2018 INSTRUCTIONAL ANNUAL PROGRAM PLANNING WORKSHEET

CURRENT YEAR: 2017-2018 **PROGRAM: PHYSICS**
CLUSTER: MATH AND SCIENCES **LAST YEAR CPPR COMPLETED: 2014-15**
NEXT SCHEDULED CPPR: 2018-19 **CURRENT DATE: 3/5/2018**

The Annual Program Planning Worksheet (APPW) is the process for:

- reviewing, analyzing and assessing programs on an annual basis
- documenting relevant program changes, trends, and plans for the upcoming year
- identifying program needs, if any, that will become part of the program's resource plan
- highlighting specific program accomplishments and updates since last year's APPW
- tracking progress on a Program Sustainability Plan if established previously.

Note: Degrees and/or certificates for the same program may be consolidated into one APPW.

This APPW encompasses the following degrees and/or certificates:
Physics A.S., Physics AS-T

GENERAL PROGRAM UPDATE

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

PROGRAM SUSTAINABILITY PLAN UPDATE

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

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

If you selected yes, please complete the Program Sustainability Plan Progress Report below after you complete the Data Analysis section. That data collection and analysis will help you to update, if necessary, your Program Sustainability Plan.

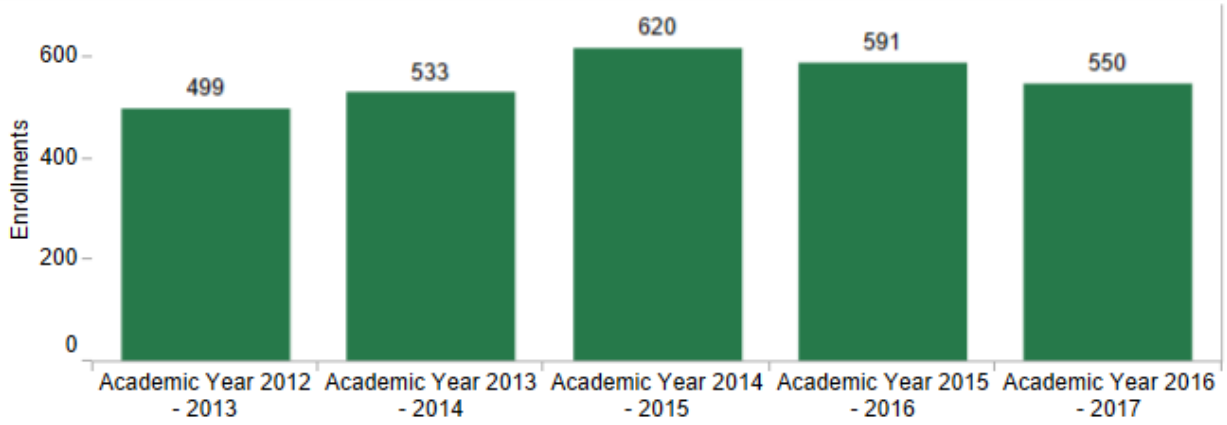
DATA ANALYSIS AND PROGRAM-SPECIFIC MEASUREMENTS

Your responses to the prompts for the data elements below should be for the entire program. If this APPW is for multiple degrees and/or certificates then you MAY want to comment on each degree and/or certificate, or discuss them holistically for the entire program being sure to highlight relevant trends for particular degrees and/or certificates, if necessary. Responses in this document need only reference the most recent year's available data.

