1.0 Executive Summary

Program review and data review show the following:

- **A need for development of a CIS tutoring program and a CIS counseling program to provide additional support and guidance for at-risk students**
- **Enrollments increased during COVID and faculty easily pivoted to online instruction**
- **An increase in female participation in CIS programs**
- **The department's curriculum reflects current industry trends**
- **The department needs additional faculty and resources for future programs**

Fullerton College Program Review and Planning
Self-Study for Instructional Programs
Fall 2021

Statement of collaboration

The program faculty members listed below collaborated in an open and forthright dialogue to prepare this Self Study. Statements included herein accurately reflect the conclusions and opinions by consensus of the program faculty involved in the comprehensive self-study.

Participants in the self-study

Gabriella Fernandez – CIS Department Coordinator

Nancy Woolridge

Laura Melella

Brian Roach

Dale Craig

Jane Troop

Anna Carlin

Authorization

After the document is complete, it must be signed by the Principal Author, the Department Coordinator, and the Dean prior to submission to the Program Review Committee.

Gabriella Fernandez		CIS Dpt Coord	11/9/2021
Printed name of Principal Author	Signature	Title	Date
Gabriella Fernandez		CIS Dpt Coord	11/9/2021
Printed name of Department Coordinator	Signature	Title	Date
Carlos Ayon	*Carlos M Ayon*	Dean BUS/CIS	11/10/2021
Printed name of Dean	Signature	Title	Date

A Note on terminology

"Program review" is the blanket term for all parts of this process. This document is a comprehensive "self-study." Fullerton College defines "program" as a course of study leading to a degree or certificate. A department may contain more than one program. With consultation with the Program Review and Planning Committee, a department may decide to write a separate self-study for each program within its department.

1.0 Executive Summary (Please write this section last, but include it here at the front of the self-study, on a page all by itself.)

2.0 Mission

Please explain briefly how your program contributes to the College's mission, vision, core values, and goals. Highlight any new contributions since your most recent self-study. If your department has a mission statement, please share it. If not then please consider discussing one with your colleagues.

The department supports the colleges mission through flexible scheduling, offering a variety of certificates, degrees and courses that transfer to four-year universities and lead to careers in CIS.

The department supports the colleges vision with our curriculum that supports careers in CIS and internships allowing students to gain experience in their chosen area of study. In addition, the CIS programs contribute to the college core values through innovation in our curriculum and flexible scheduling and course modality; with inclusivity reflected with full departmental faculty consensus on curriculum and high standards of program excellence.

College goals are supported through evaluation and updating student success strategies; creation of equity plans to address at risk students; and participation in college events, high school outreach and local community industry groups.

3.0 Students

Because there is a nearly infinite amount of student data that can be studied, please focus your analysis on the trends that stand out. The Office of Institutional Effectiveness (OIE) is providing data that will help you zero in on bottlenecks, gateways, and student equity issues. As per accreditation standards, OIE data will be broken down by race, ethnicity, gender, and other demographic categories. One of the purposes of this section is to identify inequities and make plans to remedy them.

3.1 Enrollment demographics see Appendix A

1. Using the data provided by the OIE, briefly describe the enrollment trends in the program over the past five years.
   While there is an initial decline of female enrollment in the CIS program from 2016 to 2019 there has been a steady increase over the last three years. The department has made a concerted effort to reach out to female students through advising student groups such as Girls Who Code, through our department on-campus booths at the beginning of the semester and Career Center sponsored events.

   The data indicates a significant decline in African American and white enrollment. While the decline in white enrollment represents the overall college demographic trend, the decline in African American enrollment indicates a challenge in recruiting a more diverse CIS department enrollment. More outreach to campus and community organizations that serve a diverse population is a possibility.

2. Using the data provided by the OIE, describe the student population the department serves. Do you have a way of determining which students are majors, for example through a gateway course? Please explain.
   Cannot determine.

3. Which classes have the highest demand and why? Are they offered regularly -- at different times of the day and week, in different formats (in-person, on-line, hybrid)? Please explain.

	2016	2017	2018	2019	2020	2021
CIS 100 F	502	475	467	429	508	531
CIS 111 F	818	489	505	438	449	508

The two highest enrollment classes have been the CIS 100 and CIS 111 courses. Both are entry level classes teaching office skills (CIS100) and information systems technology (CIS111). Since the addition of the CIS 100 class to the college general education requirement the enrollment has increased. When California State University Fullerton removed the CIS 111 class as their entry level require for incoming Information Systems students the enrollment has declined.

Both classes are offered at multiple times during the day and evening and both are offered on-campus, hybrid, and online.

4. Please describe how course offerings match students' preparation and goals.
   Courses are designed and scheduled to facilitate a student path through our programs. Typically, introductory classes are offered during the Fall semester with the advanced follow-on course offered during the Spring semester. High demand and introductory classes are offered both semesters.

   Course curriculum is written to facilitate student progression. Topics covered in the introduction level classes are then extended and enhanced in the advanced classes. This is also supported by the various CIS department certificates.

5. Does enrollment vary by semester? Please describe how course offerings are adjusted to meet student demand and help students reach their academic goals.
   Typically, fall enrollment is larger than spring enrollment. More introductory classes are offered in the fall than in the spring.

3.2 Student Achievement and Equity (and student demographic profile)?

1. Using the data provided by the OIE, briefly describe student achievement rates in your program over the past five years: completion, success, degrees/certificates, transfer, licensing, job placement, wage improvements (not all of these measures apply to every program).

See the Appendix. Course success and retention has not significantly changed over a five-year period. Success and completion rates for African American students has remained significantly lower than other student groups. The CIS department has attempted more structured outreach, but this clearly is not working.

