**Marshall University – Physics Department**

**General Physics I Laboratory – 1 Credit Hour**

**Course Description**

“Laboratory to accompany PHY 201 or PHY211, focusing on mechanics, concepts, applications.” – 2016-2017 Marshall University Undergraduate Catalog

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| **Course** | PHY 202 – 107 |
| **Semester** | Fall 2017 |
| **Location** | S 100 |
| **Time** | Thursday 5-6:50 |
| **Instructor** | Conner Henson |
| **Office** | S 101 |
| **Phone** | 304-691-6966 |
| **Email** | [Henson77@marshall.edu](mailto:Henson77@marshall.edu) |
| **Office Hours** | Thursday 7-8, Friday 5-6 |

**University Policies**

By enrolling in this course, you agree to the University Policies listed below. Please read the full text of each policy by going to [www.marshall.edu/academic-affairs](http://www.marshall.edu/academic-affairs) and clicking on the “Marshall University Policies” link. You can access the policies directly by going to <http://www.marshall.edu/academic-affairs/?page_id=802>.

Academic Dishonesty, Excused Absence Policy for Undergraduates, Computing Services Acceptable Use, Inclement Weather, Dead Week, Students with Disabilities, Academic Forgiveness, Academic Probation and Suspension, Academic Rights and Responsibilities of Students, Affirmative Action, Sexual Harassment

**Inclement Weather Policy:** This course will comply with Marshall University’s rules for inclement weather. Please reference the Marshall University website, if questionable weather conditions exist, to determine if class will be meeting.

**General Emergencies:** <http://www.marshall.edu/emergency/>

**MU Alert:** <http://www.marshall.edu/emergency/mualert/>

**Midcourse Corrections:** The information in this syllabus was, to the best knowledge of the instructor, considered correct and complete when distributed at the beginning of the term. The instructor, however, reserves the right, acting within policies and procedures of Marshall University, to make changes in the course content and/or instructional techniques during the term without notice or obligation.

**Special Accommodations and Students with Disabilities:** If you have a need for special accommodations of any kind, please notify me as soon as possible and contact the Office of Disability Services Program ([www.marshall.edu/disability](http://www.marshall.edu/disability)) or call 304-696-2467 to register and complete the required documentation. Before accommodations can be given, I must be given official documentation. If you need special accommodations, please submit that to the Office of Disability Services Program by the end of the first week of class.

**Instructor Policies**

**Student Conduct:** Students are expected to act in accordance to the Marshall University Board of Governors Policy No.SA-1 regarding student rights and responsibilities. All students are expected to participate in the laboratory exercise. Inappropriate or disruptive behavior will not be tolerated. Anyone exhibiting this behavior may be asked to leave the classroom. If you are asked to leave the classroom for this reason, you will not receive credit for any of the assignments associated with that class session.

**Cell Phones and Electronic Devices:** Cell phones are to be set on silent or vibrate throughout the duration of the class session. If you must answer your cell phone, you may quietly step into the hallway to do so. If for some reason you must leave your cell phone on loud, please talk to me before class starts. If you wish to take notes on a tablet or laptop, that is allowed. However, if you are seen using it for other reasons, you will be asked to put it away.

**Emails:** I will almost always be able to respond to email within the hour that I receive it, except for Tuesday after 6:30. At the latest, I will respond by the end of the day (9 pm). This is the best way to get in contact with me. All email communication must be done through your @marshall.edu account. Please be sure to get in contact with me regarding assignments as early as possible. Do not wait until 11 o’clock the night before the assignment is due!

**Exams:** Any problems regarding exams must be brought to my attention at least two weeks before the exam date. Exams will cover material from the lab manual, including but not limited to conceptual questions and problems and questions about lab procedures. Exam format may be a combination of multiple choice, short answer, true or false, and longer problems that will require all steps of the calculation to be shown to receive full and partial credit.

Exams are closed book, closed note. No talking is permitted during the exam. No cell phones or other electronic devices are to be out when taking the exam, if they are out, you will be asked to leave and given a zero for the exam. Graphing calculators are not permitted. A four function scientific calculator will be sufficient. *You must pass one exam to pass the course!*

***Exam 1 - Labs 1 – 6*** ***Exam 2 - Labs 7 – 12***

**Absences:** If you are suddenly ill or have an unforeseen reason for being absent, please email me as soon as possible. It is your responsibility to turn in an excuse to the Office of Student Affairs. To obtain an excused absence, you must submit the request form and submit supporting materials to the Vice President for Student Affairs, MSC 2W38. Make up exams and labs will only be given with appropriate documentation from Marshall University.

Try your best to be in class every week. These labs are difficult to make up.

Every session begins with a short lecture, do not be late for class. If you miss the lecture at the beginning, you will have no context for the experiment.

**Lab Reports:** Lab reports are due at the beginning of the lab session each week. Lab reports will be subject to a 5% deduction for every day they are late, after one full week, they will not be accepted for grading and you will receive a 0 for the lab. They are worth 10 points each. Before you leave at the end of class, see me so I can review it and sign off on it.

**Lab Report Template:**

The lab report should be one page, typed, double spaced. The major components of the lab report are as follows:

* State the objective of the lab. What is it that you are supposed to be learning?
* Background information. Do not write this straight out of the lab manual.
* What is your procedure to obtain the results? This should be written in your own words. Do not copy straight from the lab manual.
* What were your results?
* What did the results tell you? (THIS SHOULD BE THE MEAT OF THE LAB REPORT.)
* Explain the possible sources of error in the experiment. Do not simply state them, tell me how they influenced the results. CALCULATION MISTAKES ARE NOT A SOURCE OF ERROR!
* Did your results confirm or dispute your original hypothesis? In other words, did you meet your objective?

**Grading**

The percentage of each assignment towards the final grade is as follows:

*Lab Reports - 50%*

*Midterm Exam - 25%*

*Final Exam - 25%*

Letter grades are as follows: *A: 100-90%, B: 89-80%, C: 79-70%, D: 69-60%, F: 59-0%*

**Note:**

***Physics is not easy.*** If you are struggling, see me or your lecture professor. We can help! You need to work at physics. Relying solely on memorization will not work. So, practice the problems (both in this course and your lecture course). I will try to provide extra resources for your benefit as the semester progresses.

These lab exercises will go more smoothly if you read the labs before you come to class. You’re also more likely to finish with some time to spare.

**Course Schedule**

**Date:** **Experiment:**

8/24 Lab 1 : Introduction to Motion

8/31 Lab 2 : Accelerated Motion

9/7 Lab 3 : Mathematical Description of Motion

9/14 Lab 4 : Projectile Motion

9/21 Lab 5 : Force and Motion

9/28 Lab 6 : Circular Motion

10/5 Lab 7 : Work and Energy

10/12 Lab 8 : Collisions

10/19 **Midterm Exam : Labs 1-6**

10/26 Lab 9 : Simple Harmonic Motion

11/2 Lab 10 : Periodic Motion of a Pendulum

11/19 Lab 11 : Longitudinal Waves and Sound

11/16 Lab 12 : Temperature and Heat

11/23 **No Class – Thanksgiving Break**

11/27-12/1 Make-Up Labs/Review

12/4-12/8 Dead Week

12/14 **Final Exam : Labs 7-12** **5-7 pm S100**