Physics 2050-100: University Physics I (4hrs)

Course: Physics 2050 is intended for physics majors, engineering students, and future physics teachers, and is recommended for majors in other sciences. A student can receive credit for only one of the following courses: PHYS 2050 or PHYS 1130. It is a one-semester physics course, calculus-based, concerning the principles and practical applications of mechanics (kinematics, laws of motion, work and energy, conservation laws). This course will introduce you to the basic concepts and principles of physics that apply to your major/minor. You will hopefully learn how to reason with and about principles to help you solve open-ended, indeterminate, real-world problems.

This course will be taught in an "interactive-style" lecture format in order to benefit you the most. You will be required to do the assignments everyday; read the chapter and prepare the problems in order to be "active learners!!" The main goal of this interactive-style method of teaching is to allow you to acquire a better understanding of the concepts and basic ideas and fundamentals of “Mechanics”. The aim is to teach you to become critical thinkers and to develop your problem-solving skills as well as learn to think logically and coherently about various technical issues. Specifically, we will learn how to 1) analyze qualitatively any unfamiliar situation then 2) to quantitatively solve the situation. During the lectures, I will not be deriving formulas or informing you about the content of the chapters. My role will be to assist you and guide you to understand the concepts and material as well as discuss and clarify the concepts and principles of physics by working in class exercises and problems with your participation. I will challenge your thinking and help you assess your understanding. I will also assist you with confusing issues, and help you think critically. Your participation and active involvement will be required every day for your own benefit.

Team work: It is important to work as teams of 3-4 students in class and outside of class as a group.

Lectures: Monday, Tuesday, Wednesday, Thursday, in room 1110, Rood Hall from 11:00 to 11:50 am.

Examination: Every Monday evening 6:30 pm-7:20 pm you will have either a Quiz or Exam in 1104 Rood Hall

Instructor: Dr. Nora Berrah
Office:2224 Everett Tower
Phone:387-4955. E-mail: nora.berrah@wmich.edu

Consultation: Tuesday and Thursday, 3:00-4:00 pm, in my office and also by appointment.

Textbook: Physics for Scientists and Engineers, with Modern Physics, Serway & Jewett 8th edition. It should be brought to every lecture. We will cover Chapters 1-9 and parts of Chapters 10-13,15 during the semester. Some topics from the textbook will be omitted and these omissions will be identified in the lectures.
Prerequisites: Math 1220 or Math 1700.

1. It is Department Policy that a grade of “C” or better in a prerequisite course is required before enrollment is permitted in the next-sequence course. A student who does not meet this requirement must drop this course as soon as possible and no later than the no-refund deadline.

2. It is University Policy that the number of times a course can be taken is limited to three (including withdrawals). A student whose current enrollment is in violation of this policy must drop this course as soon as possible and no later than the deadline for no refund of tuition.

Corequisites: Physics 2060 (University Physics I) and Math 1230 or Math 1710.

Assignment:

I) Reading Assignments will be made every Thursday for the whole week. You are required to read the assigned material every day to obtain the background information needed during our interactive lectures. This is necessary and crucial for you in order to learn and understand the material. You will have quizzes on your reading assignments.

II) Homework assignments will be made on Thursday of each week and will be collected every following Thursday. Some of the problems will be graded (ie, NOT all problems will be graded), however, you are responsible for all of them. There will be 12 homework assignments each counting 20 points, for a total of 240 points (24%).

III) Group Work will be carried out during the course of the semester.

Calculator: A calculator will be needed and should be brought to all exams and lectures.

Quizzes: There will be nine 30-minutes quizzes each counting 35 points for a total of 315 points (31.5%) toward your final grade. You will be quizzed on the material covered in class during the previous week.

Exams: There will be four one-hour exams each counting 100 points (10%). The highest three for a total of 300 points (30%), will count toward your final grade. You will be tested on all the material covered since the previous exam. No make-up exams or quizzes will be given if you miss one exam/quiz. If you miss an exam/quiz, you will receive a zero. The only exceptions to this policy are a major medical problem or a death in the immediate family. Proof will be necessary in both cases.

Final Exam: The comprehensive (Chapters 1-9 and parts of Chapters 10,13,15) two-hour final exam will take place Monday, December 10, 2012 from 7:15 to 9:15 p.m in 1104 Rood Hall. It will count 145 points (14.5%) toward your final grade. Quizzes, exams and final exam will be based in part on the semester assigned problems and conceptual questions.