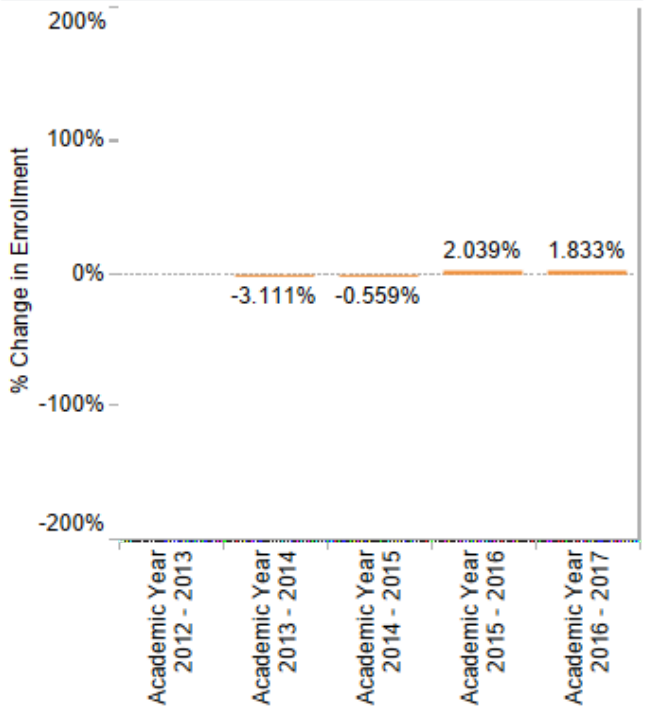
SLOCCCD Program Review Data - Enrollment

