2018-19 Program Review – Instructional

Program Overview

Please verify the mission statement for your program. If there is no mission statement listed, please add it here.

The mission of the program is to educate students so that they can compete and perform successfully in today's ever-changing global business environment. Students in this program will acquire the computer application, programming, and technical knowledge and skills needed for initial employment, skill upgrades, career advancement, and career changes as well as the undergraduate courses needed to move into four-year computer science or other related degree programs that have similar goals.

List your Faculty and/or Staff

Fulltime:
Paramsothy Thananjeyan
Vladeta Djukich

Adjunct:
Neil Dunlop
Fayez ElGiheny
Paul Winsberg
Juan Hererra
Malkiat Sandhu

The Program Goals below are from your most recent Program Review or APU. If none are listed, please add your most recent program goals. Then, indicate the status of this goal, and which College and District goal your program goal aligns to. If your goal has been completed, please answer the follow up question regarding how you measured the achievement of this goal.

Curriculum
1.Create a non-credit course sequence and certificates for Office/Windows (ongoing, partially completed in review at Curriculum committee)
2. Create a new CS course sequence and work for articulation with the UCs (ongoing, partially completed)
3. Create a new CS CP/CA/AS certificate (ongoing, partially completed)

Assessment
1. Complete assessment for courses during three year period (completed and ongoing)

Instruction
1. Faculty observation and assessments course offerings (completed and ongoing)

Describe your current utilization of facilities, including labs and other space

The CIS classes utilize Computer Labs (312, 323, 324) for most of their courses. The labs are shared with all departments. General classrooms are used for additional classroom space. Given the typical presentation of the courses, audiovisual projectors and audio are necessary in the classrooms. Instructors also require dry erase boards and solid internet connection in the classrooms.

Enrollment Trends

Enrollment Trends Power BI dashboard

Note: Please consider the most recent 3 years when answering the questions below.

Set the filters above to your discipline, and discuss enrollment trends over the past three years

CIS has shown a decrease in enrollment over the pass three years: from 888 FTES (2015-16), 781 FTES (2016-17), and 640 (2017-18). It should be noted the department had to cancel many full sections of classes due to disruptions in the faculty hiring process and one of full time has been under reduced load during the Fall/Spring semesters, and another had missed a complete year without advanced notice (resulting in many cancellations after the first day of classes). Productivity has remained approximately same during this period. (16.3-16.5)

Set the filter above to consider whether the time of day each course is offered meets the needs of students.

Census enrollment in **evening classes** has declined, year to year, for every academic year from 2015-16 – 2017-18. (164 in 2015-16, to 121 in 2016-17, to 105 in 2017-18).
Census enrollment in **day classes** have decreased, year to year, for every academic year from 2015-16 – 2017-18. (311 in 2015-16, to 273 in 2016-17, to 160 in 2017-18).

Are courses scheduled in a manner that meets student needs and demands? How do you know?

FTEF for day classes has decreased every semester over the last 3 years for the above mentioned reasons. It appears that more sections could be scheduled either in the evening, day, or online. In particular, there a significant demand for transfer and advanced CIS courses, both daytime and evening.

Describe effective and innovative teaching strategies used by faculty to increase student learning and engagement.

Use of Canvas for teaching face to face and hybrid courses; online learning tools; adopting new course materials from various textbooks (Pearson and Cengage); Online open resources; Kivotu and CollegeBuys for free and cheap software.

How is technology used by the discipline, department?

Publisher materials; online OER materials; instructor created videos; Canvas (discussion boards, quizzes)

How does the discipline, department, or program maintain the integrity and consistency of academic standards with all methods of delivery, including face to face, hybrid, and Distance Education courses?

Follow course outlines of record; Assessment of courses; observation of instructors in online and face-to-face setting

Curriculum

Please review your course outlines of record in CurricUNet Meta to determine if they have been updated or deactivated in the past three years. Specify when your department will update each one, within the next three years.

