INSTRUCTIONAL ANNUAL PROGRAM PLANNING WORKSHEET FOR 2017-2018

CURRENT YEAR: 2017-2018 | **PROGRAM: COMPUTER INFORMATION SYSTEM**
CLUSTER: WED | **LAST YEAR CPPR COMPLETED: 2014**
NEXT SCHEDULED CPPR: 2018 | **CURRENT DATE: FEBRUARY**

This APPW encompasses the following degrees and/or certificates:

- A.S. – Computer Science
- A.S. – Management Information Systems
- CS – iOS Developer
- CS – Android Developer
- CS – Internet Applications Developer

GENERAL PROGRAM UPDATE

Describe significant changes, if any, to program mission, purpose or direction. *If there are not any, indicate: NONE.*

- Due to strong enrollment, growth rates over the past 2 years the Computer Information Systems program (CIS) was awarded a full-time temporary faculty member for the 2015-2016 academic year. The addition of another instructor with Computer Science credentials enabled us to expand our offerings and continue to grow.
- The next step to sustain growth was the creation of a new full-time, tenure-track position for CIS. The position was the WEB cluster's top priority and was ultimately granted but then cancelled (along with most of the other new tenure-track slots) in the course of union negotiations. Upon cancellation of the position, the CIS program will not be able to sustain the growth that occurred with the presence of the full-time temporary faculty member.
- The CIS program has been able to grow outside traditional means due to our partnership with Lucia Mar Unified School District (LMUSD). In Fall 2016 a new lab was debuted; however course offerings were delayed by LMUSD technical issues. This delay forced a late start date of our first course, which severely affected enrollment on the campus of Central Coast New Tech High School (CCNTH). The lab provides a viable facility to teach CIS courses in the South County.
- LMUSD along with Paso Robles High School are two local school districts where Cuesta College is offering dual enrollment of CIS 201 and CIS 210 courses this year
- Given the strong response to our Dual Enrollment efforts (especially at CCNTH) we will be increasing our offerings in the South County in 2017-18. Not only will this allow local high school students an opportunity to do more advanced college work in the field, it also provides a more convenient opportunity for potential students in South County and adjacent areas.

PROGRAM SUSTAINABILITY PLAN UPDATE

Was a Program Sustainability Plan established in your program's most recent Comprehensive Program Plan and Review?

Yes ☐ If yes, please complete the Program Sustainability Plan Progress Report below.
No ☒ If no, you do not need to complete a Progress Report.

