Physics 1011  

Fall 2016

Lectures: Benton 102: Tuesday & Thursday, 9:30 to 10:45AM  
Labs: Benton 333: Tues, Wed or Thurs: 12:30 – 2:20pm  
2:30 – 4:20pm  

(Check which lab you are signed up for!)  
There are 6 possible Lab sections. You can ONLY attend the lab section that you are officially enrolled in. You cannot change section without obtaining official permission and reregistering in that new section.

Prerequisites: MATH 1030 (Algebra)  
MATH 1035 (Trigonometry)  
Calculus (MATH 1100 or 1800) strongly recommended  
If you have less than a grade of C- in ANY of these prerequisites then you are ineligible to take this course and will be withdrawn.

Course Instructor: Dr. David Horne  
Email: horneda@umsl.edu  
The best way to contact me is by email  
Office B503b, Tel: 314-516-7471  
Office Hours: Tuesday & Thursday 12pm - 2 pm (Benton 503b)  
(Email me to schedule an appointment for another time.)

Grading Scheme (for PHYS 1012, 4.0 credit class with lab):  

<table>
<thead>
<tr>
<th></th>
<th>20%</th>
<th>1100pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midterm II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final (NOT comprehensive)</td>
<td>20%</td>
<td>1100pts</td>
</tr>
<tr>
<td>Homework Problems</td>
<td>20%</td>
<td>1100pts</td>
</tr>
<tr>
<td>Lab</td>
<td>20%</td>
<td>1100pts</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>5500pts</td>
</tr>
</tbody>
</table>

Grading Scheme (for PHYS 1012A, 3.0 credit class w/out lab):  

<table>
<thead>
<tr>
<th></th>
<th>25%</th>
<th>1100pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm I</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midterm II</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Final (NOT comprehensive)</td>
<td>25%</td>
<td>1100pts</td>
</tr>
<tr>
<td>Homework Problems</td>
<td>25%</td>
<td>1100pts</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>4400pts</td>
</tr>
</tbody>
</table>

Grade scale:  
92-100: A  
90-91.99: A-  
88-89.99: B+  
82-87.99: B  
80-81.99: B-  
78-79.99: C+  
below 60: Fail
There will be no curving of grades, extra credit or dropping of a bad grade. Please do not ask for this as refusal often offends.

**Exam Format:** Exams will generally be comprised of 5 short answer questions

**Makeup exams:** A clear and **verifiable** reason (illness or valid emergency) must be given for a makeup exam, to be conducted. Bear in mind that any makeup exam will be different in content to the original exam. The testing center may only be used for those people with registered disabilities or due to extenuating circumstances. This facility does not exist for the convenience of taking an exam at a time of your choosing.

**Homework and Homework Policy:** There will be homework assignments at regular intervals throughout the class. Homework problems should be looked on as learning tool, you will not be given ANY ‘busy work’ or irrelevant material in this class.

You will be given a clear deadline for each assignment and you are expected to adhere to this deadline. There will be **no warnings** given for failure to turn in an assignment and I will **NOT** chase you for work not turned in, you will simply receive a **grade of 0** for that assignment. If you cannot turn in homework on the correct date due to a verifiable, extenuating circumstance then make sure you contact your instructor **BEFORE** the deadline.

You are encouraged to work together on assignments, however the key idea of homework is to **learn from it and understand the material**. Any work submitted must be your own, in your own words / mathematical reasoning. Copying of another student’s work may be construed as academic dishonesty. Feel free to contact your instructor if you have any questions about homework assignments.

**Late Homework:** Homework deadlines are assigned to keep the course moving along at a steady pace. Late homework submission will result in poor organization of the course for both instructor and students and ultimately student dissatisfaction.

**Exams:** Exams are designed to take 1 complete class period. Exams will not be cumulative, however each exam will build on material covered previously you should not forget prior material. **If you are witnessed cheating on an exam by any means** you will **not** be challenged during the exam period and **no verbal warnings** will be given out of respect for others taking the exam. **Your exam will simply be returned to you with a grade of 0** and you will be reported for academic dishonesty. A formula sheet will be provided on the day of your exam, this sheet will contain all formulae and constants needed for the exam. You cannot bring your own version and the formula sheet should not be viewed as a security blanket for the exam or a substitute for learning. You cannot pass by simply choosing formulae from a sheet. The formula sheet will **NOT** be distributed prior to the exam.

**Lab:** Your instructor will **not be responsible for the day to day running of the lab.** The lab Teaching Assistant (TA), will teach and grade all labs. **DO NOT** turn lab reports into your professor unless specifically instructed to. Any labs left in the professors
mailbox will not make it to your TA. Your TA will report the final lab grade to the class instructor at the conclusion of the semester and is your point of contact for all lab activities. Make sure you note the contact details of your lab TA.

- Lab reports **must** be typed.
- Lab reports are subject to the same academic dishonesty regulations as homework assignments and as such must be your own original work. Even if you have the same data from an experiment as your lab partner, your interpretation of that information **must be your own**. A simple copy of your lab-mates reports will be interpreted as copying and both parties will receive an automatic zero for their work. The final decision as to the definition of copying/dishonesty lies with the instructor who is subject to university regulations regarding academic dishonesty.
- Each lab will be graded out of 100 points. Your average lab grade will make up the final grade for the lab portion of the class.
- Labs will be due the next time your lab section meets after the experiment. As with homework there is a zero tolerance policy for late submissions.
- NO makeup labs will be given. A student missing lab because of a serious, **documentable** illness or family emergency should see the instructor to receive an alternate assignment in place of lab. Remember a **verifiable** reason for absence is required to take advantage of this exception.
- **Moving lab sections**: If you know that you will have to miss a lab or have a **documentable** emergency leading to missing lab on your assigned day but are available during an alternate lab section, it **MAY** be possible to attend another section. If you need to do this contact the instructor first, for approval before discussing with your regular TA for final confirmation. Do not depend on this action as some lab sections are very full and you cannot ‘pick and choose’ sections to attend on a weekly basis.