Comparing CIS department success and retention to the overall college rates indicate:
- **College level Success (Female – 70.3%) – (Male - 67.0%)**
- **College level Retention (Female – 83.2%) – (Male - 81.6%)**
- **CIS level Success (Female – 62.97%) – (Male – 65.27%)**
- **CIS level Retention (Female – 78.95%) – (Male – 81.8%)**

Both success and retention rates in CIS are lower than the average college level values. This is not unexpected based on the subject matter. However, the success for Female students is much lower than the college level outcomes. This indicates that there may be a problem with how information presented and the different learning modalities of Female to Male students. Investigation in this area is warranted.

Success and retention rates for various student populations also generally track, with the exception of African American students. Their success and retention rates are significantly lower than the college level outcomes.

2. Please pay special attention to equity issues -- where a group of students has an achievement rate that is below average. What factors can explain this?
    * Lack of effective equity strategies in the classroom
    * **Lack of effective equity strategies in out-of-classroom environment**
    * **Enrolled in the wrong class or in a class out of sequence (counseling)**
    * **Lack of available and effective student-level tutoring**
    * **Lack of available and effective student-level counseling (CIS department run counseling)**
    * **Lack of regular instructor to student interactions**
    * **Lack of campus support system for groups of students**

3. Does the department have regular discussions about equitable grading, attendance, late work, and extra credit policies, or about other strategies for helping students succeed? Could reforming classroom policies help more students succeed? Please explain.
    Regular discussions about the above equity issues and strategies for student success occur at the division and department level meetings . In addition , the department has dedicated entire flex day activities to these topics and have shared successful instructional strategies within the department and at divisional meetings.
4. Please write a brief Equity Action Plan. What strategies can you implement to close this gap in student achievement within the next five years? What professional learning, curriculum development, or other forms of support does your department need?

A. **Identify issues affecting student equity**
B. **Create short-term and long-term equity goals.**
C. **Create short-term and long-term metrics for meeting goals**
D. **Research internal (Fullerton College) and external equity strategies**
E. **Develop classroom equity strategies**
F. **Develop out-of-classroom equity strategies**
G. **Pilot program to implement classroom equity strategies**
H. **Pilot program to implement out-of-classroom equity strategies**
I. **Gather and evaluate data from equity strategies.**
J. **Evaluate equity goals and equity strategies and adjust as needed.**

3.2 Summary

When measuring course success and completion for CIS classes against students generally, there are several facts that can be inferred.

* Female enrollment and success rates are lower than the overall college average. Retention rates are about the same.

* African American enrollment rates match the college average, but success rates are much lower.

* Other success and retention rates are consistent with college averages

* Enrollment trends have remained steady since 2016 and there has not been significant increases or decreases.

Based on these findings, an equity action plan needs to be drafted. This plan will include proposals for both in-class and out-of-class actions to reduce the equity gaps in the CIS department. In-class actions will be implemented through a set of classroom guidelines as developed by the CIS Faculty (after evaluating best-practice equity-based classroom models).

Out-of-class actions will include development of a CIS tutoring program and a CIS counseling program. Both of these will be Faculty driven and will provide additional support and guidance for at-risk students. In addition to tutoring and counseling, the CIS equity plan will include an outreach program to target and communicate with those groups that are underrepresented in CIS classes. This outreach program will work in coordination with the CIS counseling program and the dual enrollment programs currently being operated at Fullerton College.

3.3 Student Achievement and Pathways

1. Using the data provided by the OIE, briefly describe how students have moved through the program over the past five years: unit accumulation, prerequisites, corequisites, substitutions, gateway courses, and bottleneck courses. (Not all of these measures apply to every program.)

   Data not available to CIS department.

2. For transfer degree programs: Are your current requirements in line with the Transfer Model Curriculum, or have you added extra steps, such as prerequisites? If you added extra steps, please explain.

   Data not available to CIS department.

3. Please provide an update on the curriculum mapping you have done, perhaps in collaboration with Counseling. Are all programs (degrees and certificates) mapped? Based on course offerings for the last two to three years,

could a student complete the map(s) you have created? If so, please demonstrate this with some facts from your schedules. If not, how will you address these discrepancies?
Data not available to CIS department.

4. Do the data reveal differences among your AA, ADT, or certificate programs (in enrollment, completion, or success, for example)? Please explain.

3.4 Faculty

1. Using the data provided by the OIE, briefly describe the faculty workload over the past five years: FTF (full-time faculty), PTF (part-time, or "adjunct" faculty), FTEF (full-time equivalent faculty), WSCH per FTEF (weekly student contact hours). (Not all of these measures apply to every program.)

	FTEF Load	FTEF Overload	FTEF Adjunct	Total FTEF	Adjunct %	# Adjuncts
Fall 2020	6.77	3.77	2.95	13.49	42.86%	6
	Total Sections		**Total Sections Taught by Adjuncts**		**% Sections Taught by Adjuncts**	
Fall 2020	53		13		24.5%	
	Average Census Class – Size		**Certificates Issued 2020 – 2021**		**Degrees Awarded 2020 – 2021**	
Fall 2020	20		18		14	

2. If your department plans to request hiring a full-time faculty member, this is the place to make the argument. Please discuss hiring needs in reference to data analyzed in sections 3.1 to 3.4.

- **The CIS department had three full-time faculty retire in Spring 2018.**
- **Projected retirements are between one and four full-time faculty over the next two years.**
- **This could leave the department with three remaining full-time CIS faculty.**
- **The BLS projects that software developer jobs will have an annual average of 10,400 openings over the next ten years with a median pay of $89,190 (current data).**
- **Based on input from the advisory committee meetings, programming skills are in demand in the areas of data analytics, cloud computing and cyber security.**

Because of the difficulty hiring qualified part-time faculty, projected retirements, BLS projections along with advisory committee input, this department needs an additional faculty member.