INSTRUCTIONAL ANNUAL PROGRAM PLANNING WORKSHEET FOR 2017-2018

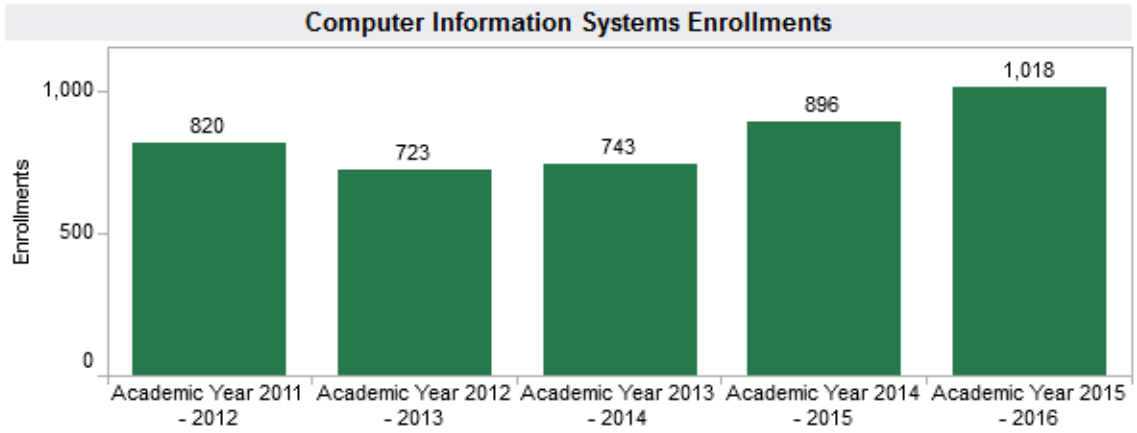
DATA ANALYSIS AND PROGRAM-SPECIFIC MEASUREMENTS

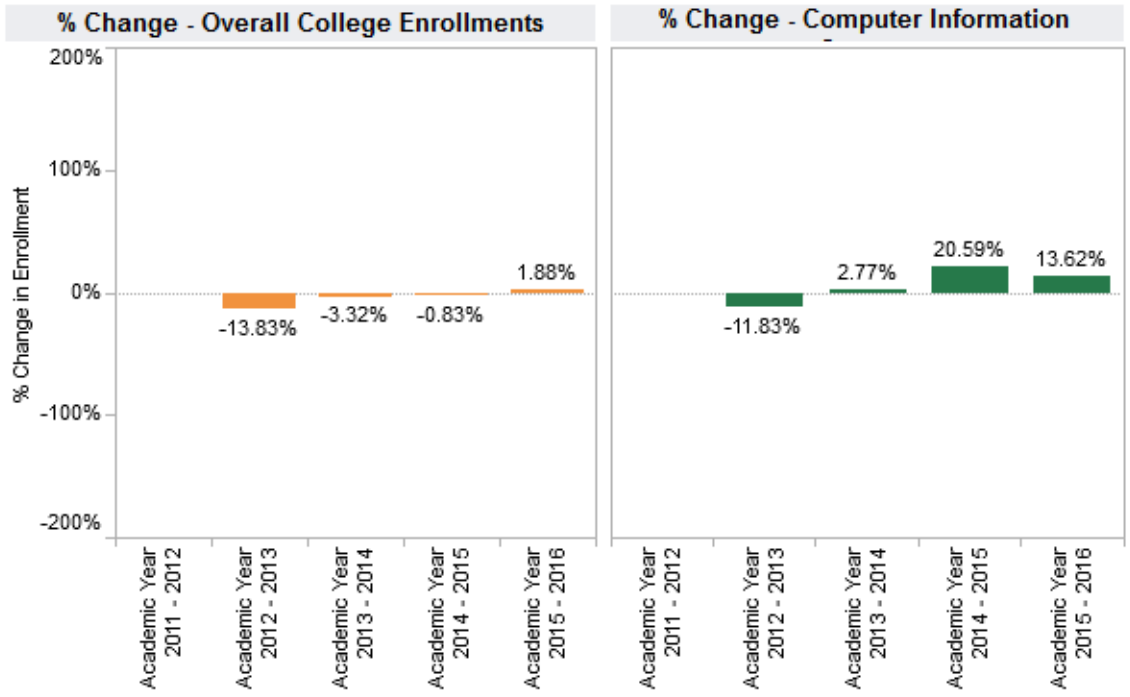
Enrollment

SLOCCCD Program Review Data - Enrollment

Department: Computer Information Sys...

Course: (All)



