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

**PHY 201 Syllabus (3 Credit hours)**

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| Course Title/Number | PHY 201-103 | | |
| Semester/Year | Spring Semester 2014 | | |
| Days/Time | TR 11:00 pm – 12:15 pm | | |
| Location | SCI 277 | | |
| Instructor | Maria Babiuc Hamilton | | |
| Office Number | SCI 257 | | |
| Phone/Email | 304-696-2754/ babiuc@marshall.edu | | |
| Office Hours | TR 10:00 am – 11:00 am | | |
| 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 learn Physics and will develop the skills of problem solving and scientific thinking | | Solve physical problems involving matter in motion (trajectories) in one- and two-dimensions; solve problems in static and dynamic equilibrium; implement work, energy and momentum as calculation tools; rotational kinematics and dynamics; all using the mathematical tools from algebra, trigonometry, solid geometry, and vectors | Group Work, Homework, Examinations |
| Students will build a strong foundation that will enable them to understand the laws of nature that underline not just Physics, but also other scientific fields. | | State in words and in formulas functional relationships in physical science. Interpret equations found in reference books and identify *limitations* applying to those equations. Properly implement an equation found in a reference book (including the text book) to a physical problem of interest | Group Work, Homework, Examinations |
| Students will demonstrate the ability to think critically and will learn the essential skills of approaching and solving real-life problems. | | Apply physical principles to everyday life problems, employ critical thinking skills to solve problems. | Group Work, Homework, Examinations |
| Students will understand how science operates and the linking of a theoretical model with reality. | | Demonstrate the ability to work effectively. Read and interpret graphs and data, being able to fit existing data and predict new data. | Group Work, Homework, Examinations |

**Other Course Expectations**

All students are expected to attend classes and to actively participate. Five unmotivated absences will be sanctioned with -1% of your grade. I expect the following routine:

* Read the assigned textbook materials before the class
* Do, to the best of your current ability, the homework and other assignments
* Attend all class and come to office hours
* Be prepared, ask questions and participate in discussions

**Required Texts and Web Resources**

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| Textbook | College Physics (9th Ed), by Young, Sears and Zemanky |
| Access Card | [www.masteringphysics.com](http://www.masteringphysics.com), Course ID: MPBABIUCHAMILTON63116 |

**Course Description**

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| Introduction to Physics for Science Professionals. Includes: motion, forces, gravitation, energy conservation, momentum conservation, rotational motion, torque, vibrations and waves, and thermodynamics. |
| *This class is challenging! There is a lot of information to be processed, and the difficult skill of problem-solving to be acquired! You will not survive if you do not pre-read the textbook material in a timely fashion, and if you are not prepared to engage in active problem-solving during class periods. Only watching me won’t do. I know already how to do problems. The point of the course is for you to learn. There are no shortcuts!*  *You need to make an honest effort to learn principles and problem-solving techniques.* |

**Grading Policy**

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| Breakdown   |  |  | | --- | --- | | Tests (2@20% each) | 40% | | Final Exam | 30% | | Homework | 20% | | Group Work | 10% | | Total Possible | 100% | | Grades   |  |  | | --- | --- | | A | 90% -100% | | B | 80% - 89.9% | | C | 65% - 79.9% | | D | 50% - 64.9% | | F | 49.9% and below | |

**Grading Specification**

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| Examination | The subject of the exams will consist of a combination of multiple-choice questions and problems from the book. 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 know what you need to ask for.* You have two days after the exam is returned to challenge a grade. After this, I will post solutions and the grade will be fixed. |
| Homework | The homework will consist usually of problems from the book for each chapter and will be available on the MasteringPhysics web page. |
| Group Work | You will learn problem-solving only by doing, and by being constructively critiqued by your group and by the instructor. |