

PHY2049L Physics II w/Calculus Laboratory TERM 20221

Selected Laboratory Handouts: "Physics with Computers" by Appel, K.; Gastineau, J.; Bakken, C.; and Vernier, D., 3rd ed. (Provided by Professor); PhET Simulations

Lab schedule

PHY2049L (Wednesdays, 8:30 am -10:20 am) South Campus

| Date | Lab Meeting | Exp. # | Topic | Lab Report # |
|--------------|-------------|--------|---|----------------|
| August 18 | 1 | | Introduction, Safety, Syllabus, Vernier Graphing Tool: https://www.vernier.com/product/graphical-analysis-4/ | |
| August 25 | 2 | PhET | Coulombs Law: https://phet.colorado.edu/sims/html/coulombs-law/latest/coulombs-law_en.html | 1 |
| September 1 | 3 | PhET | Electric Charge, Electric Field: https://phet.colorado.edu/sims/html/charges-and-fields/latest/charges-and-fields_en.html | 2 |
| September 8 | 4 | PhET | Resistance in a wire: https://phet.colorado.edu/sims/html/resistance-in-a-wire/latest/resistance-in-a-wire_en.html | 3 |
| September 15 | 5 | 22 | Ohm's Law (HO) | 4 |
| September 22 | 6 | 23 | Series and Parallel Circuits (HO) | 5 ¹ |
| September 29 | 7 | PhET | Capacitors: https://phet.colorado.edu/sims/html/capacitor-lab-basics/latest/capacitor-lab-basics_en.html | 6 |
| October 6 | 8 | 24 | Capacitors (HO) | 7 |
| October 13 | 9 | PhET | Circuits construction: https://phet.colorado.edu/sims/html/circuit-construction-kit-dc-virtual-lab/latest/circuit-construction-kit-dc-virtual-lab_en.html | 8 |
| October 20 | 10 | 31 | The Magnetic field of a Permanent Magnet (HO) | 9 |
| October 27 | 11 | 26 | The Magnetic field in a slinky (HO) | 10 |
| November 3 | 12 | PhET | Faraday's Law: https://phet.colorado.edu/sims/html/faradays-law/latest/faradays-law_en.html | 11 |
| November 10 | 13 | PhET | Reflection/Refraction, Snell's Law: https://phet.colorado.edu/sims/html/bending-light/latest/bending-light_en.html | 12 |
| November 17 | 14 | | Mirrors and Lenses – Ray Diagrams, Image Characteristics | 13 |
| December 1 | 15 | | Final Exam | |

This Lab schedule is tentative, and any changes will be announced in class. Specific dates of activities may need to be changed due to unforeseen circumstances. It is the responsibility of each student to attend class in order to be informed of any schedule changes that may be announced.