Welcome to Engineering Physics I. We hope you’ll enjoy your experience, for people can find pleasure in all kinds of experiences.


Course information and material can be found at the course’s Web page http://campus.mst.edu/physics/courses/23.

The course’s quizzes will be accessed and done online through ExpertTA at www.theexpertta.com.

**Q: What is Physics?**

A: The detailed study of fundamental processes and the operational laws of the universe as revealed in the behavior of “simple” or archetypal systems.

*But simple laws acting in simple systems can generate a rich and challenging complexity.*

Flip over the packet of introductory material that you picked up when you entered this lecture hall. In the space at the bottom of the back page, please write what you think is the continuation of the following sentence:

*I chose to come to S&T, which has a reputation of being hard, rather than going to an easier university because ....*

**Q: Why take this course?**

A: It’s a requirement.

*But there is merit in understanding how Nature’s Laws operate in the world – and the Universe.*

*Engineering is the application of such understanding to society’s needs and desires.*
Q: Why am I teaching this course?

A: I was assigned it to build my character and fortitude.

The teaching staff wants our students (i.e., YOU) to succeed in this course and in your careers.

*Physics 23 Cast of Characters* this semester

We will guide, encourage and even prod you to help you develop your full potential.

And now, a little background about me
(http://campus.mst.edu/physics/courses/23/BieniekBackground.pdf)

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The *Physics 23 Course Syllabus* has been distributed to you.

**You are expected** to read the *Syllabus* very CAREFULLY.

**You must read the online lecture announcements the day before a lecture**, both posted at Lecture Announcements online at [http://campus.mst.edu/physics/courses/23/lectures](http://campus.mst.edu/physics/courses/23/lectures).

These lecture announcements are the official source of important information, including assignment of online Expert TA quizzes. Such quizzes must be submitted online by 8:00 am the day of the associated lecture.

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**Course goals**

- Develop understanding of the basic principles of mechanics (force, energy, momentum, torque, waves, thermodynamics), and the analysis of motion (kinematics and dynamics);
- Improve technical skills, and enhance mastery of competencies;
- Nurture effective levels of self-discipline, appropriate motivation, and assured confidence.

**Some observations and aphorisms**

- You have the innate intelligence and technical insight to well in this course – respect yourself enough to use these attributes to your advantage and **empowerment**.
- There is one, and only one, right answer to any physics problem assigned in this course – all other answers are wrong.
- A person who stays on a particular path gets to where he or she is headed – make sure your destination is one you truly desire.

**Phenomena that commonly hinder a student’s success**

- Insufficient development of good study skills in high school because he or she was too intelligent to be stretched by its actual expectations and requirements
- Cursory internal checks of individual understanding, within the context of group studying or reliance on others;
- Over-extension in studies, co-curricular or social life, or procrastination. **READ material BEFORE lectures.**

**Video**: Raiders ...
MAJOR COMPONENTS OF THE COURSE

- **Lectures** (Tuesday & Thursday, 9 a.m., 10 a.m., 1 p.m.)
- **Recitation Sections (RSD)** (Wednesday & Friday)
- **Physics Learning Center (PLC)** (Tuesday & Thursday)

<table>
<thead>
<tr>
<th>Tuesday</th>
<th>Thursday</th>
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<tbody>
<tr>
<td>2:00 - 4:30 p.m.</td>
<td>129-130 Phys</td>
</tr>
<tr>
<td>6:00 - 8:30 p.m.</td>
<td>129-130 Phys</td>
</tr>
</tbody>
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The PLC will begin operation starting the day of the next lecture.

- **Labs** (every other week, starting NEXT WEEK). You need to read [Lab Announcement Made in First Lecture](http://campus.mst.edu/physics/courses/23) at [Laboratory](http://campus.mst.edu/physics/courses/23) link on the course web site.

**CAUTION:** You are expected to read the lab info by **this Monday**.

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**Sources of Course Points**

- Highest 3 of {3 Reg Tests & Final Exam @ 180} = 540 (see handout *Test Info*)
- Basic Math MiniTest = 40 (during Lecture #3)
- End Material MiniTest = 40 (concurrent with Final)
- Reading Quizzes = 50 (online, one dropped)
- Homworks = 80 (in RSD, one dropped)
- Boardwork = 100 (in RSD, one dropped)
- 6 Labs = 150 (lowest one dropped)

**Total Possible** = 1000

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**Absolute Grading Scale (based on 1000 total points)**

- **A** for 90% of Total $\geq 895$ points
- **B** for 80% of Total $\geq 795$ points
- **C** for 70% of Total $\geq 695$ points
- **D** for 60% of Total $\geq 595$ points
- **F** for less than 60% $< 595$ points

At the end of the semester, there are

- No extra points
- No adjustments
- No make-ups

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**Home Work**

- Homework (HW) will be collected unannounced in recitation section several times throughout the semester, then graded.
- For assignments for this course, you **MUST** begin any physics solution with an appropriate diagram.
- All mathematical steps **MUST** follow logically from whatever you have chosen as a starting equation.
- You will read and follow additional Homework and Boardwork procedures next week.
- Do not copy or just follow someone else’s homework. Otherwise, you’ll be “disadvantaged” on the Tests because test questions look VERY similar to Homework, Quizzes, and the worked-out Examples given in lecture or the text.
**BoardWork Procedures**

- During recitation sections, students will be called upon to put up solutions to homework problems onto the chalkboard. You must begin with an appropriate diagram and an allowed starting equation.
- You cannot bring your homework solutions to the board.
- Your recitation section instructor will explain other aspects of Boardwork operations in your first recitation section (tomorrow).

**Some VERY Important Aspects of Course Operation**

- At course end, your lowest score from {three Tests & Final} will be dropped. Your lowest Homework, Quiz, Boardwork, and Lab scores will be dropped. **This policy is not offered to compensate for “low performance” days.**
- Because of these drop policies, there are NO make-ups any assignments in this course.
- If you miss turning in four (4) or more assignments (when all types added together), you may be dropped from the course.
- **If you must miss a recitation section assignment** (homework or boardwork) because of a major university event (e.g., varsity game), see course policy and procedures .../physics/courses/23/handouts/RSDabsenceProcedures.pdf
- If you miss a lecture, always look online for announcements and material: http://campus.mst.edu/physics/courses/23/lectures.

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**Closing Thoughts**

There is nothing wrong with asking for help, assistance, and validation. I **strongly** suggest that you utilize the *Physics Learning Center (PLC)* or individual contact with your recitation instructor.

Additional learning assistance and consultation for this course and others *(including free walk-in tutoring)* is offered by Learning Enhancement Across Disciplines (LEAD) program. Go to http://lead.mst.edu/assist.

We want to bring out the best in you.

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**EXPLANATION OF THE PHYSICS 23 SCHEDULE**

Homework is due at the beginning of the recitation for which it is listed in the *Schedule of Course Assignments* found at http://campus.mst.edu/physics/courses/23/handouts/Schedule.pdf

You “may” (i.e., “will”) benefit from the review of some basic high-school physical-science material in Lecture 00 at http://campus.mst.edu/physics/courses/23/lectures/Lec-00.pdf