OVERALL PROGRAM STRENGTH AND VIABILITY ASSESSMENT

Program: Physics **Planning Year: 2023-24**
Last Year CPPR Completed: 2018-19
Unit/Division: Physical Sciences **Cluster:** 1

The purpose of this assessment is to review the program elements and identify areas that need attention in order to maintain or improve the program's strength and ongoing viability.

This review and assessment should be done collaboratively between the dean, division chair, and faculty in the program and should be based on the data provided in the program's APPW and CPPR.

In addition to the program elements listed below, other pertinent elements can be reviewed and assessed in the "Additional Program Elements" section. For all program elements assessed, please indicate whether they are improving, remain stable, or are declining. Then explain the indicator and outline the steps needed (if any) to maintain or improve the program's strength and ongoing viability. A program sustainability plan should be developed in those areas, where program elements are declining. The program sustainability plan should identify the specific needs, strategies, or actions needed to maintain or improve the program's strength and ongoing viability.

Degrees and Certificates Awarded: Review and assess this element and check indicator. If the number of degrees and certificates awarded has been declining since the program's last comprehensive program review, explain why, and if necessary, identify any specific needs, strategies, or actions, that could be implemented to address the issue in order to maintain or improve the program's strength and ongoing viability. Note: declines in degrees and certificates should be interpreted relative to college-wide trends in degrees and certificates awarded.

☒ Improving ☐ Stable ☐ Declining

Explain indicator:

In 2023, the physics program experienced a significat increase in AST and AS after the COVID decline in awarded degrees. A new FT TT position will start in Fall 24, which has a focus on dual enrollment. This will expand enrollment opportunities for local high school students, and we will engage in strategic work to build bridges between the high school and Cuesta College for STEM and physics.

Enrollment: Review and assess this element and check indicator. If there is a decline in enrollment throughout the program in four consecutive semesters, explain why, and if necessary, identify any specific needs, strategies, or actions, that could be implemented to address the issue in order to maintain or improve the program's strength and ongoing viability. Note: declines in enrollment should be interpreted relative to college-wide trends in enrollment.

☐ Improving ☒ Stable ☐ Declining

Explain indicator:

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Enrollments over the past two years are relatively stable. Enrollments are slightly lower than pre-COVID rates. This academic year had solid enrollments in Physics and increased enrollents in Astronomy (course caps were increased in multiple sections to accommodate student waitlists). It is anticipated that enrollments will return to pre-COVID numbers or better over the next few semesters. Additionally, dual enrollment offering are expanding in concert with increasing dual enrollment opportunities in Chemistry. It is anticpated these exapnsions in course offering will work synergistically to expand enrollments.

Student Demand (fill rates): Review and assess this element and check indicator. If there is a consistently low program enrollment of 50% below the enrollment maximum over four semesters, explain why, and if necessary, identify any specific needs, strategies, or actions, that could be implemented to address the issue in order to maintain or improve the program's strength and ongoing viability.

☒ Improving ☐ Stable ☐ Declining

Explain indicator:
Astronomy has experienced an increase in fill rates since 2016, and within the last 4 years is 70%-10% higher than the Overall College fill rate. Likewise, the Physics fill rates are consistently at or above 85%, and are 13-8% higher than the overall College Fill rates. The Physics Department has worked to strategically provide courses for students that lend to successful enrollment.

Efficiency (FTES/FTEF): Review and assess this element and check indicator. If there is a consistently low FTES/FTEF of 50% below the program's FTES/FTEF maximum over four semesters, explain why, and if necessary, identify any specific needs, strategies, or actions, that could be implemented to address the issue in order to maintain or improve the program's strength and ongoing viability.

☐ Improving ☒ Stable ☐ Declining

Explain indicator:
Efficiency in ASTR courses is consistently 5% higher than the college ranging from a fiveyear low of 15.36 FETS/FTEF in 2018-19 to 20.77 in 2020-21. It is expected that the efficiency will remain at 17 FTES/FTEF or higher for future years.