**Homework, Lab and Exam Grading**: Unless exceptional circumstances apply, homework, lab reports and exams will be returned within 1 week of their submission. If you are found indulging in plagiarism on homework, labs and/or cheating during an exam, **in addition to a grade of 0 being awarded your academic misconduct will be reported to the appropriate University Offices**.

**Academic Integrity/Plagiarism**: You are responsible for being attentive to and observant of University policies about academic honesty as stated in the University’s Campus Policies and Procedures in the [Triton Manual](#) (p. 30)

Academic dishonesty is a serious offense that may lead to probation, suspension, or **dismissal from the University**. One form of academic dishonesty is plagiarism – the use of an author's ideas, statements, or approaches without crediting the source. Academic dishonesty also includes such acts as cheating by copying information from another student. **Plagiarism and cheating are not acceptable.**

The definition of plagiarism or cheating is defined by the instructor Dr.Horne within the policies outlined by UMSL. The student will abide by any judgement or punitive action taken by Dr.Horne, up to and including an award of ‘0’ points for an
exam or assignment and/or the submission of a report on this behavior to Office of Academic Affairs.

Academic dishonesty reported to the Office of Academic Affairs may result in punitive actions toward the student. The instructor will make an academic judgment about the student’s grade on that work and in that course. The campus process regarding academic dishonesty is described in the “Policies” section of the Academic Affairs website.

Plagiarism is defined as the use of another person’s words or ideas without crediting that person.

Academic dishonesty consists of any deliberate attempt to falsify, fabricate or otherwise tamper with data, information, records, or any other material that is relevant to the student's participation in any course, laboratory, or other academic exercise or function. The definition of cheating and/or plagiarism will be considered on a case-by-case basis and remains at the discretion of the instructor who will operate within the accepted UMSL rules. Cheating and or plagiarism includes consensual use of work done by another person. Your work MUST be your own and sufficiently different to your fellow students, the definition of cheating and/or plagiarism remains at the discretion of the instructor who will operate within the accepted UMSL guidelines.

Plagiarism and cheating will not be tolerated and may lead to failure on an assignment in the class, failure of the class, and dismissal from the University, per the UMSL academic dishonesty policy. Students are responsible for being attentive to and observant of campus policies about academic honesty as stated in the University’s Student Conduct Code.

Class Attendance: Your attendance is required in each class and you should be prepared to take notes, lecture slides will be placed online for you by the end of the week. These slides are for your reference and should not be used to replace class attendance. Much more is said in class than is included in the slides.

Class Conduct: While in class please do not talk unnecessarily, text or otherwise indulge in wireless communication of any sort. Use of ANY electronic devices including phones, computers, Google Glass and/or smart watches is prohibited. Only approved calculators will be permitted in exams. To prevent use of smart watches in class, the use of ANY watches will be prohibited during exams. A clock is provided in the exam room for you to track the time.

Book Usage: The material covered in your class is also contained within the book. Explanations given in class will not be identical to those given in the book so you should still attend class. The book should be used as your main reference and to give you a 'second source' of information to that given in class.

STUDENTS WITH DISABILITIES: If you have any disability that might require extra accommodation during the course please come to my office to inform me of your needs and provide me with your official accommodation documentation from the Disability Office.
Week 1 (Aug 23/25):  Chapter 2 – One-Dimensional Kinematics

Week 2 (Aug 30/Sept 1):  Chapter 2 – One-Dimensional Kinematics continued
Chapter 3 – Vectors
LAB 1: The Determination of Gravitational Acceleration

Week 3 (Sept 6/8):  Chapter 4 – Two-Dimensional Kinematics

Week 4 (Sept 13/15):  Chapter 5 – Newton’s Laws of Motion
LAB 2: Projectile Motion

Week 5 (Sept 20/22):  Chapter 6 – Friction, Springs & Hooke’s Law
LAB 3: Newton’s Second Law: The Atwood Machine

Midterm I

Week 6 (Sept 27/29):  Chapter 6 – Translational Equilibrium, Tension
LAB 4: Friction

Week 7 (Oct 4/6):  Chapter 7 – Work & Kinetic Energy
LAB 5: The Work-Energy Theorem

Week 8 (Oct 11/13):  Chapter 8 – Potential Energy

Week 9 (Oct 18/20):  Chapter 9 – Linear Momentum & Collisions
LAB 5: The Work-Energy Theorem

Week 10 (Oct 25/27):  Chapter 10 – Rotational Motion & Rotational Energy
LAB 6: Conservation of Linear Momentum

Week 11 (Nov 1/3):  Chapter 11 – Torque

Midterm II

Week 12 (Nov 8/11):  Chapter 11 continued

Week 13 (Nov 15/17):  Chapter 12 – Gravitation & Kepler’s Laws
LAB 7: Rotational and Translational Energy

Week 14 (Nov 29/Dec 1):  Chapter 13 – Periodic Motion
LAB 8: Periodic Motion and Resonance

Week 15 (Dec 6/8):  Overview

Final Exam: Thursday 15th December 7:45 – 9:45AM
Your instructor reserves the right to make changes to the content of the course and the structure/schedule including assessment material stated in this syllabus while the course is in session.