

## Course Competencies Template - Form 112

GENERAL INFORMATION			
Name: Dr. Jose Diaz	Phone #: 7-3112		
Course Prefix/Number: PHY 3802L	Course Title: Intermediate Physics Laboratory		
Number of Credits: 1			
Degree Type	<input type="checkbox"/> B.A. <input checked="" type="checkbox"/> B.S. <input type="checkbox"/> B.A.S <input type="checkbox"/> A.A. <input type="checkbox"/> A.S. <input type="checkbox"/> A.A.S. <input type="checkbox"/> C.C.C. <input type="checkbox"/> A.T.C. <input type="checkbox"/> V.C.C		
Date Submitted/Revised: 03/13/08	Effective Year/Term: Fall 2008-1		
<input checked="" type="checkbox"/> New Course Competency <input type="checkbox"/> Revised Course Competency			
Course to be designated as a General Education course (part of the 36 hours of A.A. Gen. Ed. coursework): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
The above course links to the following Learning Outcomes: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Communication  <input checked="" type="checkbox"/> Numbers / Data  <input checked="" type="checkbox"/> Critical thinking  <input type="checkbox"/> Information Literacy  <input type="checkbox"/> Cultural / Global Perspective             </td> <td style="width: 50%; vertical-align: top;"> <input type="checkbox"/> Social Responsibility  <input type="checkbox"/> Ethical Issues  <input checked="" type="checkbox"/> Computer / Technology Usage  <input type="checkbox"/> Aesthetic / Creative Activities  <input checked="" type="checkbox"/> Natural Systems/Environmental Responsibility             </td> </tr> </table>		<input type="checkbox"/> Communication <input checked="" type="checkbox"/> Numbers / Data <input checked="" type="checkbox"/> Critical thinking <input type="checkbox"/> Information Literacy <input type="checkbox"/> Cultural / Global Perspective	<input type="checkbox"/> Social Responsibility <input type="checkbox"/> Ethical Issues <input checked="" type="checkbox"/> Computer / Technology Usage <input type="checkbox"/> Aesthetic / Creative Activities <input checked="" type="checkbox"/> Natural Systems/Environmental Responsibility
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Course Description (limit to 50 words or less, <b>must correspond with course description on Form 102</b> ):  This is a laboratory course consisting of a series of experiments related to intermediate courses in classical mechanics, waves, thermodynamics, electromagnetism and modern physics. The student will learn skills in the design, performance and reporting of physics experiments as well as reinforcing concepts learned in the corresponding physics courses.			
Prerequisite(s): PHY 2048L, 2049L, 3504	Corequisite(s):		

**Course Competencies:** (for further instruction/guidelines go to: <http://www.mdc.edu/asa/curriculum.asp>)

Competency 1: The student will demonstrate knowledge, comprehension and application of laboratory techniques by:

- a) Handling laboratory equipment according to operating instructions and safety guidelines.
- b) Recording data in a laboratory notebook in a clear organized manner, following accepted guidelines.
- c) Obtaining results with appropriate precision and accuracy.
- d) Performing appropriate statistical analysis of experimental results.

Competency 2: The student will demonstrate knowledge, comprehension, the ability to analyze and apply the experimental process by:

- a) Reporting experimental results in accordance with accepted guidelines.
- b) Contrasting experimental results to theoretical predictions.
- c) Discussing the nature and magnitude of the experimental errors incurred.
- d) Focusing the scope of experimental conclusions to that justified by experimental results.

Revision Date: \_\_\_\_\_

Approved By Academic Dean Date: \_\_\_\_\_

Reviewed By Director of Academic Programs Date: \_\_\_\_\_

Competency 3: The student will demonstrate knowledge, comprehension and the ability to analyze the underlying physical concepts of experiments by:

- a) Performing experiments in a manner consistent with an understanding of the underlying physical concepts.
- b) Writing properly formatted lab reports which evidence understanding of the underlying concepts.

Competency 4: The student will demonstrate knowledge and comprehension of experimental design by:

- a) Adjusting experiment design as circumstances require.
- b) Critiquing a published experiment in physics or one of the experiments done in class, with emphasis in its design.
- c) Designing an experiment related to a relevant physics concept, in accordance with accepted guidelines.

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