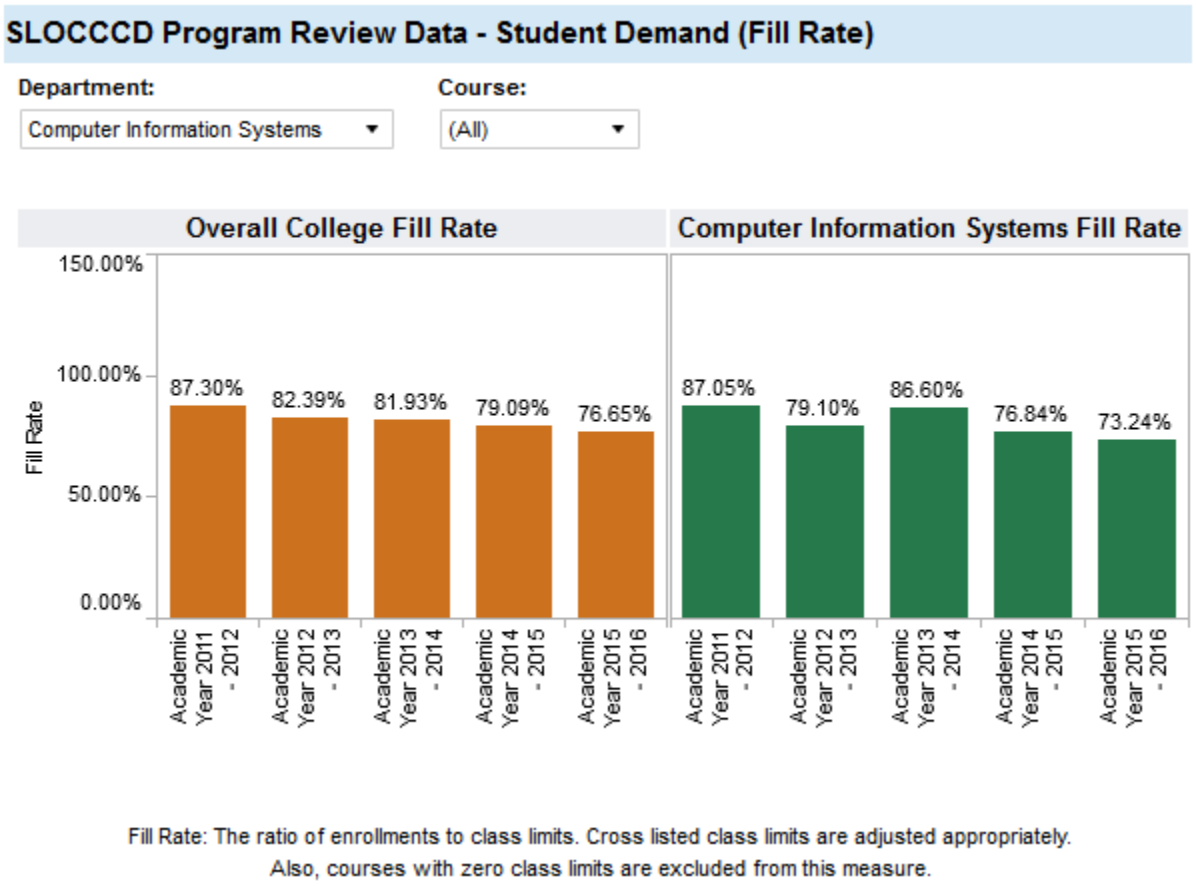


Enrollment in the CIS program has improved significantly over the previous APPW. Growth within CIS has been a three-year trend (723 to 896 to 1018). Enrollment for CIS grew by 13.62% far above the College's growth of 1.88%.

Enrollment growth came from additional sections as well as continued growth in topics of great interest (mobile and internet applications development.)

Enrollment projections for 2016-17 are to remain stable due to the cancellation of the granted full-time tenure-track faculty position, which limits our ability to offer certain high-demand classes due to the competition for candidates with Cal Poly and industry. If more instructors with computer science credentials could be brought on board (which is unlikely without a tenure-track position), enrollment would climb even more.

Student Demand (Fill Rate)



Fill Rate: The ratio of enrollments to class limits. Cross listed class limits are adjusted appropriately. Also, courses with zero class limits are excluded from this measure.

Fill rates for the CIS program have mirrored the College's fill rates, which is a 3% decrease. Though the fill rate for CIS was above the college average in 2013-14, it dipped (as it did for the college overall) the past two years.

Demand for courses remains strong even with the addition of new sections. Students are very interested in the field given its high employability and starting pay. Students are also interested in learning some of the latest, more marketable skills that are being taught in the CIS program.

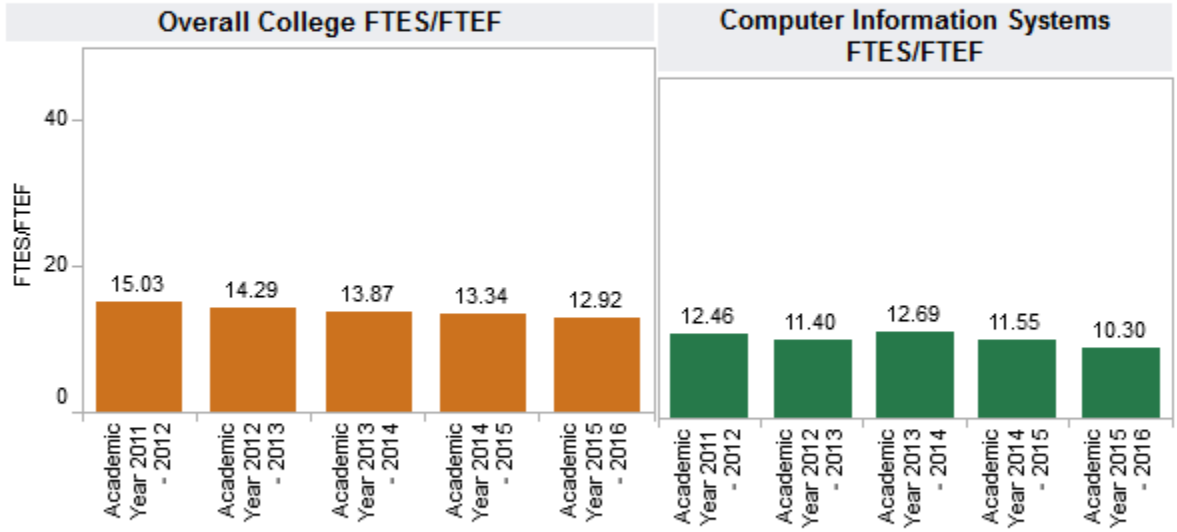
The focus in the upcoming growth year of 2017-18 is to offer sections of key courses for degree progress (CIS 201, CIS 231) while looking for opportunities to offer courses in the certificate programs (especially CIS 203 & CIS 204) that correspond to high-demand areas in the field.

General Efficiency (FTES/FTEF)

SLOCCCD Program Review Data - Efficiency (FTES/FTEF)