Department:	Course:	Dual Enrollment:	Prison:
Physics	All	All	All

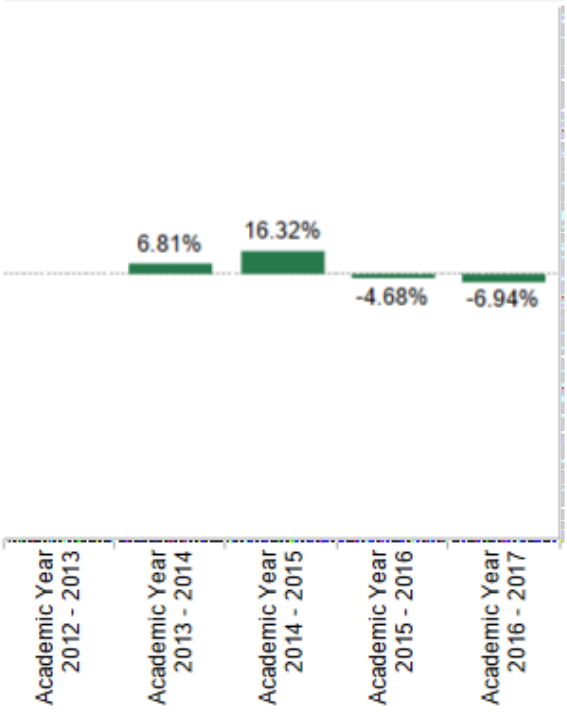
Physics Enrollments



% Change - Overall College Enrollments



% Change - Physics

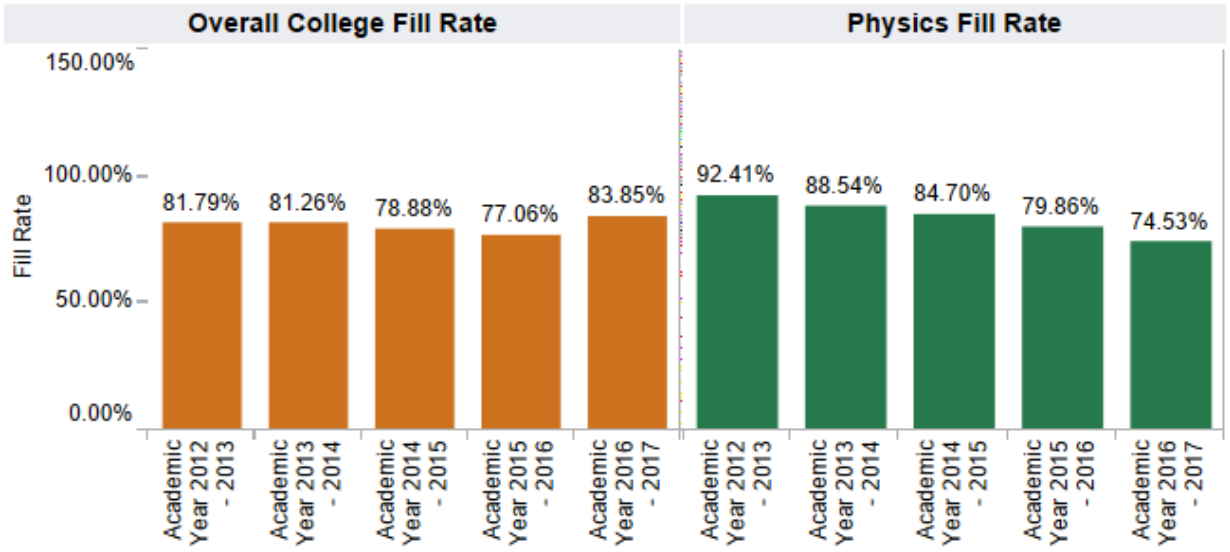


Enrollment: Duplicated count of students who completed greater than 0 units in positive attendance courses or were present on census for all other accounting methods.

Although physics enrollments have declined the past two years, enrollments are still up over the past 5 years. It is anticipated that the enrollments increase as more engineering students are required to take the third and final semester of the PHYS 208 sequence. Underrepresented groups include: 30-34 year old students and females. Given that the bulk of students taking PHYS courses are transfer students, it is not surprising that the 30-34 age group is underrepresented. It is unfortunate that we do not have a higher percentage of women in our courses and we continue to try to reach out to capture more females in STEM majors.

SLOCCCD Program Review Data - Student Demand (Fill Rate)

Department:	Course:	Dual Enrollment:	Prison
Physics	All	All	All

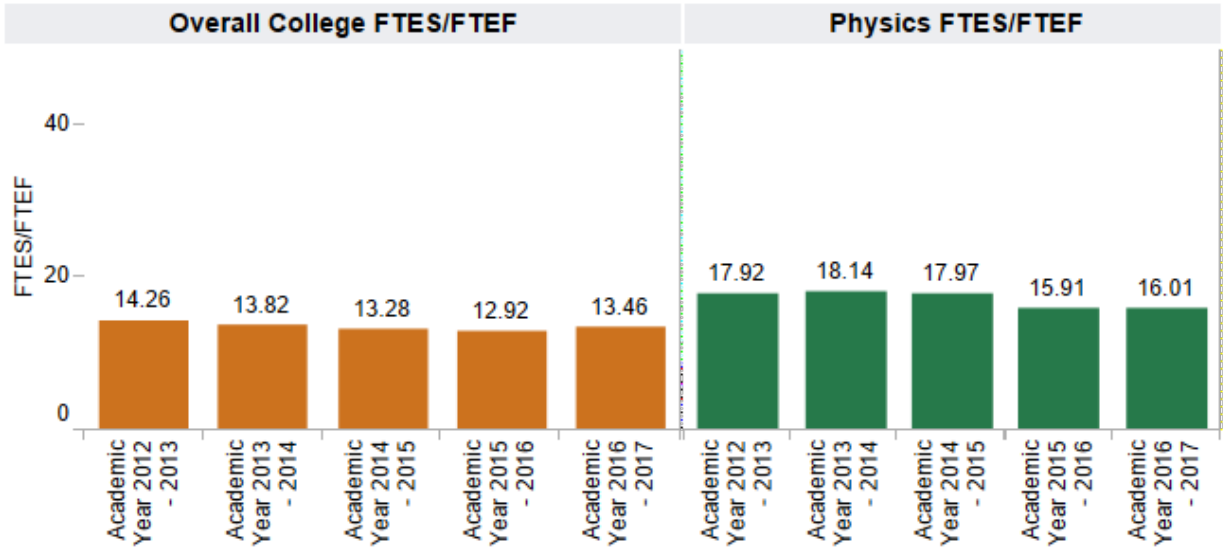


Fill Rate: The ratio of enrollments to class limits. Cross listed class limits are adjusted appropriately. Also, courses with zero class limits are excluded from this measure.

