**Colorado State University – Pueblo Academic Program Assessment Report for AY 2017-2018** **Due: June 1, 2018**

**Program:** Physics **Date:** June 1, 2018

**Completed by:** Paul Chacon

**Assessment contributors (other faculty involved in this program's assessment):** Dr. Bruce Lundberg

**I. Program student learning outcomes (SLOs) assessed in this cycle, processes, results, and recommendations.**

**NOTE: There was one Physics Program graduates Spring 18.**

| A. Which of the program SLOs were assessed during this cycle? **Please include the outcome(s) verbatim from the assessment plan.** | B. When was this SLO last assessed? Please indicate the semester and year. | C. What method was used for assessing the SLO? **Please include a copy of any rubrics used in the assessment process.** | D. Who was assessed? Please fully describe the student group(s) and the number of students or artifacts involved. |
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| (SLO #2) Understand and apply knowledge of the various subfields of physics at the undergraduate level. | Spring 2018 (This assessment will be performed every year.) | The assessment tool is a standardized examination: the MFAT in Physics | 1 Physics graduate |
| (SLO #3) Effectively communicate their results orally and in writing | Spring 2018 | Presentation in Phys 323 to develop skills for later senior seminar. Student independent research topic presentation | 1 Physics graduate |
| (SLO #4) Learn independently, locate and use appropriate sources of technical material and make use of modern scientific and computational tools | Spring 2018 | Student independent research topic presentation | 1 Physics graduate |

| E. What is the expected achievement level and how many or what proportion of students should be at it? | F. What were the results of the assessment? | G. What were the department's conclusions about student performance? | H. What changes/improvements to the program are planned based on this assessment? |
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| Criterion: Overall and in the two breakdown areas of the MFT, ninety percent of CSU – Pueblo physics majors will score at or above the 50th percentile on the MFAT standardized exam. | We had one graduate this year<br><br>MFAT percentile rank 32 | This student struggled at the beginning of the program with motivation issues. We count the relatively low rank in this case as a success. | Make more efforts to gradually build rigor and support in Intro to Physics, and give more research experiences and support at the upper division level.<br><br>We now have a new physics faculty member who can coordinate this effort with initial support from Dr. Bruce Lundberg who will help him hit the ground running. |
| All students should score a satisfactory rating on the presentation and project | Research project and presentation not complete at this time | | |
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**II. Follow-up (closing the loop) on results and activities from previous assessment cycles. In this section, please describe actions taken during this cycle that were based on, or implemented to address, the results of assessment from previous cycles.**

| A. What SLO(s) did you address? Please include the outcome(s) verbatim from the assessment plan. | B. When was this SLO last assessed? Please indicate the semester and year. | C. What were the recommendations for change from the previous assessment? | D. Were the recommendations for change acted upon? If not, why? | E. What were the results of the changes? If the changes were not effective, what are the next steps or the new recommendations? |
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| (SLO #2) Understand and apply knowledge of the various subfields of physics at the undergraduate level. (SLO #3) Effectively communicate their results orally and in writing (SLO #4) Learn independently, locate and use appropriate sources of technical material and make use of modern scientivic and computational tools | June 2016<br><br>June 15. | Work to strengthen the Phys 221-222 Calc-Based sequence to prepare students for upper division courses.<br><br>Work for new tenure track faculty members with a physics Ph.D who is energetic, and a committed leader. | We have a new TT hire Fall 2018 | We hope to gain in quality and morale our new TT hire. Dr. Gao has indeed worked well, added enthusiasm and quality to our teaching and scholarship in physics. However, the physics program still needs another committed (I.e. Tenure Track, Physics PhD) faculty to be viable |

Comments: With the resignation of Karen Lundberg May 2015, a lecturer position was opened, and used to hire a visiting physics lecturer, Dr. Caixia Gao, who has worked out well. Using the Sallie Watkins Endowed Professor of Physics money, we were able to keep Dr. Gao (who planned to leave for another position) for AY 16-17 by upgrading her position to Visiting Assistant professor

Our other visiting position has found a permanent job. However we have a new TT hire on board Fall 2018 to lead the department

Progress has been made, but the visiting positions give uncertain program commitment to and from the visiting people. We very much need another TT faculty member at the assistant professor level.