Department: Computer Information Systems

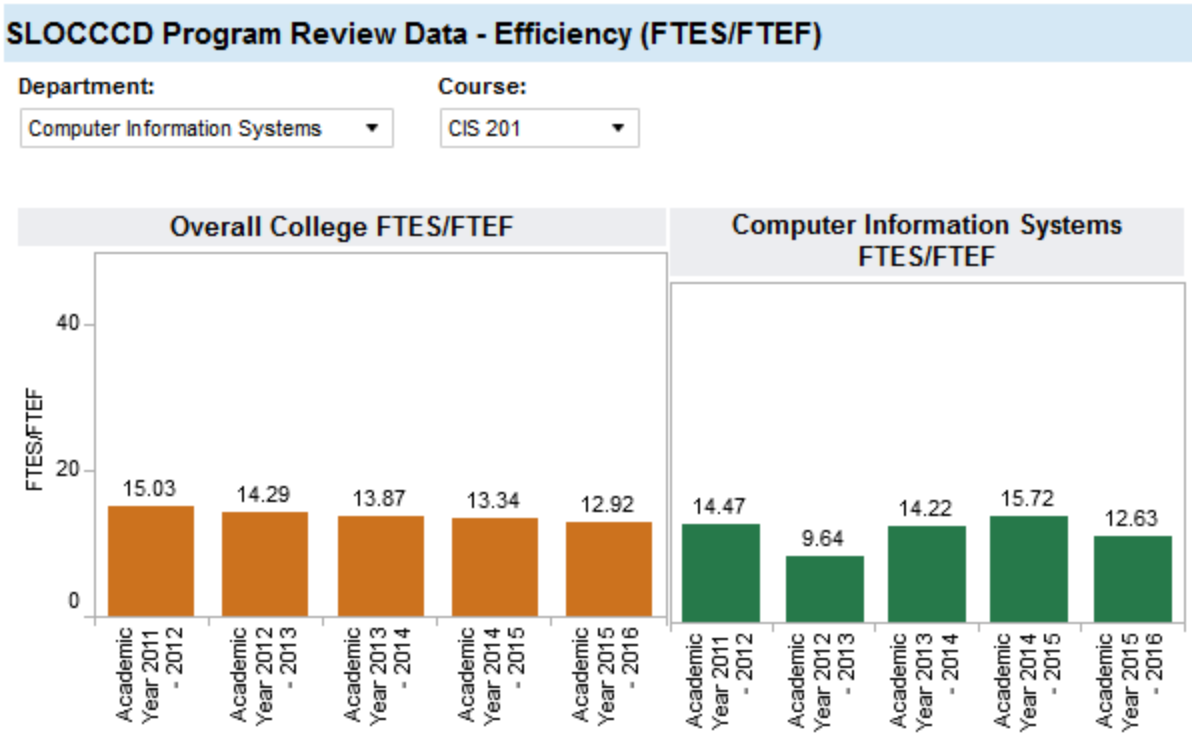
Course: (All)



FTES/FTEF: The ratio of total FTES to Full-Time Equivalent Faculty
(SXD4 Total-Hours/17.5)/XE03 FACULTY-ASSIGNMENT-FTE)

The efficiency rate for 2015-16 declined to 10.30. CIS is somewhat limited in enrollment caps given the need for a computer for each student as well as the time needed to evaluate and grade computer coursework, which can have numerous possible correct solutions for each problem. Additionally, course caps for application courses offered in a Distance Education modality have increased caps from 28 to 35 to help improve efficiency.

Efficiency was negatively impacted by a number of factors, which included an added section of CIS 232/233 to address unprecedented demand for the course, and additional sections of other courses experiencing growth in contrast to the rest of the college.



Please note the chart above shows the "point of entry" course for the CIS program, CIS 201, had an efficiency of 12.63 while growing significantly within a single year.