3.5 Covid-19

Using the data provided by the OIE, briefly describe how the Covid-19 pandemic affected your department and how your department has adjusted. Did you make temporary changes? Or have you adopted new, long-lasting practices that enhance teaching?
CIS department achieved a 10% increase in enrollment over Fall 2019 and Spring 2020. The department faculty was already proficient in online instruction tools and proceeded to increase and expand usage of online technology. In

addition, students were encouraged to join online study groups through such sites as Discord. Department meetings moved from in person to Zoom.

3.6 What has not been asked?

Please tell us about other ways your department has been successful, ways that the previous questions might have missed.

4.0 Outcomes

4.1 Program Student Learning Outcomes (PSLOs)

Since the last self-studies, the College adopted new Institutional Student Learning Outcomes (ISLOs) and new design principles for PSLOs. Please describe your department's PSLO revisions to date, and your PSLO plans.
Revised PSLOs October 2021
1)Utilize common Business Software programs to design, create and analyze various business documents and data storage systems.
2)Identify, interpret and classify common technology terms and concepts.
3)Evaluate, explain and compare basic computer security threats.
4)Demonstrate understanding and proficiency in the use of common Internet technologies and software.

4.2 PSLO Assessment

The new PSLO design principles encourage departments to use PSLOs as a way of gauging student learning once they have completed a degree or certificate, not just when they have completed a single course. Please describe how PSLOs are assessed or will be assessed in your department.
PLSO 1 Assessment: Create a spreadsheet that includes requested data, basic formulas and graphs.
PLSO 2 Assessment: Common questions or problems.
PLSO 3 Assessment: Identify most common types of cyber attacks.
PLSO 4 Assessment: Identify and evaluate Web based search sites, reference tools, and file-sharing websites.

4.3 CSLO Assessment

Briefly describe the timeline your department uses to assess CSLOs on a regular basis and how you use the results to make improvements. This discussion should be based on SLO data, which is available on eLumen. (Your division's SLO reps can help with this.) Please include relevant CSLO charts or graphs in an Appendix. Since the last self-study, you should have assessed the CSLOs of every course that you have taught, at least once. If that is not the case, please describe how you will accomplish this as soon as possible.

CSLOs are assessed on a semester-by-semester basis. CIS courses are regularly reviewed and updated to meet industry expectations and transfer requirements. As a part of that review CSLO's are analyzed added, deleted or modified based on CSLO data, industry standards and transfer requirements.

4.4 SLO Equity Analysis

1. Looking at CSLO attainment data, do you find significant differences by race, ethnicity, gender, and other categories? Please include some illustrations of this data in the Appendix. Describe here what the data shows. What strategies will you use to close the attainment gaps among groups of students? What kinds of professional learning would help?

The data shows that African American students lag behind other ethnic groups in meeting expectations (see appendix chart). As stated above, the department continues to use a more structured outreach approach in order to reach these students.

2. Compare the equity analysis in this section to the equity analysis in Section 3.2. Are there some groups who have lower completion and success rates AND lower SLO attainment rates than other groups? Can new departmental strategies close both gaps? Please explain. [For example, many departments found that their SLO attainment gaps are quite a bit smaller than their success gaps (or the gaps don't exist). This might mean that many students who get a D or lower in a course are actually learning the material (i.e., attaining the SLOs) but they are winding up with a failing grade for other reasons: absences, tardies, missed assignments, missed exams, poor performance on high-stakes assignments.]

The data shows that section 3.2 and the equity analysis in this section match. The same group that has a lower completion and success rate also has a lower CSLO attainment rate. However , the department's effort to boost the number of female students has been successful.

By viewing the PLSO data for the Computer Information Systems Associate in Science Degree program number of female students participating doubled between 2017 and 2021 (see appendix chart). The department made a concerted effort to reach out to female students through advising student groups such as Girls Who Code, through our department on-campus booths at the beginning of the semester and Career Center sponsored events.

5.0 Other Areas of Program Effectiveness

5.1 Your Department and General Education

1. Using the data provided by the OIE, please look at students who take your courses for GE credit.
2. What role does your department play in helping students complete the GE pathway?
3. Do you offer GE courses at a variety of time slots and at a frequency that allows students to fulfill GE requirements?
4. Please take into account daytime, evening, weekend, and online classes to provide a brief sketch of your GE course availability.

Two courses are in the general education requirement list: CIS 100 and CIS 111. The department helps students complete the GE pathway by offering 6 to 8 sections of each, offered at a variety of time slots. Both of these courses are offered on campus, online, daytime, evening and weekend. In addition, there are tutors available and online resources to help students succeed in these courses

5.2 Outside Influences on Your Department

1. Describe any laws, regulations, trends, policies, procedures, or other influences that have an impact on your program. Please include any other data that may be relevant to student achievement, learning, and trends within your Basic Skills, CTE, or Transfer Education programs.
   The primary outside influences affecting the CIS program include technical and career related changes in the job market.

2. Make sure you are including all degree and certificate programs, including the College's GE program.
3. Please also consider not only your courses, but also prerequisite and corequisite courses that might be offered by a different department.
4. If AB 705 applies to the program, then how are you meeting its mandates?

Employers are now hiring for not only specific skills but skills that are integrated into an overall problem-solving framework. This means that classes focused on specific skills must be re-engineered to reflect a more project-based learning environment.

Networking skills in demand have shifted to cloud computing, software-defined-networking (SDN), and wireless technologies. The CIS department currently lacks the hardware and software to effectively support this networking technology shift.

