Contents

Instructional Program Review

General Information

1. Name of department (program) under review.

   This course (Physical Science) is completely under the Physics Department and should not have a separate Program review!

2. Who is the person(s) submitting the Program Review form?

   Anca Husher (and adjunct Zaya Pourtarvirdi)

3. What is the current academic year (i.e. 2022-23)?

   2022-2023

4. Please describe the department/program, its staff and faculty, etc.

   Physical Science is a small part of Physics in general.

   Physics provides a pathway to a wide variety of high demand careers in diverse STEM sectors with the skills related to numeracy, problem solving, data analysis and communication of complex ideas, as well as understanding of how the world works on a scientific level.

   Staff: One full-time professor, and access to one instructional staff that we share with chemistry and biology. Access to one to two part-time adjuncts on demand.

5. Please describe how this department's/program's mission relates to the college's mission and strategic goals.

   Physics is a requirement for students' success in majors which require an understanding of the physical world. Students need one to three semesters of varying levels of physics to accomplish their academic goals.

   Students will master foundational skills, explore their passions, attain degrees and certificates, and pursue career and transfer pathways. Students will enhance their problem solving and critical thinking skills as they explore the relationship of physics to other topics in science, technology and engineering. Hence students will increase transfer readiness, award completion, and increase workforce readiness – specifically for careers in technical fields, insuring academic excellence and success along a journey of transformational learning and growth.

   In addition, this particular course is required for students that would like to become teachers K-12.

1. Review the Department Summary Data Table. What are the strengths? What are the challenges or areas of improvement? What is the impact on students? Respond to a minimum of three trends such as census enrollment, FTES/FTEF, course success rate, course retention rate, etc.

Use datasheet form page 484 (1 course only). This course was first taught in 2016-2017 academic year. It had a peak in 2017-2018 academic year and then a drop for 2 consecutive years and then it came bac to an average fill rate of about 92% during Covid. Retention was good (100%) especially during the fully online (Covid), with an average retention of 83%. In the past prior year, it was taught online with one adjunct and the course was not promoted to be filled. The census enrollment trend has a negative slope, and it can be corrected with more promotional incentives by the professors, counselors, dean and VP of instruction. That is the biggest current challenge.

2. Review the Department Student Equity – Success Rates Data Table. What are the strengths? What are the challenges or areas of improvement? What is the impact on students?

The success rate, however, for the students that completed the course has an average of 82% - not bad for this course. There is no data available for 2022-2023 – although the course was offered. One of the biggest challenges if the accuracy of the data being part of this interpretation – considering that this course is already under the Physics department but depict here as a standalone.

3. Review the Program (Department) SLO Data Table. How does your department support ISLOs? What are the strengths and challenges? What is the impact on the college mission?

The SLO data table for sure is incomplete (data was lost in eLumen) because all data was filled in every time the course was offered. In addition, for the one year the SLO data is published has a 100% satisfaction of all SLO's. To be accurate – this data needs to be reviewed.

Award Data Sheet

1. Review both tables on the Award Data Sheet. What are the strengths? What are the challenges or areas of improvement? What is the impact on students?

There is no award for this course. It is only a part of a Teaching credential program. No data is available for that. However, this course is art of the General Science AST degree, and it is a mandatory course for any teaching credential program.

Course Data Sheet

1. Review the Course Summary Data Table for each course. What are the trends for enrollment, retention, and success rates? What are the strengths? What are the challenges or areas of improvement? What is the impact on students?

See all details outlined in the Physics Department Program Review.

2. Review the Student Learning Outcomes Data Table for each course. What are the strengths and challenges? What is the impact on the college mission?

See all details outlined in the Physics Department Program Review. The SLO data table for sure is incomplete (data was lost in eLumen) because all data was filled in every time the course was offered. In addition, for the one year the SLO data is published has a 100% satisfaction of all SLO's. To be accurate – this data needs to be reviewed.

1. What courses and awards are due for 5-year review? To find this information, go to the Curriculum Committee webpage and click on the following links in the left menu bar: Course 5 Year Review Tracker link and Award 5 Year Review Tracker link.

See all details outlined in the Physics Department Program Review. This is a standalone course under the Physics Department.

Goal Setting

On the following pages, please establish goals for your department. Keep in mind the purpose of the Program Review to drive continuous improvement, as well as to help establish a need for funding or other support to achieve improved outcomes. **What sorts of things will the department be doing, or would like to be doing, to maintain, expand, or improve excellent instructional delivery?**

This template has space to establish up to three goals. If you wish to add more goals, additional forms are available in the Teams folder.

Goal 1

1. State the status of this goal (new, in-progress, or completed):

   New & In progress - Lab Continuous Improvement – same as under the Physics Department

2. State this goal is one or two sentences?

   Continuous laboratory improvement to get new equipment to support student learning in this new era of sensors, and AI applications.

3. What is a short name for this goal?

   Lab Continuous Improvement

4. In what ways will achieving the goal support the college's mission and/or core values?

   Labs and hands-on activities support advanced physics for a thorough understanding and completes the academic success and transformational learning and growth of all students. These are all in line with our college core values.
   All our labs value and promote creativity, innovation, experimentation, and critical thinking.

