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

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

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| Course Title & Number | PHY 201-201 |
| Semester & Year | Fall Semester 2018 |
| Instructor | Maria Babiuc Hamilton |
| Phone & Email | 304-696-2754/ babiuc@marshall.edu |
| Lecture Days & Time | MWF from 12:00 pm to 12:50 pm |
| Lecture Location | SCI 277 |
| Office Hours | Open door: MWF 3:00 pm – 4:00 pm  *If the scheduled office hours don’t work for you, please send me an email to reschedule. I will try to accommodate all your requests.* |
| Office Location | SCI 257 |
| S. I. Session Days & Time | MW from 5:00 pm to 6:15 pm |
| S. I. SessionLocation | SCI 374 |
| University Policies | By enrolling in this course, you agree to MU Academic Affairs: University Policies. Please read the full text by going to: [www.marshall.edu/academic-affairs/policies](http://www.marshall.edu/academic-affairs/policies) |
| Emergency Policies | 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) |
| Disabilities Policies | For University policies and the procedures for obtaining services, please go to <http://www.marshall.edu/academic-affairs/policies/> and read the section: **Students with Disabilities** |
| 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. 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.  **Cell Phones/Tablets** may be set to vibrate during regular class times, but they cannot be used. If an emergency call/message comes through, students are required to leave the class before answering the phone it.  CELL PHONES ARE STRICTLY PROHIBITED DURING EXAM! |

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| **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 the subject of Physics and will develop the skills of problem solving and scientific thinking | Study the laws of motion, and types of motion, conservation laws, energy, properties of matter, oscillations and waves. | Attendance to Lecture Group Work, Homework, Tests, Examinations. |
| Students will build a strong foundation that will enable them to understand the laws of nature that underline the field of Physics, and constitute a background for other scientific fields. | State in words and in formulas functional relationships in physics; interpret equations found in the textbook books, and identify *limitations* applying to those equations; properly chose and implement equations found in the text book to solve physical problems. | Attendance to Lecture Group Work, Homework, Tests, Examinations. |
| Students will demonstrate the ability to think critically and will learn the essential skills of solving real-life problems. | Apply physical principles to everyday life problems, employ critical thinking skills to solve problems. | Attendance to Lecture Group Work, Homework, Tests, 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. | Attendance to Lecture Group Work, Homework, Tests, Examinations. |

**Other Course Expectations**

All students are expected to attend and to actively participate in all the classes.

***10% of your final grade is based on class attendance and participation!***

This is a challenging class and requires commitment from you both in time and effort. In order to achieve the intended results in this class, you will have to:

* attend class, ask questions and participate in discussions
* read the assigned textbook materials and do your homework
* come to office hours when you need help
* attend and actively participate in the Supplemental Instruction sessions.

**Required Texts and Web Resources**

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| Textbook | College Physics: A Strategic Approach, 4th Edition, by Randall Knight, Brian Jones and Stuart Field |
| Homework | www.pearson.com/mastering, **Course ID:** babiuc-hamilton52548  *please see the Registration Handout for instructions on how to register.* |

**Course Description**

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| This course uses an investigative learning approach to teach introductory physics. This approach encourages students to take an active role in learning physics, to practice scientific skills such as observing, analyzing, and testing, and to build scientific habits of mind. Students learn physics best by getting involved in physics. |
| *The point of the course is for you to learn by doing. There is a lot of information to be processed, and the difficult skill of problem-solving to be acquired! No shortcuts!* |

**Grading Policy**

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| Breakdown   |  |  | | --- | --- | | Tests (2@20% each) | 40% | | Online Homework | 20% | | In-class Activities | 10% | | Final Exam | 30% | | 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 tests will consist of 4 - 6 problems chosen from both the material we covered in class, and assigned as homework. Each test is one hour long. The final exam will contain problems from last chapters and problems from the previous tests. The exams are closed book.Only personal calculators are permitted. *A formula sheet is provided only for the final exam.* The tests will be returned in one to two weeks. If you or I made an involuntary error on the test, you can challenge a grade. You have to wait until the tests are returned before you request a grade change, and you must base your request only on material included in the test. You have 3 days after the test is returned for the grade change. After this window, the grade will be fixed and posted online on the Blackboard web page. |
| Homework | Homework will be given with each chapter, and will be available on the **Mastering Physics** web page. The homework will be due in one week, with a penalty of 5% for every late day. |
| In-class | You will receive 10% of your grade for presence, good notes, and participation. It is important to attend lecture and keep good notes. |
| Extra Credit | There will be 5 points of extra credit available on each test, and an optional extra credit homework assignment at the end of the class. |

In order to calculate your grade during the semester, use the ***normalized average***. For example, if you took one test, try to estimate your attendance and homework, then calculate your grade: (test x 20% + Homework x 20% + In-class x 10%)/(50%).