Employers are now requiring potential employees have basic knowledge of computer security concepts and are actively seeking cyber security skills. The CIS department is developing a more robust Cyber Security program but still lacks adequate resources to teach such classes in classrooms that are designed for such curriculum.

Employers are putting an increased emphasis on industry and professional certifications which are not currently mapped to most CIS courses.

5.3 Your Program's Active and Applied Learning and High-Impact Practices

1. The College wants to create an inventory of faculty efforts to make learning active and applied. Please briefly describe opportunities your students have to apply and deepen knowledge and skills through projects, internships, co-ops, clinical placements, group projects outside of class, service learning, study abroad, and other experiential learning activities that you intentionally embed in coursework, or elsewhere in your program.

Internships – elective course provides the student the opportunity to undertake a Computer Information Systems internship with an employer at the employer's site. Emphasis on resume and cover letter creation, dress for success, office etiquette.

Capstone Courses – Computer Certification Preparation II serves as a capstone course for the Networking program and prepares students for industry standard certifications. Excel for Data Analytics and Big Data course (proposed) will serve as capstone for the proposed Data Analytics Certificate. Python for Data Analytics course (proposed) will serve as capstone for proposed Data Analytics Technician certification.

ePortfolios – Spring semester CIS 160 class will use for their signature assignment – Cyber Security and Awareness poster. Required as part of CIS internship class for resume and other course artifacts that employers would be interested in viewing. New for fall – Careers in CIS – this course will include ePortfolio creation.

Undergraduate Research - CIS 160 class - students are required to research a cyber security topic and develop a poster. One of the activities with the poster requires them to write an abstract. When discussing high-impact activities, students are invited to present their poster at Cal Poly Pomona's Cyber Security and Awareness Fair each October as part of National Cyber Security Awareness month. Last week, a Fullerton College student placed 1st in the Awareness category of the competition! In past years we have placed 1st and 2nd.

2. Are there institutional barriers hindering your department's ability to offer or enhance these learning experiences for students? Please explain.

6.0 Planning

6.1 Progress on Previous Strategic Action Plans

1. Please briefly describe the goals (Strategic Action Plans, SAPs) from your last self-study. How much progress have you made on them? If you have reached a goal, explain how it allows ongoing improvement, especially if you received additional funding.
    a. **Create technology for small business program - This program was not funded.**
    b. **Create an E sports program this program was partially funded**
        i. **35 high-end desktops were purchased for use in this program and other CIS courses. Since the installation occurred in the semester prior to campus closure due to COVID, the progress on this goal has not been measured.**
    c. **Re engineer network and data communications program to reflect technological changes in the industry**
        i. **One additional full-time faculty member was hired, and additional hardware was purchased and installed. Progress has been made in expanding this program and certificate completions**
2. If additional funds were NOT allocated to you in the last review cycle, how did the LACK of funds have an impact on your program?
    Curriculum for small business technology courses has not been developed and is again listed in this program review as part of our strategic action plan. This will enable us to create closer ties with the community and place our students in internships.

6.2 New Strategic Action Plans

Please write brief, concrete plans that you will accomplish over the next four years. Your plans might include requests for additional funds. The Program Review Committee will read these and either endorse the request or ask for more information. Please keep in mind that the Committee's endorsement does not guarantee additional funding. The President's Advisory Council and Faulty Allocation Committee play major roles in allocating funds and prioritizing new faculty hires.

Please number each of your plans. This will help keep to track of them. Also, make sure that each funding request includes the following elements:

1. It is supported by the data and analysis in previous sections of this self-study.
2. It fulfills a part of the [College mission, vision, goals, or objectives](#).
3. It explains how the request helps the College attain student equity.
4. There is a measurable way to tell if the extra funding will be effective.
5. It considers whether you can reach this goal (or parts of it) without additional funding.
6. Please give a dollar amount, or best estimate. If you can identify a funding source, then please name it. If you can put the request into one of the following categories, please do so: Personnel, Facilities, Equipment, Supplies, Computer Hardware, Computer Software, Training, Other.

6.0 Strategic Action Plans (SAP) [formerly called Goals (6) and Requests for Resources (7)]

Using the tables below, list the strategic action plans (SAPs) for your program. These plans should follow logically from the information provided in the self-study. Use a separate table for each SAP.

SAPs for this three-year cycle:

STRATEGIC ACTION PLAN # 1	
Describe Strategic Action Plan:	Create a cloud computing program.
List College goal/objective the plan meets:	College Goal 1:Fullerton College will increase student success Objective 3: Increase the number of degrees and certificates awarded
Describe the SAP: (Include persons responsible and timeframe.)	Create new classes to reflect cloud computing technology Persons responsible will be existing faculty and additional part time faculty. Year 1: Create new classes that meet various cloud computing certification standards. Purchase, install, and configure in-class network hardware, which will support the new curriculum. Research Cloud Based networking services. Year 2: Start teaching the new classes and revise the courses as needed. Design and teach in-class cloud computing curriculum using in-class hardware and cloud-based resources. Start the cloud computing Internship relationships. Year 3: Expand the cloud computing classes to include capstone courses. Adjust the networking curriculum to meet new cloud computing standards.
What *Measurable Outcome* is anticipated for this SAP?	• Student completion of Fullerton College cloud computing certificates. • Student completion of industry standard cloud computing certifications • Student participation in Cloud computing internship program
What specific aspects of this SAP can be accomplished without additional financial resources?	• Curriculum revisions • Cloud computing internship initial contacts and design
If additional financial resources would be required to accomplish this SAP, please complete the section below. Keep in mind that requests for resources must follow logically from the information provided in this self-study.	