Overall, PHYS fill rates have been higher than the college's overall fill rate. During the past year, fill rates for PHYS 205A have fallen. PHYS 208 suffers partly from the need to ensure that students are able to meet degree objectives in a two year time frame. As such, some sections run at lower fill rates. As more large classroom space becomes available, the department can work to maximize fill rates by adding sections as existing sections fill during the registration process. This is reflected in the fall 2018 schedule.

SLOCCCD Program Review Data - Efficiency (FTES/FTEF)

Department:	Course:	Dual Enrollment:	Prison:
Physics	All	All	All



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

Although the fill rates have declined in PHYS sections, the efficiency has increased. This is primarily due to instructors choosing to teach double, triple, and quadruple lectures into 2, 3, or 4 lab sections respectively. PHYS program efficiency has consistently been near 3 FTES/FTEF higher than the college average. 2015-16 saw a drop in efficiency. This was partly due to a decrease in demand for PHYS 208 sections. This trend has reversed due to new requirements for ENGR majors to complete PHYS 208C. We will continue to offer multiple sections in one large lecture space as a way of maintaining high efficiency in our courses.

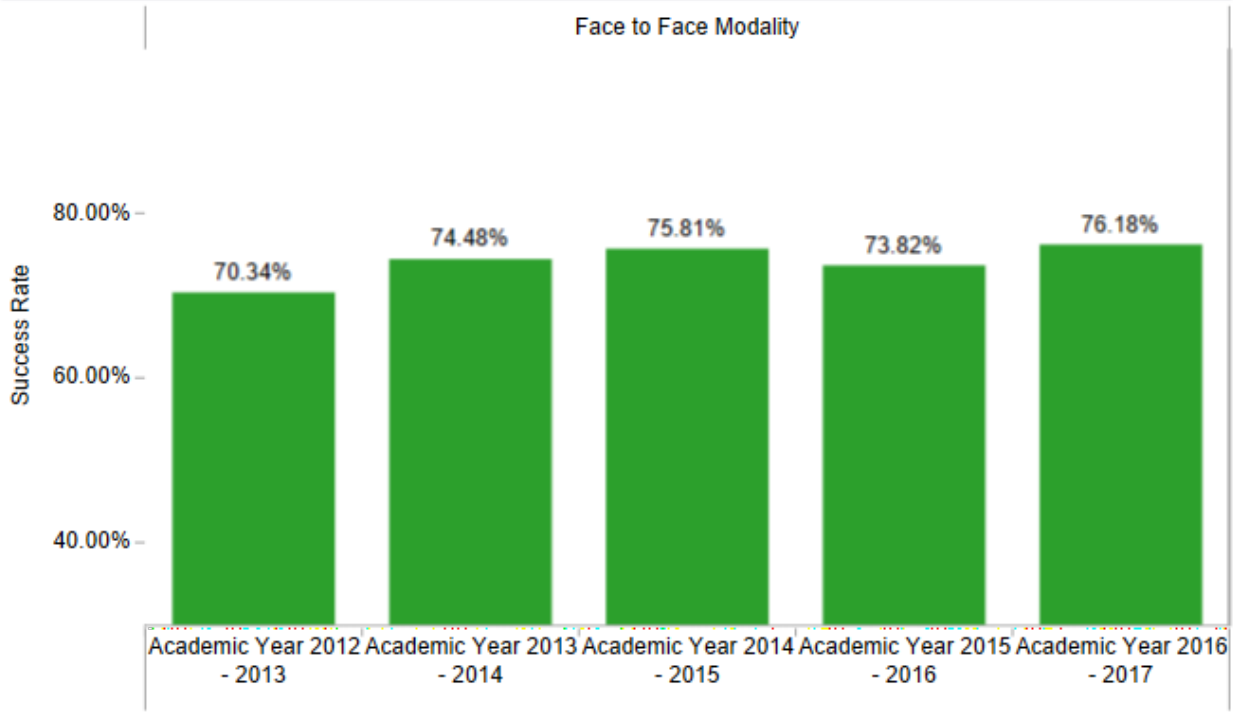
SLOCCCD Program Review Data: Successful Course Completion

