipment) that are needed to support the program as it currently exists. [This information will be reviewed and considered in institutional planning processes but does not supplant the need to request resources through established channels and processes].

Not applicable

3. If applicable, list additional human resources (staffing, professional development, staff training) needed to support the program as it currently exists. [This information will be reviewed and considered in institutional planning processes but does not supplant the need to request resources through established channels and processes].

IT staff support is critical to the success of our program. As the complexity of our curriculum continues to grow, District IT staff has not been adequately matched to our needs. When different servers go down, this past year, IT staff has begun to rely upon on our part- time faculty to restore them. It is critical that college staff have sufficient training to support and maintain the servers our program relies upon.

Our department would support the reimagining of the role of our department administrative assistant. Both the Business Chair (Sal Veas) and I agree that the role of the Department AA has pretty much stayed the same over the past many years. In fact, there are a number of activities that are no longer handled by the AA as compared to the support provided many years ago. The responsibilities of the AA do not reflect the new role of the Department office and new responsibilities that are a result of digital communication with the public and our students.

Ongoing professional development is very important in a technology program where the state-of-the-art changes rapidly. While we have been successful in recent years leveraging Perkins and Strong Workforce funding for this purpose, these funding source cannot be relied upon every year to meet our needs. We always have conferences faculty wish to attend that cannot be funded adequately.

Future Planning and Recommendations

The following items are intended to help programs identify, track, and document unit planning and actions and to assist the institution in broad planning efforts.

1. Projecting toward the future, what trends could potentially impact the program? What changes does the program anticipate in 5 years; 10 years? Where does the program want to be? How is the program planning for these changes?

Our Department is extremely active revising our curriculum. In the past six years, we revised three AA degrees, three Certificates of Achievement, four department certificates and developed five new department certificates, three new Certificates of Achievement and twenty new courses. Coupled with all our prior curriculum efforts, we have run out of course numbers in Computer Science and Computer Information Systems and would welcome a three-digit course numbering pattern.

Given the current budget climate, Academic Affairs has been implemented many consecutive years of WTH reductions. These reductions make it very difficult to build an appropriate schedule. Our area could do much more if we were given the opportunity to grow. We have identified additional certificate programs we would like to launch but fear we will not be given enough WTH for them.

2. If applicable, list additional capital resources (facilities, technology, equipment) that will be needed to support proposed changes. [This information will be reviewed and considered in institutional planning processes but does not supplant the need to request resources through established channels and processes].

In the near-term, we see the need to better equip the technology in place in our classrooms. The need to live-stream in-person instruction seems like a lesson COVID has taught us. Will our students return en-masse to on-ground instruction? Instead shouldn't the college plan for facility usage patterns to change? We see the need for better smart classrooms with technology that helps faculty deliver instruction remotely even after we return. This would mean a significant investment in mics, cameras, projectors and smart white boards similar to what is shown here:

https://www.sandiego.edu/its/support/classrooms/hybrid-classroom-technology.php

3. If applicable, list additional human resources (staffing, professional development, staff training) that will be needed to support proposed changes. [This information will be reviewed and considered in institutional planning processes but does not supplant the need to request resources through established channels and processes].

In Fall of 2018, we requested a full-time position focusing on Cybersecurity. This is an area where we see tremendous growth potential and could greatly benefit from a faculty with the right skill set. Approved in Spring 2019 and recruited in Fall 2019, the hiring process got stopped by the COVID crisis. While the need remains, it is very unclear at this time when or if this position will get once again approved for recruitment.

Over the past few years, our department has greatly benefitted from Strong Workforce funding. A significant portion of this funding has paid for professional development activities to help various faculty members keep their skills current. However, we never have enough funding for all the training faculty have requested.

4. If applicable, note particular challenges the program faces including those relating to categorical funding, budget, and staffing.

In Fall of 2019, we applied for Perkins funding to upgrade our lab computers with solid state disk drives. This purchase would effectively extend the useful life of this equipment a few more years by significantly speeding their performance at a cost much less than a full desktop replacement. The funding was approved in Spring of 2020 and went out to Purchasing in Summer of 2020. But Purchasing has stopped all non-essential requests while we are remote. While we understand this prioritization at this time, we worry about the backlog of projects that IT staff will need to complete once we return to campus.

In Fall of 2019, we received Strong Workforce funding to upgrade all our classroom projection equipment to high-resolution 4K projectors. The equipment was ordered and procured. Given all the demands on IT staff at the moment, we have waited to install them. We do worry about the backlog of projects that IT staff will need to complete once we return to campus.

5. Summarize any conclusions and long term recommendations for the program resulting from the self evaluation process.

The CSIS Department has embarked on the journey to close its equity gaps. Our faculty have agreed to support the

following goals and actions:

Overarching goal: CSIS seeks to close its equity gaps within each of our disciplines by 50% in the next five years. With regards to the CIS and OFTECH discipline, this task involves boosting the achievement of African American students. With regards to the CS discipline, this task involves boosting the achievement of Latinx students as well as welcoming more female students into our program.

Actions in support of this goal:

- We will adopt the new GPS system in all our sections. We will train faculty on using the GPS system and inform one another on best practices for using it.

- We will adopt the new Direct Connect within Canvas in all our sections. We will train faculty on using Direct Connect and inform one another on best practices for using it.

- We have created an equity workgroup to identify and disseminate best practices to help all our faculty progress toward meeting our stated goal.

6. Please use this field to share any information the program feels is not covered under any other questions.

During the COVID crisis, we would like to commend all the IT staff and in particular Miguel Reyes for supporting our program by developing the Virtual Computer Lab (VCL). The VCL has helped us support students with lab software remotely via Citrix. It has worked extremely well and our enrollment during this challenging time for the college has remained strong. We would like to recommend that even when things return back to somewhat normal that we continue to offer VCL services to students.

Evaluation of Process

Please comment on the effectiveness of the Program Review process in focusing program planning.

The Program Review process has helped us identify our strengths and weaknesses. It has encouraged department-wide as well as discipline-focused discussions on how to strategize our goals and how to better align with the college's goals and initiatives. In addition, the process helped us to put forward a 6-year plan for budget, staff and curriculum.

Data supplied by Institutional Research has been shared in this report. Numerous data discrepancies were uncovered. Our department lacks confidence in the any of the explanations supplied by Institutional Research. Conflicting values were supplied on different dashboards, many of which made no sense. If the college seeks to be data-driven in its decision making, it would be well worth the effort involved to be sure the data driving decisions is accurate, complete and correct.

Executive Summary

These fields to be filled out by the Program Review committee. Reports will be sent to the program and will be available on-line to populate relevant fields in the annual report and the next 6 year report.

Narrative

Program Evaluation

Commendations

Recommendations for Program Strengthening

Recommendations for Institutional Support

Attached File Upload

Attached Files	
CIS Advisory Board Minutes	
CS Advisory Board Minutes	
OFTECH Advisory Board Minutes	