Type of Resource	Requested Dollar Amount	Potential Funding Source
Facilities		
Equipment		
Supplies		
Computer Hardware	One server $5000	Perkins, Strong Workforce
Computer Software		
Training	Current Cloud Computing Training $15,000 for multiple people	Perkins, Strong Workforce
Other		
Total Requested Amount	$20,000	

STRATEGIC ACTION PLAN # 2

Describe Strategic Action Plan:	Create Technology for Small Business program.
List College goal/objective the plan meets:	College Goal 3: Strengthen connections with the community Objective 3: Strengthen partnerships with local business and industry.
Describe the SAP: (Include persons responsible and timeframe.)	Technology for Small Businesses (TSB). This program will consist of courses and a certificate focusing on selecting, installing, and configuring computer technology that would be used by a small business. Each course would teach multiple technologies and software and be taught in a project-oriented manner. The CIS Internship program would then be used to link students with local businesses. Year One: develop Technology for Small Business curriculum that includes courses and certificates and establish relationships with local small businesses and local city Chamber of Commerce organizations. Year Two: Start Technology for Small Businesses internship and revise curriculum as needed. Year Three: Evaluate internship, student placement, and program success.
What *Measurable Outcome* is anticipated for this SAP?	• Number of students enrolled in courses • Number of students completing certificate • Number of students participating in internship program • Number of students employed in a TSB related business
What specific aspects of this SAP can be accomplished without additional financial resources?	• Curriculum development • Internship development • Contact local businesses and Chamber of Commerce organizations

Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel		
Facilities	3 Cabinets to hold in-class Servers @$500 each	
Equipment		
Supplies		
Computer Hardware	3 Instructional Servers @$1500 each	
Computer Software	Small Business Sample Software $5000	
Training		
Other		
Total Requested Amount	$8,000	Perkins, Strong Workforce

STRATEGIC ACTION PLAN # 3	
Describe Strategic Action Plan:	Create a Department paid tutoring program. This will be faculty driven and will include student tutors and adjunct faculty tutors.
List College goal/objective the plan meets:	College Goal 1:Fullerton College will increase student success Objective 2: Increase course retention and success.
Describe the SAP: (Include persons responsible and timeframe.)	Create an in-department student Tutoring program. This program would use current and former CIS students that have taken our courses and are able to tutor other students currently taking courses. These tutors would be paid through Professional Development funds. Tutors would be screened to ensure their competence and they would be assigned to tutor CIS students at assigned hours/days. In addition, adjunct faculty may also serve as tutors. This program will require management by CIS department faculty and would require funds to pay tutors. The responsible person would be the CIS department coordinator. Year 1: - Fall – Develop tutoring program including processes for selecting and evaluating tutors, assigning and tracking students requiring tutors, record keeping, and other associated tasks. Year 1: - Spring – Test-run the tutoring program, find tutors, publicize the program, and evaluate the processes. Year 2: Run the tutoring program and, at year end, evaluate the data produced by the program including number of students tutored. Survey the CIS faculty and students on the success of the program. Year 3: Run the tutoring program and evaluate at year end.
What *Measurable Outcome* is anticipated for this SAP?	• Student retention rates in CIS classes • Student success rates in CIS classes
What specific aspects of this SAP can be accomplished without additional financial resources?	None

Type of Resource	Requested Dollar Amount	Potential Funding Source
Personnel	Release time or Professional Expert Funds for Faculty Manager of Tutoring program	
Facilities	Reservation of Existing CIS Computer Classroom	
Equipment		
Supplies		
Computer Hardware		
Computer Software		
Training		
Other	Professional Expert Funds Instructor = 2 units release time or PFE Hourly Equivalent - $2,000 a semester = $12,00 total Tutoring Rates for X tutors = $10,000 to $20,000 per semester = $70,000	Perkins or Strong Workforce or College
Total Requested Amount	$82,000 for three years (6 semesters)	

6.3 Optional: Long-Term Plans

Your department might have more plans than just immediate requests for funding. If so, please describe them here.

7.0 Executive Summary

Please provide the reader with a brief overview of the highlights, themes, and key elements of this self-study. Please don't include new information you did not discuss earlier. Although you will likely write this section last, please remember to put this summary at the front of your report.

8.0 Publication Review

The College wants to maintain integrity in all representations of its mission, programs, and services. Please help this effort by reviewing your publications: professional social media profiles, websites, brochures, pamphlets, etc. Please tell us the date they were last reviewed and if you found them to be accurate in all representations of the College and program missions and services. Information on the college's graphic standards is available here.

1. For each of your program's publications, please provide the URL where the publication can be viewed. If the publication cannot be accessed via the Internet, please contact Lisa McPheron, Director of Campus Communications at lmcpheron@fullcoll.edu.
2. If you find an inaccurate publication, please explain how you will make corrections.

If any inaccuracies are found in any of the publications we work with our curriculum representative and administration to compare what is currently published and what should be published.

3. If your department maintains a social media presence, then please describe it here. What do you use it for? How do you monitor it? Who is in charge of it? In what ways is it benefiting the College and your program? Does it follow the District's social media guidelines?

We use social media to reach students and potential students as many of our students use social media on a regular basis. We use it to communicate information about our programs and courses. Social media sites are maintained by several members of the division faculty.

4. If your program regularly communicates with the wider community, please describe how. What feedback do you get from the community?