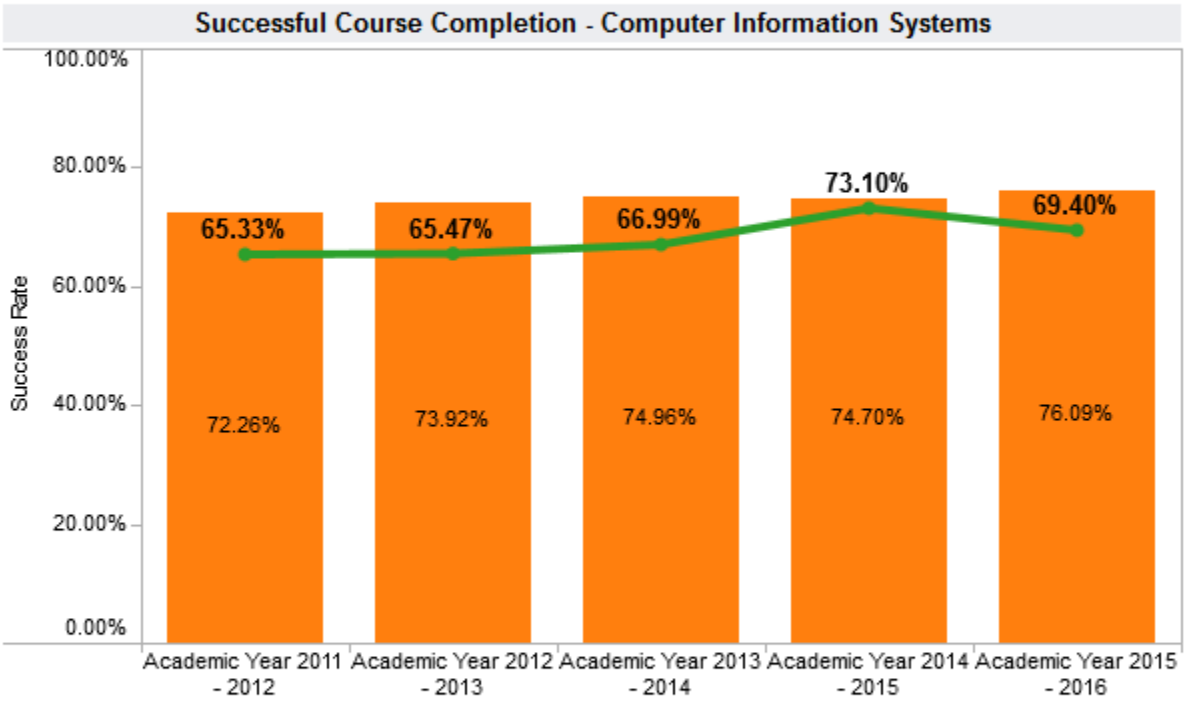
Student Success – Course Completion

SLOCCCD Program Review Data: Successful Course Completion

Select Department: Computer Information Systems

COURSE (All)

Legend: Department Success Rate; Overall College Success Rate



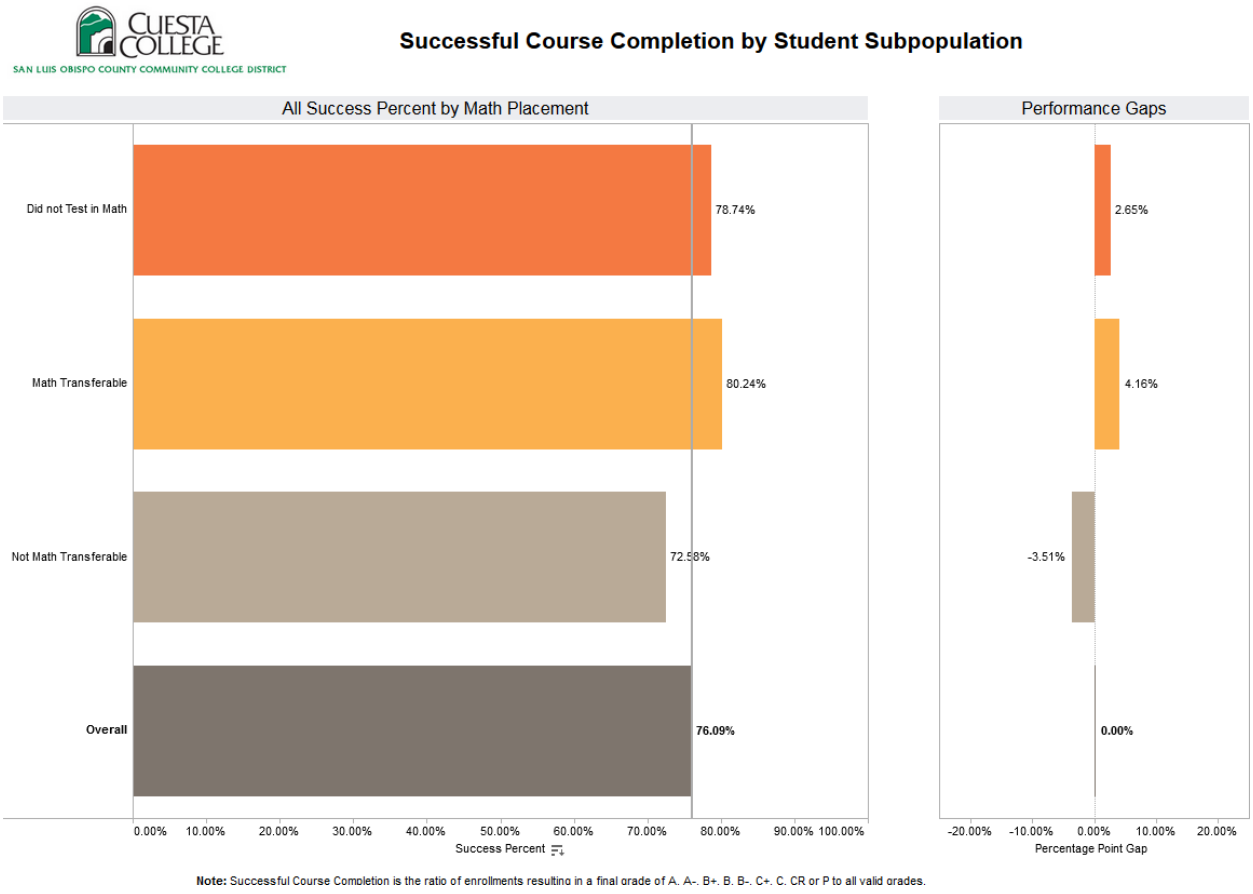
Computer Information Systems Success Rate Table

	Academic Year 2011 - 2012	Academic Year 2012 - 2013	Academic Year 2013 - 2014	Academic Year 2014 - 2015	Academic Year 2015 - 2016
Department Success..	65.33%	65.47%	66.99%	73.10%	69.40%
Total Enrollments	799	698	730	870	977

The completion percentage for CIS had risen significantly in 2014-15 to 73.10%, a single point below the college average. This is despite having one of the most challenging areas of study in the college. Introductory students rarely have the opportunity to take a CIS course before college so the topic has the added burden of being brand new to them.