The best way to prepare for quizzes and exams is to learn actively in class and practice your understanding of the concepts by solving conceptual questions and problems individually and in groups.
Grade allocation:

<table>
<thead>
<tr>
<th>Assignment Type</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>12 Individual Homework assignments @20pts each</td>
<td>= 240</td>
</tr>
<tr>
<td>9 Quizzes @35 pts each</td>
<td>= 315</td>
</tr>
<tr>
<td>3 Exams @ 100 pts each</td>
<td>= 300</td>
</tr>
<tr>
<td>1 Final Exam @ 145</td>
<td>= 145</td>
</tr>
<tr>
<td><strong>----------</strong></td>
<td><strong>1000</strong></td>
</tr>
</tbody>
</table>

Grading Scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>870-1000</td>
</tr>
<tr>
<td>BA</td>
<td>820-869</td>
</tr>
<tr>
<td>B</td>
<td>760-819</td>
</tr>
<tr>
<td>CB</td>
<td>700-759</td>
</tr>
<tr>
<td>C</td>
<td>590-699</td>
</tr>
<tr>
<td>DC</td>
<td>490-589</td>
</tr>
<tr>
<td>D</td>
<td>420-489</td>
</tr>
<tr>
<td>E</td>
<td>&lt;419</td>
</tr>
</tbody>
</table>

Tentative Test Schedule:

<table>
<thead>
<tr>
<th>Date</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept. 10</td>
<td>Quiz 1</td>
</tr>
<tr>
<td>Sept. 17</td>
<td>Quiz 2</td>
</tr>
<tr>
<td>Sept. 24</td>
<td><strong>Exam 1</strong></td>
</tr>
<tr>
<td>Oct, 1</td>
<td>Quiz 3</td>
</tr>
<tr>
<td>Oct, 8</td>
<td>Quiz 4</td>
</tr>
<tr>
<td>Oct. 15</td>
<td><strong>Exam 2</strong></td>
</tr>
<tr>
<td>Oct. 22</td>
<td>Quiz 5</td>
</tr>
<tr>
<td>Oct. 29</td>
<td>Quiz 6</td>
</tr>
<tr>
<td>Nov. 5</td>
<td><strong>Exam 3</strong></td>
</tr>
<tr>
<td>Nov. 12</td>
<td>Quiz 7</td>
</tr>
<tr>
<td>Nov. 19</td>
<td>Quiz 8</td>
</tr>
<tr>
<td>Nov. 26</td>
<td><strong>Exam 4</strong></td>
</tr>
</tbody>
</table>

Final exam: December 10, 2012 from 7:15 to 9:15 p.m in 1104 Rood Hall

The only email address that should be used for communication between WMU students and WMU faculty and staff is the email address associated with a BroncoNet ID. This email address typically takes the form buster.h.bronco@wmich.edu. Students cannot automatically forward email from this address to other addresses. Students can access this email account or get instructions for obtaining a BroncoNet ID at GoWMU.wmich.edu.

Reminder: The Faculty Senate’s Professional Concerns Committee recommends all instructors include the following paragraph in each syllabus they prepare.

“You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate and Graduate Catalogs that pertain to Academic Honesty. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. [The policies can be found at http://catalog.wmich.edu under Academic Policies, Student Rights and Responsibilities.] If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Conduct. You will be given the opportunity to review the charge(s). If you believe you are not responsible, you will have the opportunity for a hearing. You should consult with your instructor if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.”

In addition, instructors are encouraged to direct students to www.wmich.edu/conduct, www.wmich.edu/registrar and www.wmich.edu/disabilityservices to access the Code of Honor and general academic policies on such issues as diversity, religious observance, student disabilities, etc.
Physics 2050-105: University Physics I (4hrs)

Course: Physics 2050 is intended for physics majors, engineering students, and future physics teachers, and is recommended for majors in other sciences. A student can receive credit for only one of the following courses: PHYS 2050 or PHYS 1130. It is a one-semester physics course, calculus-based, concerning the principles and practical applications of mechanics (kinematics, laws of motion, work and energy, conservation laws). This course will introduce you to the basic concepts and principles of physics that apply to your major/minor. You will hopefully learn how to reason with and about principles to help you solve open-ended, indeterminate, real-world problems.

This course will be taught in an "interactive-style" lecture format in order to benefit you the most. You will be required to do the assignments everyday; read the chapter and prepare the problems in order to be active learners!! The main goal of this interactive-style method of teaching is to allow you to acquire a better understanding of the concepts and basic ideas and fundamentals of “Mechanics”. The aim is to teach you to become critical thinkers and to develop your problem-solving skills as well as learn to think logically and coherently about various technical issues. Specifically, we will learn how to 1) analyze qualitatively any unfamiliar situation then 2) to quantitatively solve the situation. During the lectures, I will not be deriving formulas or informing you about the content of the chapters. My role will be to assist you and guide you to understand the concepts and material as well as discuss and clarify the concepts and principles of physics by working in class exercises and problems with your participation. I will challenge your thinking and help you assess your understanding. I will also assist you with confusing issues, and help you think critically. Your participation and active involvement will be required every day for your own benefit.

Team work: It is important to work as teams of 3-4 students in class and outside of class as a group.

Lectures: Monday, Tuesday, Wednesday, Thursday, in room 1110, Rood Hall from 2:00 to 2:50 pm.

Examination: Every Monday evening 6:30 pm-7:20 pm you will have either a Quiz or Exam in 1104 Rood Hall

Instructor: Dr. Nora Berrah
Office:2224 Everett Tower
Phone:387-4955. E-mail: nora.berrah@wmich.edu

Consultation: Tuesday and Thursday, 3:00-4:00 pm, in my office and also by appointment.

