I. **Course Number and Title:** PHY110 Automotive Physics

II. **Catalog Description:** Basic course which acquaints ASEP students with some fundamental aspects of physics. Covers Newtonian dynamics including conservation of energy and momentum, and rotational motion. In addition, selected topics in strength of materials, fluids and thermodynamics are covered. Emphasis on applications to automotive system. Prerequisite: MAT007.

III. **Learning Outcomes:** *(Main concepts, principles, and skills you want students to learn from this course)* 

*These statements must appear verbatim in course outlines. However, additional outcomes may be added to individual course outlines at the instructor’s discretion.*

Upon completion of this course, students will be able to:

A. Apply the laws of physics in areas of kinematics and dynamics, force, momentum and collisions, work/energy concepts, rotational motion, behavior of fluids and basic thermodynamics, electricity, simple circuits, and electromagnetism.

B. Understand the physical principles behind simple machines.

C. Understand the physical principles behind production of electricity and electromagnets.

D. Interpret graphical data and do linear fits.

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*PLEASE NOTE: Any changes made to the Course Number, Title, or Catalog Description must go through the regular faculty governance process. This Expedited Process of Approval, which expires in March 2012, only pertains to approval of the Learning Outcomes. Therefore, this is NOT the form to be used to change course numbers, titles, or descriptions. This is NOT the form to use for proposing a new course. (See the Governance website for those types of proposals.)*
E. Use basic algebra throughout the course in formulating principles and solving word problems.

F. Apply critical thinking skills in analyzing multi-step word problems and formulating solutions.

G. Work as part of a team on projects involving application of the physical concepts.

H. Work in a technical setting such as a laboratory and be able to present findings in a coherent report.

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Name of Discipline Lead: Glenda Denicoló

Discipline Vote:
For 3 Against 0 Abstention 0

Date of Vote: 03/02/2010

_(Initial and Date)_________ Certification of Vote by AVP of Academic Affairs

_(Initial and Date)_________ Certification of Vote by College Curriculum Chair

*These statements must appear verbatim in course outlines. However, additional outcomes may be added to individual course outlines at the instructor's discretion.

Revised 1/10