



## Instructional Annual Program Review and Planning Update Form Fall 2023

### BACKGROUND:

Program review is an integral part of the campus planning process. As programs and areas monitor their progress on the current comprehensive four-year program review, changes in need and scope can be expected. This Annual PR Update form is designed to outline and request modifications to the current program review that occur between comprehensive four-year review cycles, as needed.

Examples of a requested change include new information such as action plans, outcomes modifications, personnel changes, technology needs, and capital expenditures requirements. As programs and areas monitor their progress on the previous comprehensive four-year program review, the form provides the basis to suggest a change in plans and processes to improve student success and institutional effectiveness.

### DIRECTIONS:

This form shall be completed annually by **all** instructional programs.

- Instructional programs must submit their Annual Program Review Update form to their dean by 5pm on Monday, November 27, 2023.
- Deans will forward the completed form to the Program Review and Planning Committee Chairs by 5pm on Monday, December 4, 2023.
- Questions or concerns?
  - Committee contacts:
    - Co-chairs Mary Bogan ([mbogan@fullcoll.edu](mailto:mbogan@fullcoll.edu)) and Bridget Kominek ([bkominek@fullcoll.edu](mailto:bkominek@fullcoll.edu))
    - Division representatives on the [Program Review and Planning Committee](#)
  - [Office of Institutional Effectiveness](#)

### SUBMISSION:

Program: Computer Science

Division: Math and Computer Science Date: 11-7-2023

We have reviewed our most recent self-study and **have not identified** any significant changes that necessitate resource requests for the upcoming academic year. *(Complete part 1 only)*

We have reviewed our most recent self-study and **have identified** significant changes that necessitate additional resource requests, which are attached in our submission. *(Complete parts 1 and 2)*

Principal Author Signature:

Printed Name: Andrew V. Clifton

Date: 11-26-2023

Dean Signature:

Printed Name: Sam Foster

Date: 12/6/2023

## Part 1: Review of Data

### Institution Set Standards (ISS)

1. Use the data provided by the Office of Institutional Effectiveness (OIE) to review your course completion and success rates and provide a comparison to the Institution Set Standards for course completion and success rates.

After August 15, you will be able to access PDF copies of your program's ISS data here: [ISS ISLO Documents](#). The folder will also include instructions to access Tableau dashboards with the same information. The instruction document will also provide more context about how these standards are calculated. If you have any questions, please reach out to the Office of Institutional Effectiveness at [ie@fullcoll.edu](mailto:ie@fullcoll.edu).

For this review period, our average success rate was **55.6%** while our average completion rate was **74.9%**. While this is below the institutional average, it represents an increase over our success/completion rates from the previous review:

	2020/2021	2021/2022	2022/2023 (current)
Completion	63.7%	66.8%	74.9%
Success	51.3%	47.3%	55.6%

2. If your program meets or exceeds the standard for completion and success, to what do you attribute your success? If your program does not meet this standard, please examine the possible reasons, and note any actions that should be taken, if appropriate.

Our success and completion rates, while improving, remain below the institutional average.

There are several reasons why students in Computer Science courses may have a lower success/completion rate compared to the average of students in other subjects.

- **Prerequisite knowledge:** Computer science courses may require background knowledge which is not fully captured in the official course prerequisites. Should a student not have completed essential foundational courses or lacks the necessary prerequisite knowledge, they may encounter challenges when tackling more advanced classes.

To address this, we continue to pursue the addition of a "CSci 0" course (SAP #3 in 2021 program review) which would introduce students to the basic concepts of computer science in a lower-intensity course.

- **Under-representation:** There is a gender gap in computer science, where fewer women than men pursue degrees in the field. This imbalance contributes to a lack of diversity in computer science classrooms, creating additional challenges for women and underrepresented groups in finding success within the subject.
- **Difficulty:** Computer science classes tend to pose a greater challenge compared to other subjects due to their demands for elevated technical proficiency and mathematical skill. Students often encounter difficulty comprehending and implementing programming languages and algorithms. Similar to other STEM courses, computer science classes frequently prioritize precision and correctness.

Furthermore, all of our courses are 4 units of lecture, compared with the more common 3 units, or 3 units lecture + 1 unit lab structure seen in many other computer science programs. While this allows us to cover more material and advanced topics (an element which many of our transfer students have expressed gratitude for) this also means that our courses include more material than many other lower-division computer science programs.

- **Lack of Support:** Some students may struggle in computer science courses due to insufficient support. Computer science courses may not have as many resources available to students, which can make it harder for students to get the help they need.

We continue to emphasize to students the availability of the CSci Lab (located inside the Math Lab) as a place where students can receive assistance without an appointment, and we are grateful for Academic Support Services offering appointment-based CSci tutoring as well.

- **Workload:** Computer science courses can have a substantial workload, requiring students to spend significant amounts of time designing and evaluating programs, and completing assignments. The magnitude of the workload can be surprising and overwhelming for some students.

### **Institutional Student Learning Outcomes (ISLOs)--Global Awareness ISLO.**

1. Describe your program's participation in assessment of Institutional Student Learning Outcomes (ISLO's). Specifically, how does your CSLO attainment, for the courses that are mapped to the Global Awareness ISLO, compare to Fullerton College's ISLO attainment?

After August 15, you will be able to access PDF copies of your program's ISLO data here: [ISS ISLO Documents](#). The folder will also include instructions to access Tableau dashboards with the same information. Please reach out to your SLOA representative if you have questions.

None of our CSLOs are mapped to the Global Awareness ISLO, so we have no data to analyze.

2. Does the SLO data show significant achievement gaps among demographic groups in your program? If so, where are the gaps and what steps can your program take to shrink them? If not, to what do you attribute your success in minimizing the achievement gap?

N/A (see q. 1)

## Part 2: Additional Resource Request Reasoning and Support

For each separate resource request, complete steps A, B, and C.

Step A: Briefly describe the request.

Step B: Answer the following questions:

1. Is it imperative that this resource request be processed now rather than during the next comprehensive program review? Why?
2. How will this additional resource allocation specifically enhance your program's services, activities, processes, etc. to continue or improve student learning and achievement?
  - Is the resource request personnel-related? If so, please provide evidence to justify the requested positions such as retirements, program growth or curricular demands, full-time/adjunct ratios, etc.
3. How will this additional resource allocation help you serve the college mission or strategic initiatives, and/or your program's goals for improvement, as stated in your last program review?

Step C: Complete this chart with details of the request:

Type of Resource	Requested Dollar Amount	<b>Potential Funding Source</b> It is only necessary to list potential funding forces if you are aware of specific grants/program funds appropriate to the request, such as Strong Workforce.
Personnel		
Facilities		
Equipment		
Supplies		
Computer Hardware		
Computer Software		
Training		
Other		
<b>Total Requested Amount:</b>		