Select Department: Physics

Course: All

Legend: Face to Face Modality

Successful Course Competion by Modality -Physics



Successful Course Competion by Modality Table - Physics

		Academic Year 2012 - 2013	Academic Year 2013 - 2014	Academic Year 2014 - 2015	Academic Year 2015 - 2016	Academic Year 2016 - 2017
Face to Face Modality	Department Success Rate	70.34%	74.48%	75.81%	73.82%	76.18%
	Total Department Enrollments	499.0	533.0	620.0	592.0	550.0

The group that had the largest gap in success rate were students who were academically disadvantaged. Ironically, females were more successful in the course even though they are an underrepresented group. Promise students succeeded by 7.6% (80% success rate) over their peers (72.4% success rate). PHYS 208AX and PHYS 208BX were employed to give students additional opportunities to improve in the PHYS 208A and PHYS 208B courses. This may be one reason why success rates have increased in PHYS 208A. PHYS 208B has not seen such an increase, but it may be due to multiple math courses conflicting with the time that PHYS 208BX is offered. We have made changes to the day and time that PHYS 208AX and PHYS 208BX are offered to minimize conflicts. It is important to target additional students (particularly the weaker students) so that they may take advantage of the opportunity that it provides.

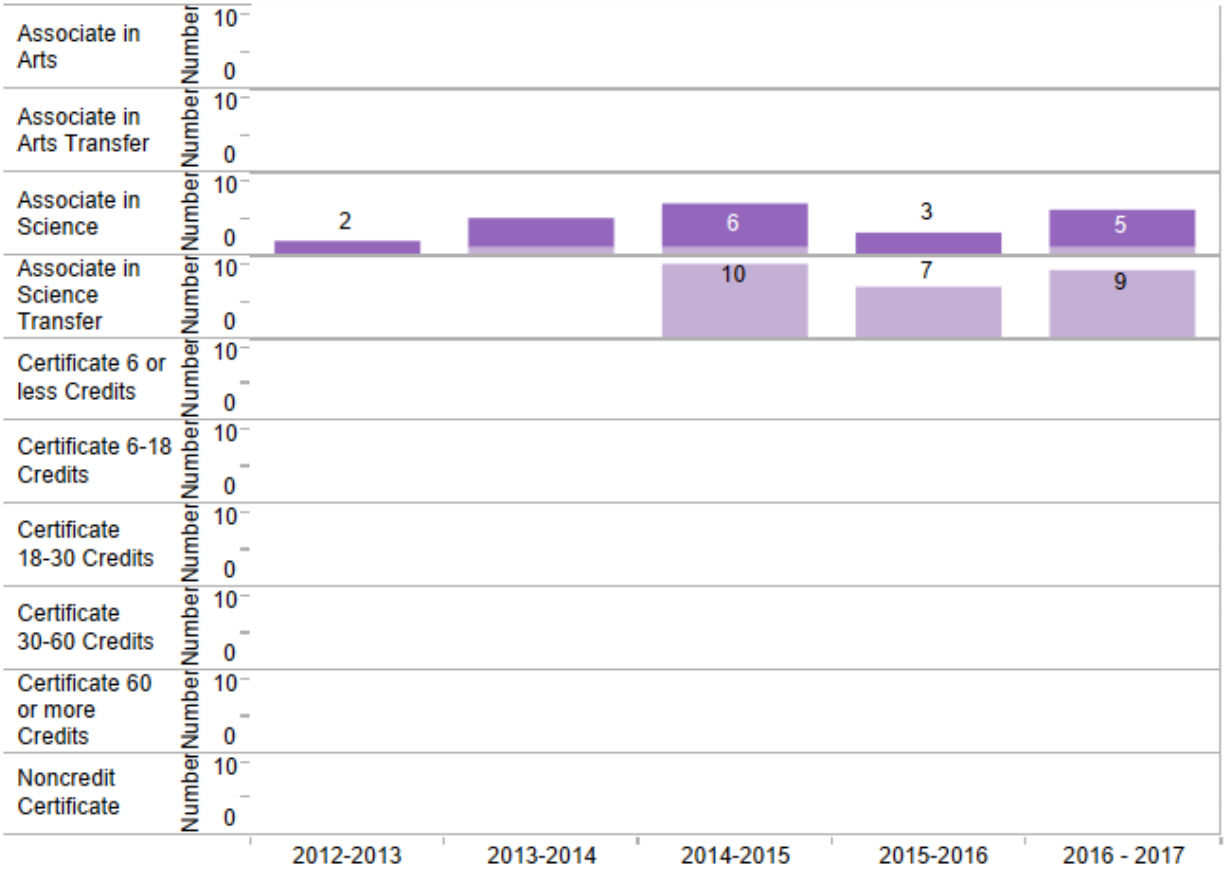
SLOCCCD Program Review Data: Degrees and Certificates Awarded