Textbook: Physics for Scientists and Engineers, with Modern Physics, Serway & Jewett 8th edition. It should be brought to every lecture. We will cover Chapters 1-9 and parts of Chapters 10-13,15 during the semester. Some topics from the textbook will be omitted and these omissions will be identified in the lectures.
Prerequisites: Math 1220 or Math 1700.
1. It is Department Policy that a grade of “C” or better in a prerequisite course is required before enrollment is permitted in the next-sequence course. A student who does not meet this requirement must drop this course as soon as possible and no later than the no-refund deadline.
2. It is University Policy that the number of times a course can be taken is limited to three (including withdrawals). A student whose current enrollment is in violation of this policy must drop this course as soon as possible and no later than the deadline for no refund of tuition.

Corequisites: Physics 2060 (University Physics I) and Math 1230 or Math 1710.

Assignment:  I) Reading Assignments will be made every Thursday for the whole week. You are required to read the assigned material every day to obtain the background information needed during our interactive lectures. This is necessary and crucial for you in order to learn and understand the material. You will have quizzes on your reading assignments.

II) Homework assignments will be made on Thursday of each week and will be collected every following Thursday. Some of the problems will be graded (ie, NOT all problems will be graded), however, you are responsible for all of them. There will be 12 homework assignments each counting 20 points, for a total of 240 points (24%).

III) Group Work will be carried out during the course of the semester.

Calculator: A calculator will be needed and should be brought to all exams and lectures.

Quizzes: There will be nine 30-minutes quizzes each counting 35 points for a total of 315 points (31.5%) toward your final grade. You will be quizzed on the material covered in class during the previous week.

Exams: There will be four one-hour exams each counting 100 points (10%). The highest three for a total of 300 points (30%), will count toward your final grade. You will be tested on all the material covered since the previous exam. No make-up exams or quizzes will be given if you miss one exam/quiz. If you miss an exam/quiz, you will receive a zero. The only exceptions to this policy are a major medical problem or a death in the immediate family. Proof will be necessary in both cases.

Final Exam: The comprehensive (Chapters 1-9 and parts of Chapters 10-13,15) two-hour final exam will take place on Monday, December 10, 2012 from 7:15 to 9:15 p.m in 1104 Rood Hall. It will count 145 points (14.5%) toward your final grade. Quizzes, exams and final exam will be based in part on the semester assigned problems and conceptual questions.

The best way to prepare for quizzes and exams is to learn actively in class and practice your understanding of the concepts by solving conceptual questions and problems individually and in groups.
Grade allocation:

- 12 Individual Homework assignments @20pts each = 240
- 9 Quizzes @35 pts each = 315
- 3 Exams @ 100 pts each = 300
- 1 Final Exam@ 145 = 145

Total: 1000

Grading Scale:

- A 870-1000
- BA 820-869
- B 760-819
- CB 700-759
- C 590-699
- DC 490-589
- D 420-489
- E <419

Tentative Test Schedule:

- Sept. 10, Quiz 1
- Oct. 8, Quiz 4
- Nov. 5, Exam 3
- Dec. 3, Quiz 9

- Sept. 17, Quiz 2
- Oct. 15, Exam 2
- Nov. 12, Quiz 7

- Sept. 24, Exam 1
- Oct. 22, Quiz 5
- Nov. 19, Quiz 8

- Oct 1, Quiz 3
- Oct. 29, Quiz 6
- Nov. 26, Exam 4

Final exam: December 10, 2012 from 7:15 to 9:15 p.m in 1104 Rood Hall

---

The only email address that should be used for communication between WMU students and WMU faculty and staff is the email address associated with a BroncoNet ID. This email address typically takes the form buster.h.bronco@wmich.edu. Students cannot automatically forward email from this address to other addresses. Students can access this email account or get instructions for obtaining a BroncoNet ID at GoWMU.wmich.edu.

Reminder: The Faculty Senate’s Professional Concerns Committee recommends all instructors include the following paragraph in each syllabus they prepare.

“You are responsible for making yourself aware of and understanding the policies and procedures in the Undergraduate and Graduate Catalogs that pertain to Academic Honesty. These policies include cheating, fabrication, falsification and forgery, multiple submission, plagiarism, complicity and computer misuse. [The policies can be found at http://catalog.wmich.edu under Academic Policies, Student Rights and Responsibilities.] If there is reason to believe you have been involved in academic dishonesty, you will be referred to the Office of Student Conduct. You will be given the opportunity to review the charge(s). If you believe you are not responsible, you will have the opportunity for a hearing. You should consult with your instructor if you are uncertain about an issue of academic honesty prior to the submission of an assignment or test.”
In addition, instructors are encouraged to direct students to www.wmich.edu/conduct, www.wmich.edu/registrar and www.wmich.edu/disabilityservices to access the Code of Honor and general academic policies on such issues as diversity, religious observance, student disabilities, etc.