CIS 01 – Updates 12/17
CIS 03 – Missing from active list in Curricunet (Need to check)
CIS 05 – Updated 11/17
CIS 06 – Last Update 11/13. Need to be updated (Spring 19).
CIS 20 – Updated 5/17
CIS 23 – Updated 11/13. Need to be updated (Spring 19).
CIS 25 – Updated 9/07. Need to be updated (Spring 19).
CIS 27 – Updated 11/13. Need to be updated (Spring 19).
CIS 36 A – Updated 5/16. Need to be updated (Spring 19).
CIS 36 B – Updated 5/16. Need to be updated (Spring 19).
CIS 42A - Updated 11/17
CIS 42B – Updated 12/17
CIS 48UA-ZZ – In review for deactivation.
CIS 48UT – In review for deactivation.
CIS 49 – In review 5/18.
CIS 61 – In review 3/16.
CIS 80 – In review. 4/18.
CIS 81 – Updated 1/14. Need to be updated (Spring 19).
CIS 82 – Updated 1/14. Need to be updated (Spring 19).
CIS 83 A – Updated 1/14. Need to be updated (Spring 19).
CIS 83 B – Updated 1/14. Need to be updated (Spring 19).
CIS 84 – Updated 1/14. Need to be updated (Spring 19).
CIS 85 – Updated 11/13. Need to be updated (Spring 19).
CIS 86 – Updated 1/14. Need to be updated (Spring 19).
CIS 87 – In review for deactivation.
CIS 87 – In review for deactivation.
CIS 90 – Updated 1/14. To be deactivated.
CIS 92 – Updated 1/14. Need to be updated (Spring 19).
CIS 103 – Updated 12/13. Need to be updated (Spring 19).
CIS 104 – Updated 12/13. Need to be updated (Spring 19).
CIS 105 – Updated 1/14. Need to be updated (Spring 19).
CIS 138 – In review for deactivation.
CIS 200 – Updated 12/17
CIS 230 - Updated 9/07. To be deactivated.
CIS 231 – Updated 9/07. To be deactivated.
CIS 231 – Updated 11/13. A/B/C/D - To be deactivated.
CIS 232 – Updated 12/15. To be updated in Fall 19.
CIS 237 – Updated 4/15. Need to be updated (Spring 19).
CIS 245 A/B – Updated 1/14. To be deactivated.
CIS 246 - Updated 1/14. To be deactivated.
CIS 248 UA ZZ – In review for deactivation.
CIS 510-516 – In review 12/18

CurriQunet Meta

Please summarize the Discipline, Department or program of study plans for curriculum plans for improvement. Below, please provide details for individual course improvement. Add plans for new courses here.

- Check and update all courses.
- Create new CS courses and deactivate existing corresponding CIS courses. Articulate CS courses with UCs.
- Create 2 new CS certificate sequences CP/CA/AS
- Create a non-credit series of Office Programs

Assessment – Instructional

Student Learning Outcomes Assessment

List your Student Learning Outcomes

Each course has a different SLOs mostly based on transfer requirements and certificates. Please see Curricunet for full list SLOs by course. Too many to be included in this report.

Were there any obstacles experienced during assessment? What worked well? (Mainly based on evidence in the report, attach other evidence as necessary)

No obstacles. Students were assessed by exam questions, lab assignments, and projects.

What percent of your programs have been assessed? (mainly based on evidence in the report, attach other evidence as necessary; note: a complete program assessment means all Program Learning Outcomes (PLOs) have been assessed for that program)

All active and offered courses have been assessed during the last three-year cycle, as appropriate. We are creating a new assessment plan for the next three-year cycle.

How has your dept worked together on assessment (planning together)? Describe how your dept works well on assessment? Describe things that went well or obstacles. What aspects of assessment work went especially well in your department and what improvements are most needed?

Each faculty is responsible for assessing their own courses. Jayne Matthews coordinated previous cycle of assessments. Leonard Chung is coordinating the current three-year cycle.

No obstacles.

Collaboration

See below.

Leadership Roles

N/A

Planning Process

Department assessment coordinator establishes assessment plan with consultation with the chair and faculty.

