Catalogue Description: This course is the laboratory component that accompanies PHYS 1302 and PHYS 2306.

Prerequisites: Required concurrent enrollment in or credit for General Physics (PHYS 1302) or Physics (PHYS 2306), as seen on student’s transcript approved by UIW Registrar and Physics Department Chair. Students should have fundamental skills in college algebra, trigonometry, functions and problem solving.

Overview: This course is the laboratory which accompanies the lecture section, and includes hands-on experiments as well as computer applications of concepts covered in the lecture section. Laboratory experiments include exercises on electricity, magnetism, light, geometric optics, interference and diffraction.

Course Description: (General) Physics Laboratory II engages the student in the techniques and ways of setting up an experiment, data collection, trial and error runs for data reproduction and verification, data analysis along with appropriate mathematical calculations, and analysis of findings and conclusions reached through experimentation. The data for experiments will be gathered through careful measurements verified through repeated runs, and analyzed for precision and accuracy through standard statistical analysis of data. The laboratory includes graphical analysis of data to note linear and non-linear relationships. This laboratory stresses the importance of making accurate and precise measurements based on the accepted international standards of length, mass, and time measurement. The laboratory focuses on topics including electrostatics, electrical circuits, magnetism and electromagnetism, light, optics of mirrors and lenses, interference and diffraction.

Course Outcomes: The student will be able to:
1. make accurate and reproducible measurements involving experiments in electricity, magnetism, light, optics, interference, and diffraction.
2. gather the proper material, supplies, and equipment, and properly set up the experiment
3. collect and record data to repeat and verify experimental runs
4. analyze data, discuss the results, and develop conclusions on the experiment and describe these conclusions
5. use modern scientific and/or engineering tools

Course Assessment: Students will complete and turn in laboratory reports to verify completion of the experiment from setup through conclusions, and to verify data collection and analysis. In addition, students may take quizzes throughout the semester on laboratory experiments.
**Grade Distribution:**  
Laboratory Experiments 75%  
Class Participation 25%  
100%

Final letter grades will be determined at the end of the semester.

**Student Conduct and Academic Integrity Statement**
The University is committed to nurturing academic excellence, truth, honesty, and personal integrity. The faculty expects all students to maintain high ethical standards and adhere to the Code of Academic Integrity as stated in the 2005-2007 UIW Undergraduate Bulletin. Please also refer to the UIW Undergraduate Bulletin for statements regarding student conduct, class attendance, and Community Rights and Responsibilities at UIW.

**Disability Accommodations:**
The University of the Incarnate Word is committed to providing a supportive, challenging, diverse and integrated environment for all students. In accordance with Section 504 of the Rehabilitation Act – Subpart E and Title III of the Americans with Disabilities Act (ADA), the University ensures accessibility to its programs, services and activities for qualified students with documented disabilities.

For more information, contact the Student Disability Services Office:

Location Administration Building – Room 105  
Phone (210) 829-3997  
Fax (210) 829-6078  
[www.uiw.edu/sds](http://www.uiw.edu/sds)

**Approval date:** Jan 2014

*This course outline is a guide, not a contract. I reserve the right to change this syllabus at any time at my discretion.*