**Schedule**

***Subject to change. Students are responsible for all announcements (in-class or e-mail)***

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| **Week of** | **Monday** | **Wednesday** | **Friday** |
| Week 1 | Aug. 20  Syllabus/Ch. 1 | Aug. 22  Chapter 1 | Aug 24  Chapter 1 |
| Week 2 | Aug. 27  Chapter 2 | Aug. 29  Chapter 2 | Aug. 31  Chapter 3 |
| Week 3 | ***Sep. 3***  ***Labor Day-No School*** | Sep. 5  Chapter 3 | Sep. 7  Chapter 3 |
| Week 4 | Sep. 10  Chapter 4 | Sep. 12  Chapter 4 | Sep. 14  Chapter 5 |
| Week 5 | Sep. 17  Chapter 5 | Sep. 19  Chapter 5 | Sep. 21  Chapter 5 |
| Week 6\* | **Sep. 24**  **TEST 1** | Sep. 26  Chapter 6 | Sep. 28  Chapter 6 |
| Week 7 | Oct. 1  Chapter 6 | Oct. 3  Chapter 7 | Oct. 5  Chapter 7 |
| Week 8 | Oct. 8  Chapter 8 | Oct.10  Chapter 8 | Oct. 12  Chapter 8 |
| Week 9 | Oct. 15  Chapter 9 | Oct. 17  Chapter 9 | Oct. 19  Chapter 9 |
| Week 10 | Oct. 22  Chapter 10 | Oct. 24  Chapter 10 | Oct. 26  Chapter 10 |
| Week 11\* | **Oct.29**  **TEST 2** | Oct. 31  Chapter 11 | Nov. 2  Chapter 11 |
| Week 12 | Nov. 5  Chapter 11 | Nov. 7  Chapter 14 | Nov. 9  Chapter 14 |
| Week 13 | Nov. 12  Chapter 15 | Nov. 14  Chapter 15 | Nov. 16  Chapter 15 |
| ***Break*** | ***Nov.19*** | ***Nov. 21*** | ***Nov. 23*** |
| Week 14 | Nov. 26  Chapter 16 | Nov. 28  Chapter 16 | Nov. 30  Chapter 12 |
| Week 15 | Dec. 3  Chapter 12 | Dec. 5  Chapter 13 | Dec 7  Chapter 13 |

***NOTE: Please go to:*** [***www.marshall.edu/registrar/exam-schedule***](http://www.marshall.edu/registrar/exam-schedule) ***for the Exam Schedule.***

***For this class, the final exam will be Friday Dec. 14, 2018 from 10:15 am to 12:15 pm in S277.***

**SUMMARY: How to Study Physics**

***NOTE: This is just the summary of a document written in 1950 on how to study physics web. Please read the whole paper at:*** [***http://www.physics.csbsju.edu/105/HowToStudyPhysics.htm***](http://www.physics.csbsju.edu/105/HowToStudyPhysics.htm)

1. The proper mental attitude—an earnest desire to learn—is the most important requirement for effective study.
2. Qualities that make for success are character, aptitude, attitude toward work, knowledge, ability to get along with others, ability to use the English language effectively, integrity, and perseverance.
3. Put special emphasis on learning how to attack problems and on how to apply what you know.
4. Physics, the basic physical science, is fundamental in medicine, science, engineering, and many present-day social problems.
5. Ask yourself questions about the material while you study it.
6. For most students, physics involves new concepts, about which logical reasoning is necessary. Hence, efforts to memorize physics are worthless.
7. Adopt a receptive and cooperative attitude toward your instructors.
8. Study in a place free from distractions.
9. Get adequate sleep, exercise, and recreation, but leave enough time for study.
10. Study regularly, preferably soon after class.
11. Review material frequently, both in self-recitation and in discussions with fellow students.
12. Seek help from the library, or from a tutor if necessary.
13. Pay close attention to definitions.
14. Be alert. Take an active part in recitation classes.
15. Go to class not just to take notes but to learn.
16. In taking notes be sure to include explanations.
17. Soon after class, smooth out and fill in your notes.
18. Have an orderly, well-organized procedure for working problems.
19. Review your problems by working them forward and backward and by doing variations.
20. Memorize, for convenience only, a few of the most important fundamental formulas and for the other material learn to reason from the fundamental ideas.
21. Don't be rusty in high school math. Practice up if necessary.
22. Study a derivation to learn the origin of and the range of usefulness of the formula, so that you can fit into the picture technological extensions that develop after you leave college.
23. Keep in mind the physical ideas.

**How to Register for PHY201FALL2018 :**

1. Go to www.pearson.com/mastering .
2. Under Register, select **Student**.
3. Confirm you have the information needed, then select **OK! Register now** .
4. Enter your instructor’s course ID: babiuc-hamilton52548 , and **Continue** .
5. Enter your existing Pearson account **username** and **password** to **Sign In** .

You have an account if you have ever used a MyLab or Mastering product.

»If you don’t have an account, select **Create** and complete the required fields.

1. Select an access option.

»Enter the access code that came with your textbook or that you purchasedseparately from the bookstore.

»If available for your course,

• Buy access using a credit card or PayPal.

• Get temporary access.

1. From the You're Done! page, select **Go To My Courses** .
2. On the My Courses page, select the course name **PHY201FALL2018** to start your work.

**How to Sign in Later:**

1. Go to www.pearson.com/mastering .
2. Select **Sign In** .
3. Enter your Pearson account **username** and **password**, and **Sign In** .
4. Select the course name **PHY201FALL2018** to start your work.

**How to Upgrade Temporary Access to Full Access:**

1. Go to www.pearson.com/mastering .
2. Select **Sign In** .
3. Enter your Pearson account **username** and **password**, and **Sign In** .
4. Select **Upgrade access** for **PHY201FALL2018** .
5. Enter an access code or buy access with a credit card or PayPal.