Dept meetings for Collaboration

Department chair and assessment coordinator establishes assessment calendar. Collaboration meetings are set as necessary.

Data Analysis

N/A

What were the most important things your department learned from assessment? Did implementation of your action plans result in better student learning? In other words, how has your department used the results of assessment to improve student learning and/or curriculum? Please be as detailed as possible.

Action plan:

- Reference the student learning outcomes before covering the topics in class and continually reference them throughout the course. Indicate that the learning outcomes are building blocks that will be developed over the course of the semester.
- Ensure that students who take classes are adequately prepared by taking the pre-requisite courses.
- Coordinate with other colleges to make sure that if the same course is taught is at other colleges, then they meet the SLOs for the course.

Does your department participate in the assessment of multidisciplinary programs? If Yes, Describe your department's participation and what you learned from the assessment of the program that was applicable to your own discipline.

No. CIS department does on intend to participate in multidisciplinary programs.

Does your department participate in your college's Institutional Learning Outcomes (ILOs) assessment? If Yes, Please describe your departments participation in assessing Institutional Learning Outcomes.

CIS department does not directly participate in College's ILO assessment.

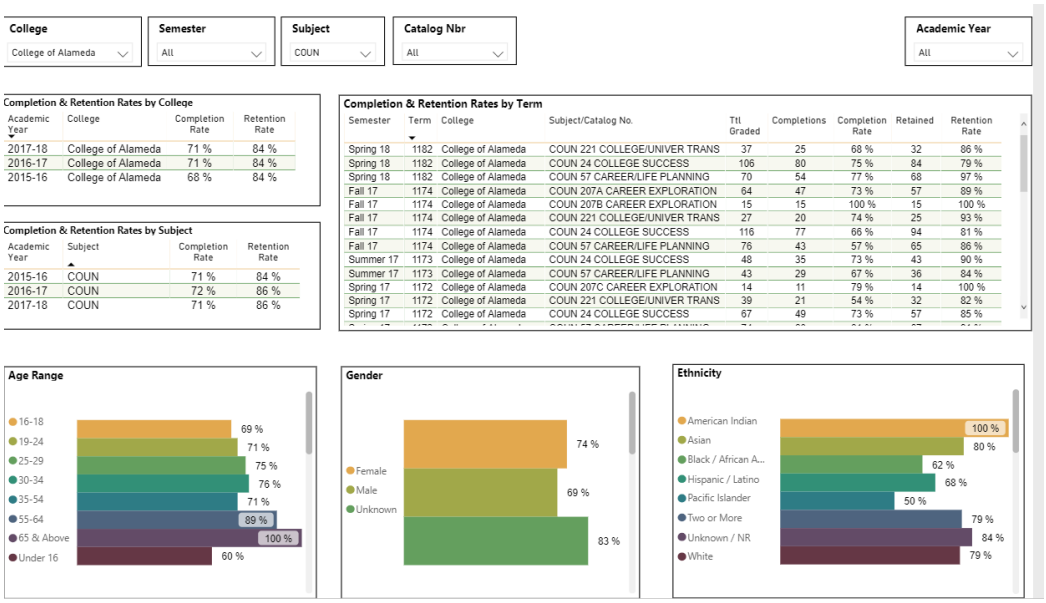
What support does your department need from administrators, assessment coordinators and/or your campus assessment committee to continue to make progress in assessment of outcomes and implementation of action plans?

No support is needed at this time. We are currently starting our next cycle of assessments.

Please verify the mission statement for your program. If there is no mission statement listed, please add it here.

The mission of the program is to educate students so that they can compete and perform successfully in today's ever-changing global business environment. Students in this program will acquire the computer application, programming, and technical knowledge and skills needed for initial employment, skill upgrades, career advancement, and career changes as well as the undergraduate courses needed to move into four-year computer science or other related degree programs that have similar goals.

Course Completion



Course Completion Power BI Dashboard

Consider your course completion rates over the past three years (% of student who earned a grade of "C" or better).

