

PHYSI 004, Sections 01 and 02: Introduction to Physics II Laboratory
Syllabus – Spring 2020

Instructor

Section 01:

Prof. Hill, Brian (answers to just about anything, including "Hey you"), Email: brh3@stmarys-ca.edu, add'l info (Office Hours and Office) are always available at physics.stmarys-ca.edu/faculty/brianhill.

Section 02:

Dr. Gheith, Muhammed (Dr. G OR Prof. G), Section 02, Email: mkg9@stmarys-ca.edu, Office Hours and Office: By appointment (Room Gal. 104).

Laboratory Description and Learning Outcome

In the Introduction to Physics II Laboratory, students gain hands-on experience with the topics discussed in Physics 3. Additionally, students are introduced to methods of experimentation in physics including good measurement techniques, simple data analysis and scientific writing. Concurrent enrollment in Physics 3 is required.

Recommended Materials

1. Thumb drive: It is highly recommended that you save your data as you go on a thumb drive. Computers, while set up, may boot off the network, which means that you risk losing any data saved on the local machine any time you reboot.
2. Calculator.
3. Lab notebook.

Attendance

Attendance is critical, missing three or more labs will result in failing the lab and maybe the course.

Grading

Your lab grade will be based on the following:

Weekly Evaluations	75 %
Participation	25 %
Total	100 %

Weekly Evaluations

Each week you will be evaluated by a task, quiz, and/or written assignment—I'll tell you which at the beginning of lab. You may use your notes (preferably written in a lab notebook), but you may not use the lab handout (provided by instructor every week).

- Tasks will require hands-on demonstration of experimental techniques (including simulations) and/or verbal explanation of concepts and calculations. If there is more than one possible task for a given week, you'll randomly be assigned one of the possible tasks. (You won't know which until you tell the professor you're ready to perform the task).
- Quizzes will focus on calculations and concepts that were central to the lab.
- Written Assignments will be graded in lieu of an entire lab write-up/report. Typically, these will be something like: print the graph(s) from the lab and turn them in with an explanation of your analysis, and/or write out answers to questions from the lab handout.

Important Lab Policy

Cell phones and other electronic devices are not allowed during lab time. In addition, any disrespectful and/or disruptive behavior will be dealt with according to the policies established by the College.

Tentative Lab Schedule

The schedule below is subject to change, during the semester, at the discretion of the lab and lecture instructors.

FEB 12: Organizational Lab — No Experiment	APR 01: Refraction and Thin Lenses
FEB 19: Electrostatics and Coulomb's Law Simulation	APR 08: No Lab (Easter Recess)
FEB 26: Electric Field Simulation and Mapping	APR 15: Young's Double Slit Experiment
MAR 04: Ohm's Law and Resistivity	APR 22: Diffraction and Spectroscopy
MAR 11: Circuits	APR 29: Optics Applications: Compound Lenses
MAR 18: Magnetic Force, Electric Motor	MAY 06: Makeup Lab Day
MAR 25: Faraday's Law	MAY 13: TBA

Additional Policies and Information

The Academic Honor Code Policy, STEM Center Information, Student Disability Services Information, and Student Success Coaching Information in Prof. Rosario's Physics 3 Syllabus are also applicable to both sections of the Physics 4 labs.

See: physics.stmarys-ca.edu/courses/Phys003/20S/syllabus-003-20S.pdf