Additionally the late approval date to hire a full-time temporary faculty member as well as the temporary nature of the position made it difficult to attract candidates with experience in the classroom affecting our student success.

[Disaggregated Success and Completion Data]



The success rate for completion in CIS has a strong correlation to math achievement. This is not surprising due the computational and critical thinking aspects of the program. Most students in the program are transfer oriented, and those who have done the necessary preparation in math are very successful.

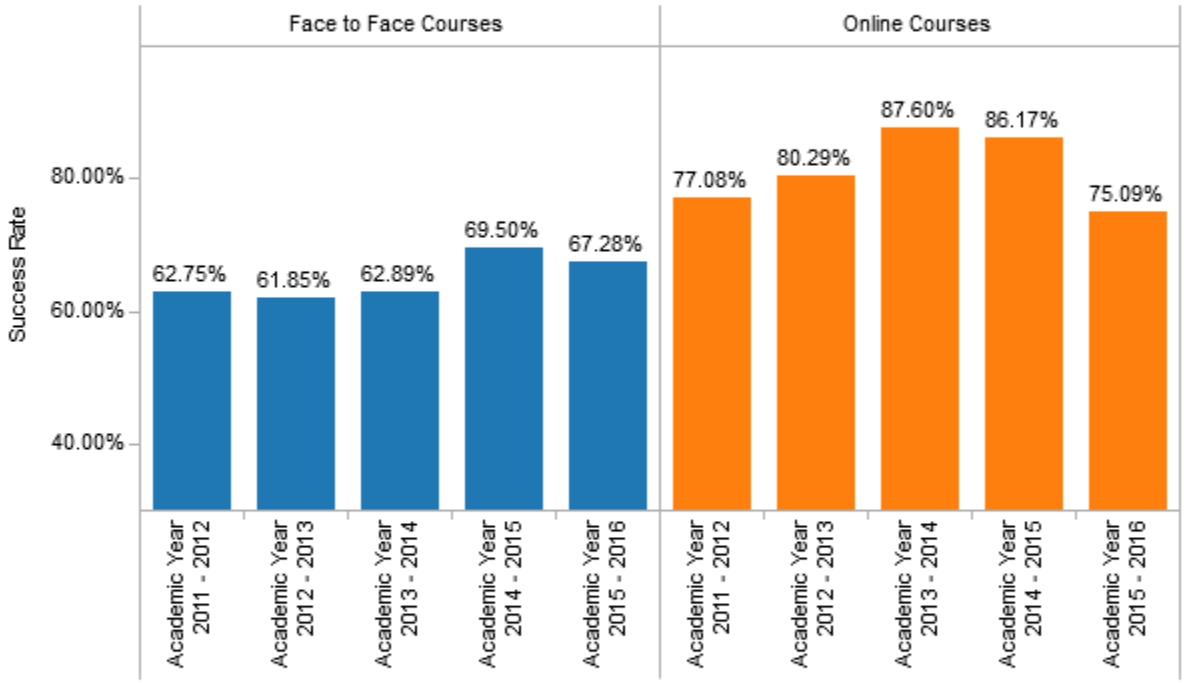
Student Success—Course Modality

SLOCCCD Program Review Data: Successful Course Completion

Select Department: Computer Information Systems

Legend: Face to Face Courses; Online Courses

Successful Course Competion by Modality -Computer Information Systems



Successful Course Competion by Modality Table - Computer Information Systems

		Academic Year 2011 - 2012	Academic Year 2012 - 2013	Academic Year 2013 - 2014	Academic Year 2014 - 2015	Academic Year 2015 - 2016
Face to Face Courses	Department Success Rate	62.75%	61.85%	62.89%	69.50%	67.28%
	Total Department Enrollments	655.0	561.0	609.0	682.0	712.0
Online Courses	Department Success Rate	77.08%	80.29%	87.60%	86.17%	75.09%
	Total Department Enrollments	144.0	137.0	121.0	188.0	265.0

Successful course completion rates in face-to-face sections dropped slightly in 2015-16 after a significant increase the year before, but still higher than previous years. The successful course completion rates for distance education dropped off, also contrary to long-term trends.

Successful course completion in the DE modality continues to be an important statistic for the College. The Business Education division and the CIS department continues to share best practices with tech-savvy instructors collaborating with colleagues to provide a foundation to

increase student success. This is important, as the demand for DE course offerings has increased due to demand has affected overall completion.

Given the nature of the discipline, offering distance education and hybrid courses (some face-2-face time) is a good fit. Some courses in the program are offered on only a handful of campuses in the state and therefore draw strong interest. Hybrid courses have been a convenient way to serve students on the edges of the district who may not be able to attend the SLO campus more than once a week.