Use the filters on the top and right of the graphs to disaggregate your program or discipline data. When disaggregated, are there any groups whose course completion rate falls more than 3% points below the discipline average? If so, indicate yes and explain what your department is doing to address the disproportionate impact for the group.

Age

In general, course completion rates and retention and rates for CIS are more than 3% less than BCC rates. Although this might be a potential problem, CIS courses are generally more difficult compared to other most courses offered at BCC. The course rigor is set to meet the four-year college transfer requirements and employment requirements. CIS is generally regarded as a difficult subject area.

It should be noted that some percentage seem large due to small number of students. (Small sample size)

For academic year 2015-16, the 30-34 cohort was 7% below the average; 35-54 cohort was 5% below the average; 55-64 cohort was 12 percent below average; above 65 was 18% below average.

For academic year 2016-17, all years are above college average.

For academic year 2017-18, 19-24 cohort was 21% below average; 25-29 cohort was 11% below average; the 30-34 cohort was 31% below the average; 35-54 was 18% below average; and above 65 cohort was 40% below the average.

In general, younger student completion rate are in par with BCC average, while drops for older students.

Students need to be advised to take the courses in the correct sequence. Verify that students are taking the pre-requisite classes before taking the advanced courses.

We plan to have extra IA and TA support in class and at the Learning Resource Center.

We hope to coordinate with other colleges to make sure that all colleges meet the course SLOs and also make sure that there is consistency in course rigor at all colleges.

Ethnicity

It should be noted that some percentage seem large due to small number of students. (Small sample size)

In 2015-16, American Indian was 35% below average; unknown was 21% below average; and white was 13% below average.

In 2016-17, American Indian was 15% below average; Black, African American was 4% below average; unknown was 6% below average; and white was 5% below average.

In 2015-16, American Indian was 24% below average; Asian is 11% below average; Black, African American was 21% below average; Hispanic is 12% below average; 2 or more is 25% below average; unknown was 34% below average; and white was 13% below average.

Gender

It should be noted that some percentage seem large due to small number of students. (Small sample size)

In 2015-16, Unknown was 12% below the average.

In 2016-17, Unknown was 6% below the average.

In 2017-2018, Female was 11% below average; male was 15% below average; unknown was 15% below average.

Foster Youth Status

It should be noted that some percentage seem large due to small number of students. (Small sample size)

In academic year 2015-16, 16% below average.
In academic year 206-17, 0 student completed CIS courses. (0/3)
In academic year 2017-18, 13% below average.

Disability Status

It should be noted that some percentage seem large due to small number of students. (Small sample size)

In academic year 2016-17, 4% below average.
In academic year 2017-18, 6% below average.

Low Income Status

It should be noted that some percentage seem large due to small number of students. (Small sample size)

In academic year 2017-18, 19% below average.

Veteran Status

It should be noted that some percentage seem large due to small number of students. (Small sample size)

In academic year 2016-17, 12% below average.
In academic year 2017-18, 19 below average.

Consider your course completion rates over the past three years by mode of instruction. What do you observe?

Face-to-Face

In academic year 2017-18, face-to-face is 13% below average. 2015-2016, and 2016-2017 completion rates are above or close to college averages.

Hybrid

In academic year 2017-18, hybrid is 28% below average. 2015-2016, completion rates are close to college averages. 2016-2017, No hybrid courses were offered.

100% Online

In academic year 2017-18, online is 17% below average. 2016-17, face-to-face is 25% below average. 2015-2016, completion rates are close to college averages.

Dual Enrollment

N/A

Day time

In academic year 2017-18, daytime is 17% below average. 2015-2016, and 2016-2017 completion rates are above or close to college averages.

Evening

In academic year 2017-18, evening is 11% below average. 2015-2016, and 2016-2017 completion rates are above or close to college averages.

How do the course completion rates for your program or discipline compare to your college's Institution-Set Standard for course completion?

There are no Institution Set Standards.

The completion rates show that CIS completion rates are similar or close BCC completion rates for 2015-16, and 2016-17. CIS completion rates are low in 2017-18 compared to BCC rates.