Publication	Date last reviewed	Is the information accurate?	URL of publication
Department Web Site	**November, 2021**	**Yes**	**http://buscis.fullcoll.edu/**
College Catalog	**November, 2021**	**Yes**	**http://www.fullcoll.edu/catalog**
Business/CIS Facebook site	**November, 2021**	**Yes**	**https://www.facebook.com/fcbusinessdiv/**
Career and Technical Education	**November, 2021**	**Yes**	**https://cte.fullcoll.edu/**

Appendix A: Key Performance Indicator (KPI) data

The Office of Institutional Effectiveness will provide data for departments to analyze. To answer some of the questions on this form, departments will need disaggregated data that focuses on specific groups. The data will be presented to identify equity gaps among groups, so that departments can plan ways to close those gaps. Departments should also be informed how their student populations compare to the overall college population, and the population of the college's service area.

3.1

	2015	Pct	2016	Pct	2017	Pct	2018	Pct	2019	Pct	2020	Pct	2021	Pct
Amer. Indian / Alaska Native	95	0.27%	94	0.27%	91	0.26%	83	0.25%	67	0.21%	58	0.18%	50	0.16%
Asian	4,454	12.64%	4,433	12.60%	4,471	12.94%	4,257	12.65%	4,003	12.47%	3,690	11.69%	3,816	12.51%
Black / African American	1,236	3.51%	1,167	3.32%	1,204	3.48%	1,207	3.59%	1,058	3.30%	936	2.97%	935	3.07%
Filipino	1,059	3.01%	1,029	2.92%	989	2.86%	947	2.81%	918	2.86%	883	2.80%	900	2.95%
Hispanic	17,878	50.73%	18,506	52.58%	18,407	53.27%	18,143	53.90%	17,438	54.33%	17,550	55.62%	16,986	55.69%
Native Hawaiian / Pacific Islander	128	0.36%	132	0.38%	121	0.35%	106	0.31%	102	0.32%	76	0.24%	74	0.24%
Two or More	1,204	3.42%	1,213	3.45%	1,178	3.41%	1,140	3.39%	1,105	3.44%	1,027	3.25%	1,114	3.65%
White	7,931	22.51%	7,556	21.47%	6,976	20.19%	6,472	19.23%	5,789	18.04%	5,187	16.44%	5,065	16.61%
Unknown	1,255	3.56%	1,065	3.03%	1,119	3.24%	1,303	3.87%	1,616	5.03%	2,149	6.81%	1,561	5.12%
All	35240		35195		34556		33658		32096		31556		30501	
	2015	PCT	2016	PCT	2017	PCT	2018	PCT	2019	PCT	2020	PCT	2021	PCT
Female	18,018	51%	17,959	51%	17,705	51%	17,375	52%	16,767	52%	16,241	51%	16,282	53%
Male	16,637	47%	16,588	47%	16,232	47%	15,708	47%	14,809	46%	14,278	45%	12,886	42%
Different / Unknown	585	2%	648	2%	619	2%	575	2%	520	2%	1,037	3%	1,333	4%
All	35,240		35,195		34,556		33,658		32,096		31,556		30,501	

Total Enrollment		CIS Enrollment	
Avg 2016-2021		**Avg 2016-2021**	
Amer. Indian / Alaska Native	0.2%	Female	34.4%
Asian	12.5%	Male	62.7%
Black / African American	3.3%	Unknown	2.9%
Filipino	2.9%		
Hispanic	54.2%		
Native Hawaiian / Pacific Islander	0.3%	**Avg 2016-2021**	
Two or More	3.4%	Amer. Indian / Alaska Native	0.3%
White	18.7%	Asian	17.1%
Unknown	4.5%	Black / African American	4.4%
		Filipino	2.9%
		Hispanic	44.7%
		Native Hawaiian / Pacific Islander	0.2%
Avg 2016-2021		Two or More	3.9%
Female	51.8%	White	22.3%
Male	45.7%	Unknown	4.2%
Different / Unknown	2.4%		

	2016	PCT	2017	PCT	2018	PCT	2019	PCT	2020	PCT	2021	PCT
Amer. Indian / Alaska Native	5	0.2%	8	0.4%	7	0.4%	1	0.1%	5	0.3%	4	0.2%
Asian	332	15.8%	336	18.0%	339	18.6%	315	18.4%	271	15.2%	320	16.6%
Black / African American	93	4.4%	70	3.8%	103	5.7%	74	4.3%	88	4.9%	65	3.4%
Filipino	60	2.8%	45	2.4%	53	2.9%	58	3.4%	50	2.8%	57	3.0%
Hispanic	925	43.9%	851	45.7%	765	42.0%	737	43.1%	802	44.9%	938	48.8%
Native Hawaiian / Pacific Islander	9	0.4%	2	0.1%	6	0.3%	2	0.1%	6	0.3%	2	0.1%
Two or More	79	3.8%	71	3.8%	67	3.7%	67	3.9%	71	4.0%	80	4.2%
White	551	26.2%	422	22.7%	422	23.2%	372	21.8%	388	21.7%	354	18.4%
Unknown	52	2.5%	57	3.1%	60	3.3%	83	4.9%	105	5.9%	103	5.4%
total	2106		1862		1822		1709		1786		1923	

3.1 Summary

College Course Success	
Success	**Average**
Female	70.3%
Male	67.0%
Different / Unknown	69.8%
College Course Retention	
Class Retention	**Average**
Female	83.2%
Male	81.6%
Different / Unknown	82.7%

College Course Success Groups	
Success	**Average**
Amer. Indian / Alaska Native	66.7%
Asian	77.7%
Black / African American	52.7%
Filipino	73.5%
Hispanic	66.1%
Native Hawaiian / Pacific Islander	59.6%
Two or More	70.5%
White	73.8%
Unknown	66.6%

Course Retention	
Retention	**Average**
Amer. Indian / Alaska Native	80.3%
Asian	86.5%
Black / African American	76.4%
Filipino	84.2%
Hispanic	81.3%
Native Hawaiian / Pacific Islander	77.2%
Two or More	82.5%
White	84.4%
Unknown	81.1%