Degrees and Certificates Awarded

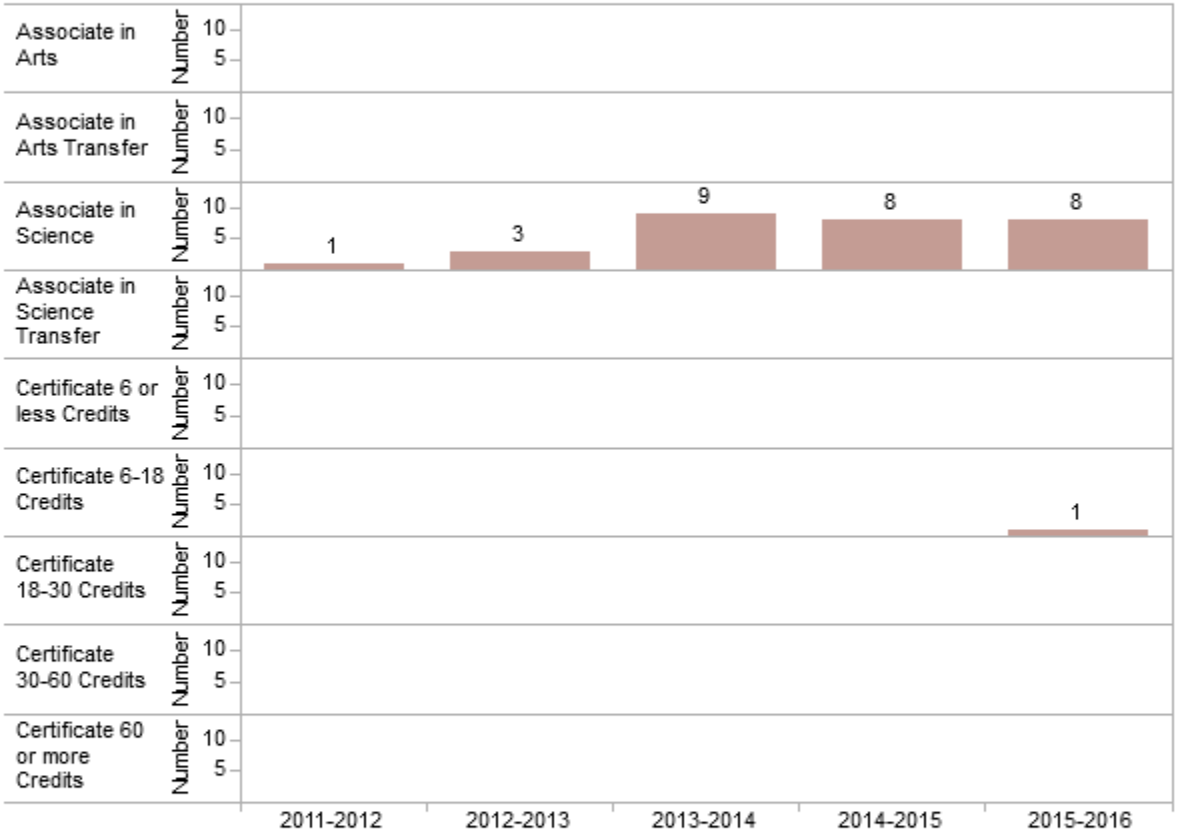
SLOCCCD Program Review Data: Degrees and Certificates Awarded

Program: Computer Information Sys...

Award Type: (All)

Program Awards

Top Code Description(s): Computer Information Systems
Award(s): All



Program Awards Table

Award T..	Award	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Associate in Science	Computer Science (AS)	1	3	9	8	8
	Total	1	3	9	8	8
Certificate 6-18 Credits	Android Developer (CS)					1
	Total					1
Grand Total		1	3	9	8	9

Program Awards: The number of degress and certificates awarded by program type

Degrees in the CIS program have remained steady after a significant increase a few years ago. Most of the degree recipients were for the A.S. Computer Science degree. Certificate completion could grow if

additional instructors were available. As a stronger part-time faculty pool has emerged, we hope to see classes offered on a regular rotation.

One of the biggest obstacles to completing the degree has been the availability of CIS 240. Given the limited faculty available, the division has utilized a qualified instructor from the Engineering and Technology division to teach this course. This instructor's other obligations currently limit him to offering the course only once a year in contrast to the rest of the courses in the degree. All other degree courses are offered both semesters.

The situation has been resolved by moving CIS 240, from an electrical lab that allows for only 18 students to a traditional classroom with a capacity of 28. The resulting impact is a 33% increase in enrollment this year. The expanded room capacity will allow more students to take the course and finish the degree.

An inherent challenge in CIS coursework is that the skills students learn pay well, but that they do not always have to complete a degree or certificate to receive gainful employment. In addition, many students transfer to four-year computer science programs without completing (or filing to receive) the Computer Science AS.