CIS completion rates are low in 2017-18 compared to BCC rates. The reason for this is not clear at this time and will be further discussed in the next department meetings. We will also consult with the dean and VP to investigate the reasons and how we could improve completion rates.

How do the department's Hybrid course completion rates compare to the college course completion standard?

The completion rates show that CIS completion rates are similar or close BCC completion rates for 2015-16, and 2016-17.

CIS completion rates are low in 2017-18 compared to BCC rates. The reason for this is not clear at this time and will be further discussed in the next department meetings. We will also consult with the dean and VP to investigate the reasons and how we could improve completion rates.

Are there differences in course completion rates between face to face and Distance Education/hybrid courses? If so, how does the discipline, department or program deal with this situation? How do you assess the overall effectiveness of Distance Education/hybrid course?

The completion retention rates for face-to-face is lower compared DE/Hybrid courses during the academic year 2015-16, while face-to-face is higher for the years 2016-17 and 2017-18.
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2015-16: Completion rates – face-to-face: 62%, Hybrid – 65%, Online 76%
2015-16: Completion rates – face-to-face: 69%, Online 36%
2015-16: Completion rates – face-to-face: 54%, Hybrid – 39%, Online 47%

It should be noted that some percentage seem large due to small number of students. (Small sample size)

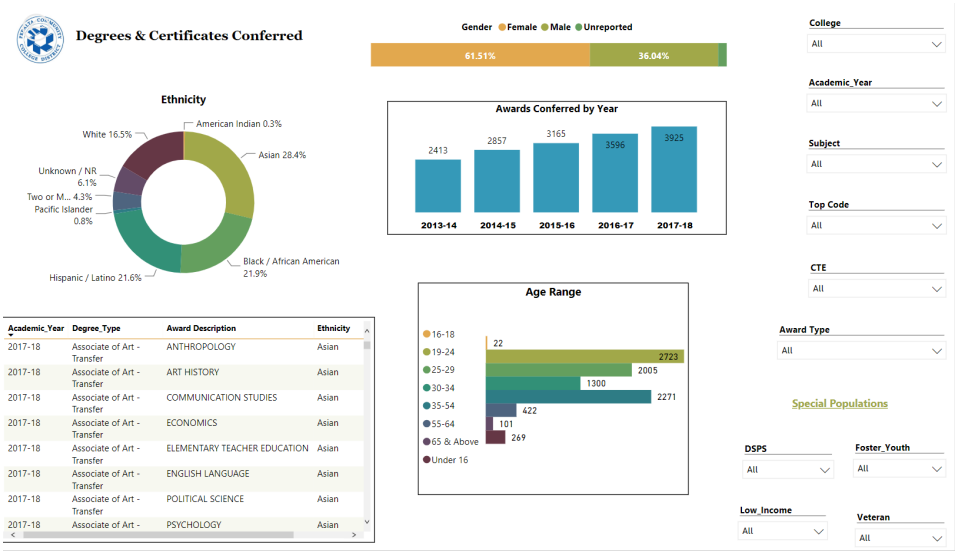
Describe the course retention rates over the last three years. If your college has an Institution-Set Standard for course retention, how does your program or discipline course retention rates compare to the standard?

The CIS retention rates are similar to BCC for the years 2015-16, 2016-16, and slightly lower for the year 2017-2018.
2015-16: Retention rate – CIS 77%, BCC 80%
2016-17: Retention rate – CIS 79%, BCC 80%
2017-18: Retention rate – CIS 72%, BCC 79%

What has the discipline, department, or program done to improve course completion and retention rates?

- Add a fulltime instructor in Computer Science; add more courses and opportunities for students so that they can take courses in a predictable and organized schedule.
- Provide more material through Canvas and other online sources; facilitate online interaction between students.
- Increase tutoring support during class lab hours.
- Increase tutoring support at the Learning Resource Center.

Degrees & Certificates Conferred



Degrees & Certificates Power BI dashboard

What has the discipline, department, or program done to improve the number of degrees and certificates awarded? Include the number of degrees and certificates awarded by year, for the past three years.

