

PHY 1511 – General Physics I Laboratory

High Point University
Department of Physics
Summer Session I 2013

Instructor: Dr. Aaron Titus

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Office & Phone: Congdon 361, (336) 841-4668

Office Hours: M-TH 4:30-5:30 PM, F 3-4 PM

Class Meets: M-TH: 2:15 PM – 4:15 PM, Congdon 130

Calculator: Bring a scientific calculator to lab with you every week.

Course Description: A laboratory to accompany PHY 1510. Topics include measurement, error analysis, graphical interpretation, curve fits, video analysis, and computer acquisition interfaces and sensors. Applications are congruent with topics covered in PHY 1510.

Grading Scale: A+ (100–97), A (96–93), A– (92–90), B+(89–87), B (86–83), B– (82–80), C+ (79–77), C (76–73), C– (72–70), D+ (69–67), D (66–63), D– (62–60), F (59–0).

Grade Determination: Your grade in this laboratory course will be based on the following:

Lab Reports	50 %
Lab Practical	50 %

While there are no make-up laboratory sessions, your lowest lab report will be dropped.

Attendance & Participation: Attendance in lab is required. The laboratory exercises are intended to help you learn concepts used in the lecture course. So, attending lab regularly will greatly improve your understanding of the lecture course material. An absence will be counted as a zero for that lab. If you miss ONE lab, you may be put on attendance probation, and if you miss TWO labs you may be withdrawn from the course.

Notebook: You will be given numerous handouts. I expect you to use a 3-ring binder. I expect to see all of your lab handouts neatly organized in the notebook. It should include printouts of curve fits, data, or anything else created during lab. I will do random notebook checks and will include these checks as part of the grade for lab reports.

Lab Reports: In each lab session, you will be required to carry out experiments, analyze data, and draw conclusions. Frequently, you will investigate topics before they are discussed in the lecture. For each lab you will be required to submit a lab report on WebAssign. **You must register with WebAssign in order to submit lab reports.** Go to <http://www.webassign.net/> and click “I Have a Class Key.” Enter highpoint 5135 0874 into the three fields. After submitting our class key, click the button that says “Yes, this is my class.” And then, if you haven’t done it before, create an account in WebAssign. If you already have a WebAssign account for the lecture part of the course, you can enter your account information and log in. ***Do not create more than one account.***

Lab Practical: At the end of the semester, you will have a lab practical. The lab practical will be given during the final exam period for the lab course, which is on June 28 at 8:30 – 11:30 AM. The lab practical will include both multiple choice questions and lab tasks. You will be given a handout with more information on the format of the lab practical and how to prepare for it.

Course Conduct: Out of courtesy and respect for your instructor and fellow classmates, please refrain from using cell phones (for any purpose) during class. Also, computers may only be used for class activities such as taking notes, investigating a topic, doing homework, collecting data, etc. Facebook, Twitter, and other social networking sites are not allowed during class. Please check texts and voicemail during our break between lecture and lab.

Accommodations: Students who require classroom accommodations due to a diagnosed disability must submit the appropriate documentation to the Academic Services Center. The Academic Services Center is located on the 4th floor of Smith Library. Upon submitting appropriate documentation of a disability, you will be given a letter detailing any necessary accommodations. Please bring this letter to me as early in the semester as possible (preferably the first or second week of class). Accommodations are not retroactive. To request accommodation letters, please contact Rita Sullivant in Academic Services, 841-9061, rsulliva@highpoint.edu.

Expectations: In addition to attending class, students are expected to spend at least 8 hours each week engaged in out-of-class work (i.e., reading, studying, doing homework, etc.) for every hour of credit earned in this course. Thus, for our 1-credit lab, you should spend at least 8 hours per week on this course, outside of our lab time. *That's approximately 2 h each lab day.*

Each day, we will spend the following time on the lab:

	Daily Time (min)	Total for Summer Session (min), including the lab practical, preparing for the lab practical, and the independent investigation
Laboratory (synchronous)	120	1860
Lab reports and preparing for the lab practical (asynchronous)	120	2040

Honor Code: The High Point University Honor Code asserts that:

- Every student is honor-bound to refrain from conduct which is unbecoming of a High Point University student and which brings discredit to the student and/or to the University;
- Every student is honor-bound to refrain from collusion;
- Every student is honor-bound to refrain from plagiarism;
- Every student is honor-bound to confront a violation of the University Honor Code;
- Every student is encouraged to report a violation of the University Honor Code.

My obligation is to promote academic integrity and to enforce the University Honor Code. This obligation includes appropriately interpreting the Honor Code, promoting conditions favorable to academic integrity, and reporting violations of the Honor Code.

I encourage collaboration during the lab. In fact, you will work in lab groups. You should share the responsibilities so that all members of the group learn to use lab sensors, general lab equipment, and

software. All members should participate in doing calculations, making measurements, and doing curve fits so that all members are prepared for the final lab practical.

You must do your own work on the lab practical. You may not look at another person's exam, experimental setup, or computer files. You may not use any other resource except your lab notebook. You may not store programs or equations in your calculator, and you may not use data stored in your calculator on an exam. Calculators may only be used to input numerical values and perform calculations. You may not use any other computer software except that which is required for the lab practical, such as *Logger Pro* or *Tracker*.

Violation of the honor code will be handled according to procedures outlined in the *Faculty Handbook*.

Schedule of Laboratory Topics

6/3	Graphing Motion
6/4	Relationship Between Force, Mass, and Acceleration
6/5	Newton's Three Laws of Motion
6/6	An Investigation of Friction
6/10	Projectile Motion
6/11	Fluid Pressure and Buoyancy
6/12	Uniform Circular Motion
6/13	Torque
6/17	Static Equilibrium
6/18	Impulse and Momentum
6/19	Conservation of Momentum
6/20	Conservation of Energy
6/24	Hooke's Law and Elastic Potential Energy
6/25	Independent Investigation
6/28	Lab Practical: 8:30 AM – 11:30 AM