Student Success (Successful Course Completion): Review and assess this element and check indicator. If there is a decline over four semesters, or a consistently low rate of student success in course completion, explain why, and if necessary, identify any specific needs, strategies, or actions, that could be implemented to address the issue in order to maintain or improve the program's strength and ongoing viability. Note: declines in student success should be interpreted relative to college-wide trends in student success.

☐ Improving ☒ Stable ☐ Declining

Explain indicator:

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Course completion is increasing after a decline during COVID.

Student Success (Program Modality): Review and assess this element and check indicator. If there is a decline over four semesters, or a consistently low rate of student success in course modality (i.e. face-to-face, distance education, hybrid), explain why, and if necessary, identify any specific needs, strategies, or actions that could be implemented to address the issue in order to maintain or improve the program's strength and ongoing viability. Note: declines in student success should be interpreted relative to college-wide trends in student success.

☒ Improving ☐ Stable ☐ Declining

Explain indicator:
Astronomy: Course completion for online sections has increased over the past 4 years. Success rates of face to face classes is slightly lower than online. Physics: Course completion improved in 22-23 for both face to face and online modalities, after COVID declines.

Additional Program Elements Reviewed and Assessed: List any other program elements that were reviewed and assessed and check indicator. If the element is declining, explain why, and if necessary, identify any specific needs, strategies, or actions, that could be implemented to address the issue in order to maintain or improve the program's strength and ongoing viability.

☐ Improving ☐ Stable ☐ Declining

Explain indicator:
None

Commendations: List those areas where the program is performing well.

Physics faculty and lab technicians responded to moving classes to the online format during COVID. Elements that promoted student success have been incorporated into the program.

Considerations: List any considerations that could be addressed to maintain and/or improve the program's strength and ongoing viability. These are suggestions and implementation will not be monitored by the district.

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As a department have conversations about how labs change over time (with changing technology); providing more problem-solving opportunities both in lab and lecture, have robust discussions on how the 16 week calendar will impact curriculum.

The Physics Department is in need of budget augmentation to replace/update equipment.

Overall Program Assessment

☒ Program remains strong and viable. Sustainability Plan NOT WARRANTED

☐ Program Sustainability Plan RECOMMENDED (see next page to complete plan)

☐ Program Sustainability Plan INEFFECTIVE; revitalization process initiated

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PROGRAM SUSTAINABILITY PLAN

The Program Sustainability Plan should include all specific needs, strategies, or actions that were identified for any declining program elements above that need to be addressed by the district in order to maintain or improve the program's strength and ongoing viability. The dean, division chair, program faculty, and the college should proactively monitor the implementation of the Sustainability Plan to uphold the district's commitment to the program and ensure its ongoing strength and viability.

N/A

Note: The specific needs, strategies, or actions that are listed, as part of the Program Sustainability Plan, can include 1) funding priorities from the unit plan (i.e. technology, equipment, facilities, faculty, staffing, etc.), 2) specific program curriculum revisions (i.e. employer needs and/or transfer institution requirements) an/or 3) any documented employer demand (e.g. job placement, skill upgrading, advisory committee input, etc.) so long as they are supported as a need, by the assessment of the program elements above, to maintain and/or improve the program's strength and ongoing viability.

Signatures:

_____ _____

Dean Date Division Chair Date

Program Faculty (include more lines if needed)

_____ _____

Date Date

_____ _____

Date Date

_____ _____

Date Date

_____

Vice President of Academic Affairs Date

OVERALL PROGRAM STRENGTH AND VIABILITY ASSESSMENT

The above-signed individuals have reviewed and discussed this Program Strength and Ongoing Viability Assessment and agree to the specific needs, strategies, or actions specified in the program Sustainability Plan as necessary to maintain and/or improve the program's strength and ongoing viability.