Degrees and certificates awarded:
2015-2016 → 10 degrees and certificates were awarded.
2016-2017 → 11 degrees and certificates were awarded.
2017-2018 → 6 degrees and certificates were awarded.

A fulltime faculty retired in 2013 and has not been replaced yet which has disrupted the course offering in the CIS department. We have been searching for a qualified fulltime faculty for the last three years

and have not filled the vacancy yet. The search in ongoing and it is very important that a fulltime faculty be hired immediately. Future course offerings and certificate completions will depend on how soon a fulltime faculty can be hired.

We are also actively seeking qualified adjunct faculty who can teach advanced CIS and CS courses.

Over the next 3 years, will you be focusing on increasing the number of degrees and certificates awarded?

- Create a CS program that is compatible with the transfer requirements for the UCs.
- Create a CP/CA/AS in Computer Science and Software Development.
- Create a non-credit program and certificates for MS Windows and Office programs.
- Update existing CP/CA/AS certificates in CIS as necessary.

What is planned for the next 3 years to increase the number of certificates and degrees awarded?

- Hire a fulltime faculty in CS
- Hire additional adjunct faculty in CS
- Create additional general-purpose computer lab.
- Hire additional IAs and TAs to support students.

Engagement

Discuss how faculty and staff have engaged in institutional efforts such as committees, presentations, and departmental activities. Please list the committees that full-time faculty participate in.

Paramsothy Thananjeyan is fully involved is department chair activities for CIS/BUS/ECON, hiring committees, curriculum development, and TRC committees.

Vladeta Djukich has been on reduced load the last three years and had been involved DAS and other ad-hoc committees as necessary.

Discuss how faculty and staff have engaged in community activities, partnerships and/or collaborations.

Attend and participate in CIS Advisory Meeting.

Work with CS faculty at UC-SD on a collaborative project in Algorithms and Data Structures.

Discuss how adjunct faculty members are included in departmental training, discussions, and decision-making.

Adjunct faculty members are invited to college professional days for department meetings and advisory committee meetings. They are also consulted in course assignments and curriculum development as necessary based on their expertise and area of interest.

Prioritized Resource Requests Summary

In the boxes below, please add resource requests for your program. If there are no resource requested, leave the boxes blank.

Resource Category	Description/Justification	Estimated Annual Salary Costs	Estimated Annual Benefits Costs	Total Estimated Cost
Personnel: Classified Staff	CTE and transfer courses: staff to coordinate departmental activities, support students.	$30,000	$10,000	$40,000
Personnel: Student Worker	In-class and LRC support.	$50,000		$50,000
Personnel: Part Time Faculty	Adjunct faculty for CIS/CS classes.	$200,000	$20,000	$220,000
Personnel: Full Time Faculty	CS fulltime faculty.	As budgeted.		

Resource Category	Description/Justification	Total Estimated Cost
Professional Development: Department wide PD needed	Attend conference and professional development activities.	$5,000
Professional Development: Personal/Individual PD needed		

Prioritized Resource Requests Summary - Continued

Resource Category	Description/Justification	Total Estimated Cost
Supplies: Software	Robotics software	$500
Supplies: Books, Magazines, and/or Periodicals		
Supplies: Instructional Supplies	Robotics kits	$5,000
Supplies: Non-Instructional Supplies	Computer and instructional supplies support.	$10,000
Supplies: Library Collections		

Resource Category	Description/Justification	Total Estimated Cost
Technology & Equipment: New		
Technology & Equipment: Replacement		

Prioritized Resource Requests Summary - Continued

Resource Category	Description/Justification	Total Estimated Cost
Facilities: Classrooms		
Facilities: Offices		
Facilities: Labs	General purpose multi-use computer Lab	$200,000
Facilities: Other		

Resource Category	Description/Justification	Total Estimated Cost
Library: Library materials		
Library: Library collections		

Resource Category	Description/Justification	Total Estimated Cost
OTHER		