Success	Average
Female	62.97%
Male	65.27%
Different / Unknown	65.55%
Amer. Indian / Alaska Native	45.83%
Asian	78.10%
Black / African American	28.43%
Filipino	70.95%
Hispanic	61.55%
Native Hawaiian / Pacific Islander	53.05%
Two or More	63.28%
White	67.37%
Unknown	69.02%

Retention	Average
Female	78.95%
Male	81.80%
Different / Unknown	80.92%
Amer. Indian / Alaska Native	64.85%
Asian	87.73%
Black / African American	64.02%
Filipino	82.95%
Hispanic	79.37%
Native Hawaiian / Pacific Islander	78.88%
Two or More	80.73%
White	81.75%
Unknown	82.68%

3.2 Course Success

	2016	2017	2018	2019	2020	2021
Female	63.2%	59.4%	64.1%	61.8%	63.0%	66.3%
Male	62.9%	63.4%	64.4%	67.8%	65.7%	67.4%
Different / Unknown	70.0%	68.3%	76.9%	49.2%	66.9%	62.0%
	2016	2017	2018	2019	2020	2021
Amer. Indian / Alaska Native	33.3%	60.0%	63.6%	0.0%	62.5%	55.6%
Asian	75.7%	77.7%	77.3%	77.9%	80.2%	79.8%
Black / African American	38.5%	32.3%	30.5%	13.6%	22.7%	33.0%
Filipino	77.0%	73.6%	72.2%	64.6%	73.2%	65.1%
Hispanic	60.2%	55.8%	61.2%	64.8%	63.4%	63.9%
Native Hawaiian / Pacific Islander	60.0%	0.0%	33.3%	100.0%	50.0%	75.0%
Two or More	55.0%	50.8%	74.3%	63.3%	63.7%	72.6%
White	64.1%	66.9%	66.8%	68.6%	71.1%	66.7%
Unknown	68.3%	68.6%	71.4%	80.6%	58.3%	66.9%

Course Retention

	2016	2017	2018	2019	2020	2021
Female	80.4%	77.7%	78.3%	81.3%	76.2%	79.8%
Male	80.8%	85.7%	78.8%	84.2%	79.5%	81.8%
Different / Unknown	80.0%	92.7%	84.6%	75.4%	76.9%	75.9%
	2016	2017	2018	2019	2020	2021
Amer. Indian / Alaska Native	50.0%	90.0%	72.7%	0.0%	87.5%	88.9%
Asian	88.2%	91.1%	86.0%	87.5%	86.8%	86.8%
Black / African American	63.2%	72.9%	53.9%	76.0%	48.8%	69.3%
Filipino	87.8%	81.9%	83.3%	80.5%	85.9%	78.3%
Hispanic	79.2%	80.1%	77.3%	81.0%	77.7%	80.9%
Native Hawaiian / Pacific Islander	90.0%	50.0%	50.0%	100.0%	83.3%	100.0%
Two or More	79.0%	75.0%	90.5%	78.6%	78.4%	82.9%
White	80.8%	85.7%	80.7%	85.4%	81.2%	76.7%
Unknown	84.1%	85.7%	78.6%	87.9%	79.1%	80.7%

Appendix B: SLO data

This data is still off-limits to the OIE because it is housed in eLumen. The Faculty Senate only allows faculty members to have access to SLO data on eLumen. The Senate's SLO Assessment Committee will work with its division reps to help departments disaggregate SLO data, just as KPI data is disaggregated in Appendix A.

	Greatly exceeds expectations.		Exceeds expectations		Meets expectations		Does not meet expectations but developing		Does not meet expectations	
Integrate CSS properties into HTML pages using embedded styles and external stylesheets.	0	0.00%	0	0.00%	8	100.00%	0	0.00%	0	0.00%
Summarize the tools and responsibilities involved in network operations	0	0.00%	0	0.00%	11	78.57%	0	0.00%	3	21.43%
Use Microsoft Excel to create and edit professional spreadsheets that use basic formulas, graphs, and sensitivity analysis.	0	0.00%	0	0.00%	10	100.00%	0	0.00%	0	0.00%
Use the basic language features of looping and decision.	0	0.00%	0	0.00%	4	80.00%	0	0.00%	1	20.00%
Compare various e-commerce software and examine the use of merchant accounts.	0	0.00%	0	0.00%	7	100.00%	0	0.00%	0	0.00%
Create a Java class from a set of specifications that includes appropriate attributes and methods and create an application demonstrating object instantiation and display data for each object.	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Create a mail merged document by combining template files with a structured data source.	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Create a simple database using one of the modern DMS programs.	0	0.00%	0	0.00%	10	100.00%	0	0.00%	0	0.00%
Create banners, buttons, and navigational elements for use on the Web.	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%

	Greatly exceeds expectations.		Exceeds expectations		Meets expectations		Does not meet expectations but developing		Does not meet expectations	
Integrate CSS properties into HTML pages using embedded styles and external stylesheets.	0	0.00%	0	0.00%	8	100.00%	0	0.00%	0	0.00%
Summarize the tools and responsibilities involved in network operations	0	0.00%	0	0.00%	11	78.57%	0	0.00%	3	21.43%
Use Microsoft Excel to create and edit professional spreadsheets that use basic formulas, graphs, and sensitivity analysis.	0	0.00%	0	0.00%	10	100.00%	0	0.00%	0	0.00%
Use the basic language features of looping and decision.	0	0.00%	0	0.00%	4	80.00%	0	0.00%	1	20.00%
Compare various e-commerce software and examine the use of merchant accounts.	0	0.00%	0	0.00%	7	100.00%	0	0.00%	0	0.00%
Create a Java class from a set of specifications that includes appropriate attributes and methods and create an application demonstrating object instantiation and display data for each object.	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Create a mail merged document by combining template files with a structured data source.	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Create a simple database using one of the modern DMS programs.	0	0.00%	0	0.00%	10	100.00%	0	0.00%	0	0.00%
Create banners, buttons, and navigational elements for use on the Web.	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%

