**Marshall University - College of Science - Physics Department**

**PHY 204 Syllabus (1 Credit hour)**

|  |  |
| --- | --- |
| Course Title/Number | General Physics Lab: PHY 204-204/206 |
| Semester/Year | Spring Semester 2015 |
| Days/Time | Thu 8:00 am – 9:50 am & 10:00 – 11:10 am |
| Location | SCI 103 |
| Instructor | Maria Babiuc Hamilton |
| Office Number | SCI 257 |
| Phone/Email | 304-696-2754/ babiuc@marshall.edu |
| Office Hours | Mon, Wed, Fri: 12:00 pm – 1:30 pm |
| 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 “Marshall University Policies”.Direct: [www.marshall.edu/academic-affairs/policies](http://www.marshall.edu/academic-affairs/policies)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.General Emergencies: [www.marshall.edu/emergency](http://www.marshall.edu/emergency)MU Alert Sign Up: [www.marshall.edu/emergency/mualert](http://www.marshall.edu/emergency/mualert) |
| Instructor Policies | **Course corrections**: 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, to make changes in the course content and/or instructional techniques during the term without notice or obligation**Student Conduct**: Student rights and responsibilities are outlined in the Marshall catalog, page 34. Especially, the infractions and violations listed under "Conduct, Rights and Regulations" will be enforced in this class. Students who disrupt class may be removed from class (failing all of the activities for the day) on a daily basis, as warranted, by the instructor. Continuing behavior problems will result in an instructor drop of the offending student.**Cell Phones/Telephones/Ipads** may be set to vibrate during regular class times. If an emergency call comes through, please leave the class before you answer it. If during an EXAM, ANY of these devices are “on” or “visible”, they belong to me and you get a zero (0) on that exam |
| **Student Learning Outcomes** | **How students will practice each outcome in this Course** | **How student achievement of each outcome will be** **assessed in this Course** |
| Students will conduct an experiment in order to investigate a physical phenomenon or interaction | Students will read and complete the lab report, and communicate during lab to get a better grasp of the physical phenomenon | Group Work, Homework, Examinations |
| Students will learn how to make objective observations and take measurements of data | Students will work effectively in groups during lab to execute the experiment and take data | Group Work, Homework, Examinations |
| Students will demonstrate the ability to analyze quantitative and qualitative information using software, graphs, tables and statistics | Student will work effectively in groups during lab to read and interpret graphs and data, will fit existing data and will predict new data. | Group Work, Homework, Examinations |
| Students will be able to draw the correct conclusions based on the observations and measurements | Student will complete individually homework problems and will write a separate conclusion of the experiment  | Group Work, Homework, Examinations |

**Other Course Expectations**

**Five unmotivated absences will be sanctioned with -1% of your final grade!**

**Lab make-ups**: ***You are to make every effort to make up your lab in the same week, while the particular experiment is still set up. You can make-up the lab with another instructor. If you cannot do that, there is a week of review/make-up labs before the first exam and you need to make-up labs 1 to 6 during this week. The second half of the make-up labs can be done during the dead week.***

**Required Texts and Web Resources**

|  |  |
| --- | --- |
| Textbook | Physics 204 Laboratory Manual, Spring 2015 Edition |
| Flash Drive | To be used with the Spark interface, save the data and graphs. |

**Course Description**

|  |
| --- |
| The lab is a hands-on, active environment, where students will work in teams, and carry out experiments that will allow them to apply, verify or discover concepts and laws of physics. The labs are designed to provide students with experience in applying the principles covered in the PHY 203 lecture class. The lectures will not always cover the theory necessary for understanding the labs *before*the lab meets. Students are required to read the lab manual before coming to class.  |

**Grading Policy**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Breakdown

|  |  |
| --- | --- |
| Exams (2@20% each) | 40% |
| Homework & Conclusion  | 30% |
| Lab Report | 20% |
| Presence | 10% |
| Total Possible | 100% |

 | Grades

|  |  |
| --- | --- |
| A | 90% -100% |
| B | 80% - 89.9% |
| C | 70% - 79.9% |
| D | 60% - 69.9% |
| F | 59.9% and below |

 |

**Grading Specification**

|  |  |
| --- | --- |
| Examination | The subject of the exams will consist of a combination of conceptual questions and problems from the homework. The exams are closed book; no notes or cards are allowed, only a simple calculator will be permitted*. I will give formulas at the exam, if you to ask for it.* Students have two days after the exam is returned to challenge a grade. After this, the grade will be fixed. |
| Homework & Conclusion | The homework problems and Conclusions are to be done with no collaboration with your partners. The Conclusions must be an analysis of the actual experiment, and it must be done on a separate sheet of paper, typed with font size 12, and be about a half page to a page long (250-350 words). *Remember to include a discussion of the errors, or you will be penalized otherwise*. If you need help, please come to office hour to see examples conclusions. Staple the Homework and the Conclusions to the lab report. |
| Lab Report | Your reports should include all lab manual pages filled during class, in collaboration with your lab partners. Your lab partners’ names must be written on the first page of the report near your name. The completed reports are to be stapled and turned in at the immediate beginning of the next lab class.*. Lab reports returned at the end of the class will be penalized. Late submission will be penalized* ***5%*** *the first day**and* ***10%*** *per day for the first week. Lab reports returned a week or more late will be penalized a flat* ***60%*** *of the grade.* |
| Presence | Students are expected to attend all labs and to be responsible for what they are doing in lab. This is not a course where you can come in later in the week to finish an experiment! Moreover, if a student is observed to be consistently letting his/her laboratory partners do all or most of the work, that person will be penalized with **5%** for that lab. If you miss a class with a valid reason you must see me about a make-up time as soon as possible. Absences will be excused only with proper documentation. If you do not make up a lab you will receive a **0 (zero)** for that lab. The labs take about 90 minutes to complete. You can leave no more than 20 minutes earlier if you completed all your activities. Before you leave, I will sign your lab report, to acknowledge that you did all the work in class.  |