**Program Efficacy Evaluation and Recommendation**

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| **Program: Physics** |
| **Reviewers: David Smith, Dena Murillo-Peters** |
| **Overall Recommendation with Rationale: Meets**  **Professor Lysak, department chair, has prepared a detailed and thorough report outlining the successes and challenges of the Physics/Astronomy Dept. despite facing financial and demographic challenges. The department is coping effectively and has outlined a clear vision for the future.** |

**Part I: Access**

| **Strategic Initiative** | **Institutional Expectations** | |
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| **Does Not Meet** | **Meets** |
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| Demographics | The program does not provide an appropriate analysis regarding identified differences in the program’s population compared to that of the general population | The program provides an analysis of the demographic data and provides an interpretation in response to any identified variance.  If warranted, discuss the plans or activities that are in place to recruit and retain underserved populations. |
| Pattern of Service | The program’s pattern of service is not related to the needs of students. | The program provides evidence that the pattern of service or instruction meets student needs.  If warranted, plans or activities are in place to meet a broader range of needs. |
| **Reviewer Feedback: Meets**  **The department is low in African-American participation and high for males. A study of the situation reveals that engineering as a male-dominated field is the main reason. The department is working on major factors for improvement, including greater use of MSSSC, and the new STEM grant. In terms of access, laboratory availability is the main issue. After serious consideration, department has rejected the idea of online lab work.** | | |

**Part II: Student Success**

| **Strategic Initiative** | **Institutional Expectations** | |
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| **Does Not Meet** | **Meets** |
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| Data demonstrating achievement of instructional or service success | Program does not provide an adequate *analysis* of the data provided with respect to relevant program data. | Program provides an analysis of the data which indicates progress on departmental goals.  If applicable, supplemental data is analyzed. |
| Student Learning Outcomes and/or Student Achievement Outcomes | Program has not demonstrated that they have made progress on Student Learning Outcomes (SLOs) and/or Service Area Outcomes (SAOs) based on the plans of the college since their last program efficacy. | Program has demonstrated that they have made progress on Student Learning Outcomes (SLOs) and/or Service Area Outcomes (SAOs) based on the plans of the college since their last program efficacy. |
| **Reviewer Feedback: Meets**  **The main report is that success and retention levels have held steady at approximately 78% retention and 68% success for the last four years. The department feels that considering staffing of only one full-time professor; this consistency is reasonable. FTEs have gone from 76 to 139 over the last five years. Online enrollment has held steady.**  **The department is beginning the second cycle of SLO evaluation; this academic year, they will evaluate day time lecture/lab section of Physics 101 and Astronomy 120.** | | |

**Part III: Institutional Effectiveness**

| **Strategic Initiative** | **Institutional Expectations** | |
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| **Does Not Meet** | **Meets** |
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| Mission and Purpose | The program does not have a mission, or it does not clearly link with the institutional mission. | The program has a mission, and it links clearly with the institutional mission. |
| Productivity | The data does not show an acceptable level of productivity for the program, or the issue of productivity is not adequately addressed. | The data shows the program is productive at an acceptable level. |
| Relevance, Currency, Articulation | The program does not provide evidence that it is relevant, current, and that courses articulate with CSU/UC, if appropriate. | The program provides evidence that the curriculum review process is up to date. Courses are relevant and current to the mission of the program.  Appropriate courses have been articulated or transfer with UC/CSU or plans are in place to articulate appropriate courses. |
| **Reviewer Feedback: Meets**  **Evaluations are current. The department did not evaluate some independent study courses due to misunderstandings regarding protocols, but will rectify the situation during this academic year.** | | |

**Part IV. Planning**

| **Strategic Initiative** | **Institutional Expectations** | |
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| **Does Not Meet** | **Meets** |
| **Part IV: Planning - Rubric** | | |
| Trends | The program does not identify major trends, or the plans are not supported by the data and information provided. | The program ~~identifies~~ and describes major trends in the field. Program addresses how trends will affect enrollment and planning. Provide data or research from the field for support. |
| Accomplishments | The program does not incorporate accomplishments and strengths into planning. | The program incorporates substantial accomplishments and strengths into planning. |
| Challenges | The program does not incorporate weaknesses and challenges into planning. | The program incorporates weaknesses and challenges into planning. |
| **Reviewer Feedback: Meets**  **The report explores the strong need for more engineering majors and the optimistic potential for job growth in that field. The department anticipates an increase in enrollment in response to these trends. Again, the STEM grant should play a large part in meeting increased demand. If enrollments continue to be high with long waiting lists, the department is eager to add more Physics sections, funding permitting. Accomplishing include successfully moving into the new building. The department plans to increase the number of STEM majors and add an online Physics 101 course. The department successfully offered Modern Physics 210 the past six summers and increased night offerings of Physics 101. The public is well served with Planetarium and Observatory shows.**  **A major challenge is finding an adequate pool of adjunct professors. The program has admittedly suffered at times due to an unstable work force. The department lost a lab technician six years ago, and have been getting by with a half-time assistant.**  **Another challenge is the lecture rooms are not well laid out in conjunction with the labs; the plan is to modify a lecture/demo procedures and purchase some new equipment to resolve this issue.** | | |

| **Part V: Technology, Partnerships & Campus Climate** | | |
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|  | **Does Not Meet** | **Meets** |
| Technology, Partnerships & Campus Climate | Program does not demonstrate that it incorporates the strategic initiatives of Technology, Partnerships or Campus Climate.  Program does not have plans to implement the strategic initiatives of Technology, Partnerships or Campus Climate | Program demonstrates that it incorporates the strategic initiatives of Technology, Partnerships and/or Campus Climate.  Program has plans to further implement the strategic initiatives of Technology, Partnerships and/or Campus Climate. |
| **Reviewer Feedback: Meets**  **The Planetarium and Observatory provide much appreciated links to the community with annual attendance of 400. They also do shows for on-campus “Science and Math Day” events. In addition, the Planetarium and Observatory are also available to visiting schools. The department is incorporating digital scales, an electric multi-meters to improve accuracy and facilitate learning. They are experimenting with “clicker” class management technology and PowerPoint during lectures. The department supports a certificate program in vector control at CSUSB.** | | |