Program:
Physics, General

Award Type:
All

Program Awards

Top Code Description(s): Physics, General
Award(s): All



Program Awards Table

Award T..	Award	2012-2013	2013-2014	2014-2015	2015-2016	2016 - 2017
Associate in Science	Physics (AS)	2	4	6	3	5
	Physics (AST)		1	1		1
	Total	2	5	7	3	6
Associate in Science Transfer	Physics (AST)			10	7	9
	Total			10	7	9

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

The addition of the AD-T for Physics has increased the number of students receiving degrees. It is believed that the number of students receiving AD-T's in Physics will increase during the next several years as students and counselors become better at identifying the degrees that students may be able to obtain upon graduation. Additionally, if DegreeWorks would "auto award" degrees to those students who meet the requirements (so no work was required of the student), it is believed that the number of AS-T's would increase further.

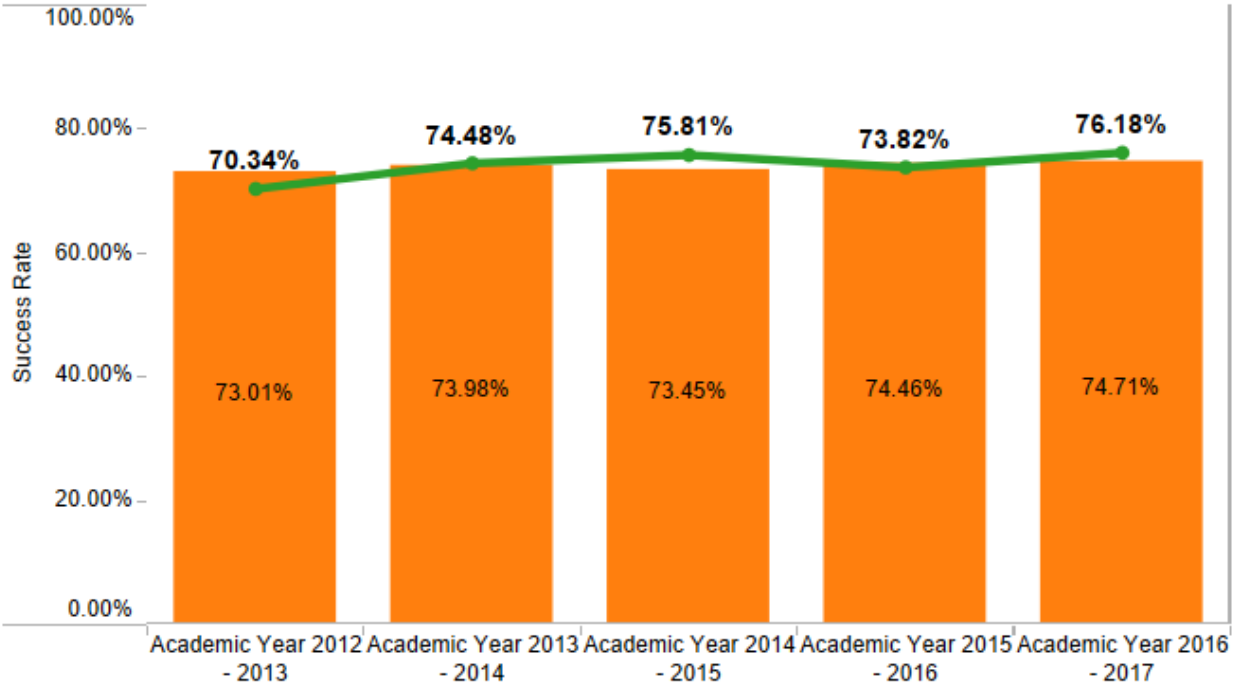
SLOCCCD Program Review Data: Successful Course Completion

