**Amarillo College Curriculum Map Template**

**Division:** STEM **Degree/Academic Program(s):** AS Physics **Person Responsible for Area/Title:** David Van Domelen **Component Director/Chair: C**ollin Witherspoon **Submission Date:** Fall 2015

**Purpose Statement:** The Physics Department is dedicated to providing students with a sound foundation in physics in order to successfully complete a bachelor’s degree at a transfer university or college.

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| 1. **Goal #1:**  To graduate students who demonstrate content knowledge and skills from several foundational areas of physics. | | | | | |
| **Program-Specific Courses** | **PLO #1:**  Students will solve problems by identifying and applying core concepts of Mechanics. | **PLO #2:**  Students will solve problems by identifying and applying core concepts of mechanical and electromagnetic oscillations and wave behavior. | **PLO #3:**  Students will solve problems by identifying and applying core concepts of thermodynamics. | **PLO #4:**  Students will solve problems by identifying and applying core concepts of electric and magnetic forces and phenomena. | **PLO #5:**  Students will solve problems by identifying and applying core concepts of electric circuits. |
| **PHYS-2425** | **D** | **I,D** | **I** |  |  |
| **PHYS-2426** |  | **I,D** |  | **I** | **I** |

**I = Introduced; D = Developed & Practiced with Feedback; M = Demonstrated at Mastery**

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| **Goal #2:** To graduate students who demonstrate the mathematical content knowledge and skills from several foundational areas of mathematics and understand how the knowledge relates to physics. | | | | |
| **Program-Specific Courses** | **PLO #1:**  Students will identify and apply core concepts of College Algebra in relation to solving physics problems. | **PLO #2:**  Students will identify and apply core concepts of Trigonometry in relation to solving physics problems. | **PLO #3:**  Students will identify and apply core concepts of Differential and Integral Calculus in relation to solving physics problems. | **PLO #4:**  Students will identify and apply core concepts of Differential Equations in relation to solving physics problems. |
| **MATH-1414** | **D** |  |  |  |
| **MATH-1316** | **D** | **I** |  |  |
| **MATH-2413** | **M** | **D** | **I** | **I** |
| **MATH-2414** |  | **M** | **D** | **D** |
| **MATH-2415** |  |  | **D** |  |
| **MATH-2320** |  |  | **M** | **D** |

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| **Goal #3:** To graduate students with the skills to work successfully in the laboratory. | | | | |
| **Program-Specific Courses** | **PLO #1:**  Students will perform experiments. | **PLO #2:**  Students will analyze the results of experiments. | **PLO #3:** Students will develop laboratory reports based on experiments and analysis. | **PLO #4:**  Students will demonstrate that they can effectively engage in teamwork. |
| **PHYS-2425** | **I** | **I** | **I** |  |
| **PHYS-2426** | **D** | **D** | **D** |  |

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