5. List the college-wide strategic goals that will be addressed by this goal (include all that apply and remove any that do not apply).

   - Increase award completion
   - Reduce barriers to completion
   - Reduce equity gaps
   - Increase transfer readiness
   - Increase workforce readiness
   - Maintain institutional stability

6. What steps are you going to take to achieve this goal?

   Make a list with all our lab improvements, equipment or parts necessary to advance some of the labs to the next level. Also, make a list of all the broken equipment that needs to be replaced, and the wear and tear parts that need to be on going.

7. How are you going to measure completion of this goal?

   Purchasing the necessary parts/ equipment & Implementation of the labs

8. If this goal was completed or is in progress, please provide an update and summarize efforts.

   New – in progress. Some of the list of done and will be listed in the website provided for the Program review.

9. Briefly describe or list the types of resources (staffing, equipment, technology, facilities, etc.) that are needed to support and achieve this goal. Then enter all resource requests through the Resource Allocation Requests link below.

   Equipment/ technology applicable in the lab.

Resource Allocation Requests

- Enter requests in the Program Review Resource Allocations Request From (Secured – YCCD Login Required) located on the Program Review webpage under the Resource Allocation Requests heading.

Goal 2

1. State the status of this goal (new, in-progress, or completed):

   New

2. State this goal is one or two sentences?

   Improve promotion of this course with the final goal to increase enrollment

3. What is a short name for this goal?

   Increase enrollment

4. In what ways will achieving the goal support the college's mission and/or core values?

   Academic Excellence & Success via a robust curriculum and continuous improvement through the assessment of student learning outcomes, program effectiveness, and our decision-making processes.

5. List the college-wide strategic goals that will be addressed by this goal (include all that apply and remove any that do not apply).

   - Reduce barriers to completion
   - Reduce equity gaps
   - Increase transfer readiness
   - Maintain institutional stability

6. What steps are you going to take to achieve this goal?

   This course must be promoted again to high school; unfortunately, because the course changed names and is now under Physical Science – the most counselors thing it is Earth Science – which is not. That is the biggest misconception about this course. Meet with counselors and discuss the coding that is still part of how the transcripts look: CHEM140 and PHYCS140.

7. How are you going to measure completion of this goal?

   By monitoring the census enrollment.

8. If this goal was completed or is in progress, please provide an update and summarize efforts.

   new

9. Briefly describe or list the types of resources (staffing, equipment, technology, facilities, etc.) that are needed to support and achieve this goal. Then enter all resource requests through the Resource Allocation Requests link below.

   Flex time with the research analyst and all counselors.

Resource Allocation Requests

- Enter requests in the Program Review Resource Allocations Request From (Secured – YCCD Login Required) located on the Program Review webpage under the Resource Allocation Requests heading.

Goal 3

1. State the status of this goal (new, in-progress, or completed):

   New

2. State this goal is one or two sentences?

   Review and discuss Physics Dept data with our Research Analyst (Matthew Connot)

3. What is a short name for this goal?

   Data collection and dissemination

4. In what ways will achieving the goal support the college's mission and/or core values?

   This goal supports the accuracy of our *Assessment and Improvement* core value: continuous improvement through the assessment of student learning outcomes, program effectiveness, and our decision-making processes. We use the results of these assessments to pursue improvements in our courses, programs, practices, and student outcomes.

5. List the college-wide strategic goals that will be addressed by this goal (include all that apply and remove any that do not apply).

   - Reduce equity gaps
   - Maintain institutional stability

6. What steps are you going to take to achieve this goal?

   Set up several meetings with our Research Analyst (Matthew Connot)
   Pull data set out and analyze them

7. How are you going to measure completion of this goal?

   Data restructure and agreement as how to collect it and distribute it to be as correct as possible.

8. If this goal was completed or is in progress, please provide an update and summarize efforts.

   New

9. Briefly describe or list the types of resources (staffing, equipment, technology, facilities, etc.) that are needed to support and achieve this goal. Then enter all resource requests through the Resource Allocation Requests link below.

   Flex time with the research analyst.

Resource Allocation Requests

- Enter requests in the Program Review Resource Allocations Request From (Secured – YCCD Login Required) located on the Program Review webpage under the Resource Allocation Requests heading.

Submit

- When you have completed all areas of the Program Review as outlined above, notify your dean by typing the @ symbol and your dean's name in the box below (e.g. @Sean Osborn, @Steve Amador, etc.).

@Sean Osborn
@Jeri Pourchot

Dean's Review and Feedback

Deans: Please review the form above and place any thoughts or feedback that you have in the space below. Feedback from AAC, counseling, industry, etc. can be included. When completed, please put the @ symbol and the faculty member name(s) at the end so that they will get notified when your review is completed.

Physical Science is comprised of a single class. It should be reviewed either as part of physics or in the general education pathway. There is no award associated with the class. In addition, better outreach and program description should be provided to the high schools. It was high school students who support this class more than any other population.