Select Department: Physics

COURSE All

Legend: Department Success Rate; Overall College Success Rate

Successful Course Completion - Physics



Physics Success Rate Table

	Academic Year 2012 - 2013	Academic Year 2013 - 2014	Academic Year 2014 - 2015	Academic Year 2015 - 2016	Academic Year 2016 - 2017
Department Success..	70.34%	74.48%	75.81%	73.82%	76.18%
Total Enrollments	499	533	620	592	550

Review the Disaggregated Student Success charts; include any charts that you will reference. Describe any departmental or pedagogical outcomes that have occurred as a result of programmatic discussion regarding the data presented.

The group that had the largest gap in success rate were students who were academically disadvantaged. Ironically, females were more successful in the course even though they are an underrepresented group. Promise students succeeded by 7% (81.25% success rate) over their peers (74.2% success rate). PHYS 208AX and PHYS 208BX were employed to give students additional opportunities to improve in the PHYS 208A and PHYS 208B courses. This may be one reason why success rates have increased in PHYS 208A. PHYS 208B has not seen such an increase, but it may be due to multiple math courses conflicting with the time that PHYS 208BX is offered. We have made changes to the day and time that PHYS 208AX and PHYS 208BX are offered to minimize conflicts. It is important to target additional students (particularly the weaker students) so that they may take advantage of the opportunity that it provides.

OTHER RELEVANT PROGRAM DATA (OPTIONAL)

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

PROGRAM OUTCOMES ASSESSMENT CHECKLIST AND NARRATIVE

CHECKLIST:

☒ SLO assessment cycle calendar is up to date.
☒ All courses scheduled for assessment have been assessed in eLumen.
☐ Program Sustainability Plan progress report completed (if applicable).

NARRATIVE:

Program Learning Outcomes were changed to better match and align with revised course learning outcomes. Given this change, it will take a few semesters to obtain enough data to make program analysis valid.

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PROGRAM PLANNING / FORECASTING FOR THE NEXT ACADEMIC YEAR

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

PHYS 205A was offered for the first time as a DE/Dual Enrollment section at Templeton High School. It is anticipated that other high schools will be interested in having the course offered on their campuses as well. If that materializes, additional DE faculty will need to be hired to accommodate the load.

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PROGRAM SUSTAINABILITY PLAN PROGRESS REPORT

This section only needs to be completed if a program has an existing Program Sustainability Plan. Indicate whether objectives established in your Program Sustainability Plan have been addressed or not, and if improvement targets have been met.

Area of Decline or Challenge	Identified Objective (Paste from PSP)	Planning Steps (Check all that apply)	Has the Improvement Target Been Met?
Enrollment		☐ Identified ☐ Resources Allocated ☐ Implemented	--
Student Demand (Fill Rate)		☐ Identified ☐ Resources Allocated ☐ Implemented	--
Efficiency (FTES/FTEF)		☐ Identified ☐ Resources Allocated ☐ Implemented	--
Student Success – Course Completion		☐ Identified ☐ Resources Allocated ☐ Implemented	--
Student Success— Course Modality		☐ Identified ☐ Resources Allocated ☐ Implemented	--
Degrees and Certificates Awarded		☐ Identified ☐ Resources Allocated ☐ Implemented	--

If Program Sustainability Plan is still necessary, provide a brief description of how you plan to continue your PSP and update your PSP to remove any objectives that have been addressed and include any new objectives that are needed.

OPTIONAL SURVEY

Please take 15 minutes to complete the IPPR Survey. Your assessment will serve to help us make the form and process better.

Thanks,

The IPPR Committee

Survey Link: https://www.surveymonkey.com/r/J79W8GW