Course Syllabus

Copy of this syllabus and the laboratory schedule and the manual for each experiment and the worksheet for each sense-making activity can be downloaded from https://umdrive.memphis.edu/lyu2/public/Lab-2011-2111/

School and Department: The University of Memphis, Department of Physics

Course Number and Title: PHYS 2011 General Physics I Laboratory (1 credit hour)
PHYS 2111 Physics I for Science and Engineering Laboratory (1 credit hour)

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Catalog Description: Laboratory experiments and techniques to accompany PHYS 2010/2110. Two laboratory hours per week. One credit hour.

GenerallyScheduled: Fall Semester, Spring Semester and Summer Semester

Prerequisite or Corequisite: PHYS 2010 or PHYS 2110

Nature and Number of Evaluations and Other Major Requirements: Students grades will be based on performance of required activities as evidenced by in-class participation, laboratory reports, solutions to required problems, and a final exam.

Group Policy: Students will work in groups of no more than three and may discuss the lab activities within their group. Lab activities will generally be of two types: sense-making activities or experiments. For experiment reports, each table will turn in a single lab report with all members of the group names attached. If your name is not on the lab report then you will not receive credit for the lab. For sense-making activities, each student will turn in his/her own worksheet.

Pre-Lab Policy: Before each class when the lab activity is a sense-making activity, each student must print out the worksheet for that week before coming to class. Students are encouraged to read through the worksheet before coming to class. Failure to bring a copy of the worksheet to class will result in deduction of 1 point from your grade that week. Students can download the worksheets from the website given at the top of the syllabus. Students can consult the laboratory schedule posted in the website given at the top of the syllabus to find out which worksheet they need to print out for a given week.

Make-up Policy: No make-up work will be allowed without a valid written excuse as determined by the laboratory instructor. One (and only one) missed lab activity may be made up at the end of the semester. Note that the make-up lab will not be the missed lab but a special lab and this material will not be on the final exam.

Grading Policy: Students final point totals will be the sum of 13 lab activities plus the final exam score. Each lab activity is worth 10 points, and the final will be worth 50 points. The following will be the grading scale: A 162-180, B 144-161, C 126-143, D 108-125, and F 0-107

Attendance Policy: Students must attend class to participate in the lab activity and turn in the required report or worksheet.

Relationship of Course to the Curriculum: This course is designed to provide laboratory and sense-making experiences which will supplement and reinforce those physical principles taught in PHYS 2010/2110.

Relationship of Course to Knowledge Base and Skill Requirements: To provide an understanding of systems of measurement for obtaining data and the ability to use scientific instruments to make those
measurements. To teach the ability to collect, organize and communicate data through the use of a formal laboratory report. To make sense of the topics covered in the lecture course.

**Major Topics and Activities:**
- Measurement and Error, Uniformly Accelerated Motion
- Newton's Second Law of Motion, Friction
- Concurrent Coplanar Forces, Rigid Body Equilibrium
- Centripetal Force, Conservation of Momentum, Moment of Inertia