	Greatly exceeds expectations.		Exceeds expectations		Meets expectations		Does not meet expectations but developing		Does not meet expectations	
Design and create functional forms and reports that allow input, lookup and display of data	0	0.00%	0	0.00%	4	66.67%	0	0.00%	2	33.33%
Identify common network security issues	0	0.00%	0	0.00%	13	92.86%	0	0.00%	1	7.14%
Read, write, and append data files.	0	0.00%	0	0.00%	5	100.00%	0	0.00%	0	0.00%
Use Microsoft PowerPoint to create and deliver a presentation that includes designs, transitions, and graphics	0	0.00%	0	0.00%	11	100.00%	0	0.00%	0	0.00%
Use Access to develop an database table and search for information in the table	0	0.00%	0	0.00%	9	100.00%	0	0.00%	0	0.00%
Demonstrate the ability to utilize responsive design principles.	0	0.00%	0	0.00%	8	100.00%	0	0.00%	0	0.00%
Design and create a Java program demonstrating the use of error handling techniques	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Explain and implement troubleshooting practices	0	0.00%	0	0.00%	13	92.86%	0	0.00%	1	7.14%
Summarize industry standards, practices and network theory	0	0.00%	0	0.00%	12	85.71%	0	0.00%	2	14.29%

Overall by Term for Demographic Category: Ethnicity

	Greatly exceeds expectations.		Exceeds expectations		Meets expectations		Does not meet expectations but developing		Does not meet expectations	
Fall 2016	0	0.00%	0	0.00%	461	88.15%	0	0.00%	62	11.85%
Spring 2017	0	0.00%	0	0.00%	224	86.15%	0	0.00%	36	13.85%
Fall 2017	0	0.00%	0	0.00%	216	67.92%	0	0.00%	102	32.08%
Spring 2018	0	0.00%	0	0.00%	17	85.00%	0	0.00%	3	15.00%
Fall 2018	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Spring 2019	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Fall 2019	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Spring 2020	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Fall 2020	0	0.00%	0	0.00%	43	81.13%	0	0.00%	10	18.87%
Spring 2021	0	0.00%	0	0.00%	124	86.11%	0	0.00%	20	13.89%

Overall by Demographic Element for Demographic Category: Ethnicity

	Greatly exceeds expectations.		Exceeds expectations		Meets expectations		Does not meet expectations but developing		Does not meet expectations	
African American	0	0.00%	0	0.00%	44	58.67%	0	0.00%	31	41.33%
American Indian/Alaskan Native	0	0.00%	0	0.00%	11	84.62%	0	0.00%	2	15.38%
Asian	0	0.00%	0	0.00%	192	85.71%	0	0.00%	32	14.29%
Filipino	0	0.00%	0	0.00%	43	81.13%	0	0.00%	10	18.87%
Hispanic	0	0.00%	0	0.00%	406	78.08%	0	0.00%	114	21.92%
Pacific Islander	0	0.00%	0	0.00%	3	100.00%	0	0.00%	0	0.00%
Unknown	0	0.00%	0	0.00%	48	94.12%	0	0.00%	3	5.88%
Unspecified	0	0.00%	0	0.00%	2	100.00%	0	0.00%	0	0.00%
White Non-Hispanic	0	0.00%	0	0.00%	336	89.12%	0	0.00%	41	10.88%

The following is one of the PLSOs for the Computer Information Systems Associate in Science Degree by gender (female). Note the participation levels between 2017 and 2021.

Department: Computer Information Systems Dept.

Program: Computer Information Systems Associate in Science Degree

Courses: All Courses for Selected Programs

Terms: Fall 2021, Spring 2021, Fall 2020, Summer 2020, Spring 2020, Fall 2019, Summer 2019, Spring 2019, Fall 2018, Summer 2018, Spring 2018, Fall 2017, Summer 2017, Spring 2017, Fall 2016, Summer 2016, Spring 2016

SLOs: Program PSLOs

Date: 11-05-2021

Demographics Categories and Elements:
Gender: F, M, N, X

PSLO: Demonstrate an understanding of common computer technology related terms.

Demographic Category: Gender

F

	Greatly exceeds expectations.		Exceeds expectations		Meets expectations		Does not meet expectations but developing		Does not meet expectations	
Spring 2016	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Summer 2016	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Fall 2016	0	0.00%	0	0.00%	11	73.33%	0	0.00%	4	26.67%
Spring 2017	0	0.00%	0	0.00%	1	50.00%	0	0.00%	1	50.00%
Summer 2017	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Fall 2017	0	0.00%	0	0.00%	12	40.00%	0	0.00%	18	60.00%
Spring 2018	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Summer 2018	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Fall 2018	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Spring 2019	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Summer 2019	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Fall 2019	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Spring 2020	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Summer 2020	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Fall 2020	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Spring 2021	0	0.00%	0	0.00%	24	96.00%	0	0.00%	1	4.00%
Fall 2021	0	0.00%	0	0.00%	0	0.00%	0	0.00%	0	0.00%
Overall	0	0.00%	0	0.00%	48	66.67%	0	0.00%	24	33.33%

Note: the above report is too lengthy to include (13 pages).

Appendix C: Other data

In addition to the KPI and SLO data, departments may wish to include other data that it finds in Tableau or other sources.