Many of this year's students in key CIS courses have identified their program as either Computer Science or one of the certificates. It is expected that many of these students will complete the program over time.

OTHER RELEVANT PROGRAM DATA (OPTIONAL)

Please provide and comment on any other data that is relevant to your program such as State or National certification/licensure exam results, employment data, etc. If necessary, describe origin and/or data collection methods used.

PROGRAM OUTCOMES ASSESSMENT AND IMPROVEMENTS CHECKLIST AND NARRATIVE

CHECKLIST:

☒ SLO assessment cycle calendar is up to date:
☒ Date SLO assessment cycle calendar was last updated: Spring 2016
☒ All courses scheduled for assessment have been assessed in eLumen
☒ Dates of last completed course assessments in eLumen :

Narrative:

Briefly describe program changes, if any, which have been implemented in the previous year as a direct result of the Program or Student Services Learning Outcomes Assessment. *If no program changes have been made as results of Program or Student Services Learning Outcomes Assessment, indicate: NONE.*

PROGRAM PLANNING / FORECASTING FOR THE NEXT ACADEMIC YEAR

INSTRUCTIONAL ANNUAL PROGRAM PLANNING WORKSHEET FOR 2017-2018

Briefly describe any program plans for the upcoming academic year. These may include, but are not limited to the following: *(Note: you do not need to respond to each of the items below)*. *If there are no forecasted plans for the program, for the upcoming year, indicate: NONE.*

A. New or modified plans for achieving program learning outcomes:

CIS is an extremely dynamic field and arguably one of the most dynamic at the college. Several of our courses involve technologies that did not exist ten years ago. Other areas have especially grown in job market importance such as: IOS, Android and Web programming. As such this program is one of the most active in the college in the area of curriculum development.

B. Anticipated changes in curriculum, scheduling or delivery modality

From our curriculum analysis, CIS 103 and CIS 217 will need revisions within the next year. During the 2015-2016 academic year, a new course, CIS 216 – Electronic Spreadsheet Applications was created to replace the former course CAOA 261 – Excel spreadsheets. This new course addresses the need voiced by both the Business Administration and Business Administrative Assistant advisory committees. The Five Year Review of the State Transfer Model Curriculum did not result in any changes to the program.

CIS has experienced a phenomenal growth rate. New sections fill immediately when the opportunity to offer them arises. During the 2015-2016 academic year CIS was granted a full-time temporary faculty member to address rapid growth. As a result of the faculty hiring prioritization process, we were awarded a full-time tenure track faculty position, which was one of several new hire recruitments that were cancelled mid-stream. Our biggest challenge is finding qualified faculty to teach these and potentially new course as the field continues to broaden. Due to the retraction of the full-time faculty member we had to cancel several previously scheduled sections of CIS.

As the partnership with Lucia Mar Unified School District grows due to the creation of a joint use Mac lab a consistent rotation of course offerings needs to be established. This rotation will better meet the students' at Nipomo and Central Coast New Tech high schools and provide stronger fill rates. All courses within the CIS program have curriculum approval in order to teach in either a: traditional, hybrid or distance education modality. We currently use all 3 modalities with high success rates.

C. Levels, delivery or types of services

As the CIS program continues to grow additional computer service staff will be needed to ensure that the teaching labs are ready at the start of the semester. For the academic 2017-2018, the College has made the commitment to hire a full time tenure track Instructional Designer to aide faculty in the development and implementation of their DE courses.

D. Facilities changes

To remain current with the industry, all 3 classrooms 3413, 3412 and N2411 each need adjustable height computer desk for the instructor station. Additionally our partnership with Lucia Mar Unified School District has resulted in creation of a joint use Mac lab on the campus of Central Coast New Tech High School. This lab provides a viable facility to teach CIS courses in the South County.

E. Staffing projections

During the 2015-16, CIS presented their position justification and was ranked 7 out 18. As a result of the faculty hiring prioritization process, we were awarded a full-time tenure track faculty position. The CIS program will resume the on-going part-time hiring pool as a result of the full time faculty position being retracted. We are currently unable to meet our growing staffing needs. Additionally Cal Poly part time faculty are paid 50% higher than Cuesta College faculty, thus we lose many qualified part time faculty to Cal Poly. The program needs to have an additional full-time CIS faculty member to reliably manage growth.

With the growth of the Business and CIS programs and the reformation of the Business Administrative Assistant program a lead instructor is needed to provide leadership for the: marketing, growth, advisory committee and administrative responsibilities.

F. Other

The CIS program remains on the cutting edge for the following reasons:

1. Randy Scovil was an original member of the Faculty Discipline Review Group (FDRG) for Computer Science and is a member of the group, which is, conducted the Five Year Review of the Transfer Model Curriculum. This is a small group of CSU and Community College faculty who are making recommendations for the Statewide transfer model curriculum.
2. CIS is actively involved in Dual Enrollment with projected offerings of CIS 201 and CIS 210: at Paso Robles, San Luis Obispo and New Tech high schools.