PHY 298 - Summer 2019

Introductory Mechanics, Heat, and Sound

Class Meetings: Natural Sciences Building, room NS 128 (this represents a classroom change with respect to the original schedule, which was NS LL30)

M-W-TH-F: 1:00 - 2:15 p.m.

May 13 – July 22, except May 27, July 04-05

38 class meetings.

Instructor: Dr. Sergio B. Mendes, Professor of Physics
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Graduate Teaching Assistant: Soumyananda Goswami, Ph.D. student
Dept. of Physics and Astronomy
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Office Hours by the Instructor: Monday, Wednesday, and Friday: 11:00 a.m. - noon, or by appointment through email. Office location: Shumaker Research Building (SRB), room 240.

Goals of this Course: To introduce basic concepts and methods in kinematics, dynamics, vibrations, waves, fluid motion, and thermodynamics.

Lectures: Lectures will discuss the major and more crucial points described in the textbook. The sections of the textbook covered in each lecture will be available in the Announcement section of the instructor’s website (see address below).

This course will go over a large number of concepts that requires proper and deep understanding, so you will be able to master and apply them in complex scenarios. Careful reading and studying of the textbook is highly required for success in this course.

You should carefully study your textbook till you learn the material. Always bring questions to the instructor (in classroom meetings and/or at office meetings) of any hurdle you're facing to learn the material.

Be advised that simply skimming equations out of your textbook (for instance in an attempt to solve problems in a homework assignment or preparing for an exam) does not provide proper studying and learning of the material. Be informed that such practice has been shown to be highly insufficient to success in this course.

Instructor’s Website:

http://www.physics.louisville.edu/sbmendes/teaching.htm

Access to the instructor’s website is essential for this course. By accessing the instructor’s website (address above) you will find links to this course syllabus, class slides, homework assignments and solutions, quizzes and solutions, midterm exams and solutions, class announcements, and other related information.

Please note that the website for this course is not on the Blackboard portal. Only this Syllabus is being posted on the Blackboard portal. In the rare cases when the server of the instructor’s website is down then please look for the homework assignment in the Blackboard portal.

Evaluation:

- **Mid-Term Exams**: 3 mid-term exams = 3 × 18% = 54%. For the mid-term exam you be allowed to consult during the exam a single (regular size, 8.5” by 11”) double-sided reference paper that you will prepare.
- **Final Exam**: 1 final comprehensive exam = 26%. For the final exam you be allowed to consult during the exam three (regular size, 8.5” by 11”) double-sided reference papers that you will prepare.
- **Homework**: Average of your best (N - 4) homework scores = 10%, N = total number of homework assignments in this course.
• **Quiz**: Average of your best \((M - 6)\) quiz scores = 10\%, \(M\) = total number of quizzes in this course.

**Exam Dates:**

Mid-Term Exams: June 03, July 01, and July 22

Final Comprehensive Exam: July 24

**Grading:**

- \(A^+ = 100\% - 95\%\)
- \(A = 94\% - 89\%\)
- \(A^- = 88\% - 83\%\)
- \(B^+ = 82\% - 77\%\)
- \(B = 76\% - 71\%\)
- \(B^- = 70\% - 65\%\)
- \(C^+ = 64\% - 59\%\)
- \(C = 58\% - 53\%\)
- \(C^- = 52\% - 47\%\)
- \(D^+ = 46\% - 41\%\)
- \(D = 40\% - 35\%\)
- \(D^- = 34\% - 29\%\)
- \(F = 28\% \text{ and below}\)

The instructor reserves the right to lower the grade limit.

**Homework Assignments:**

Homework assignments will be posted at the instructor’s website after every lecture, typically before 4 pm. In case the server of the instructor’s website is down, please then check the Blackboard portal of this course to retrieve the homework assignment.

Each homework assignment will have (typically) 3 problems highly related to the content of the latest lecture(s).

Homework assignments are due at the next lecture. **No homework assignment will be accepted after the due date.**
Please try to turn in your HW as you enter the classroom for the lecture. Folders will be available at the entrance doors to collect your homework assignment.

In case you have to miss a class, you can request a colleague to turn in your homework assignment. However, be informed that missing a class is not a good idea because you will miss the lecture content of the next homework assignment and you most likely will miss a quiz (see below about quizzes).

A small set of the assigned problems from each homework assignment (for instance, 1 out of 3, or 2 out of 3, or 2 out of 4) will be graded (by the GTA) and tabulated towards the average of your homework assignments.

Solutions to the HW assignments will be published at the instructor's website.

**Quizzes:**

Typically, at the end of every lecture there will be a quiz. The content of the quiz will be highly related to the latest homework assignment(s) and the content of the latest lecture(s). Usually, each quiz will have a single problem and I will budget about 5-10 minutes for each quiz. You will not be allowed to consult any material during the quiz. Absolutely, no make-up will be allowed for any missed quiz. If you miss a class for any reason, your score will be zero for that particular quiz.

**General Education:**

This course satisfies part of the Natural Sciences general education requirement. Natural Sciences (7 hours: lecture and lab in a single discipline; an additional 3 hours in a second discipline) are concerned with understanding the physical world through the scientific method. Students who satisfy this requirement will demonstrate that they are able to do all of the following:

1. Relate everyday observations of the world to physical principles;
2. Apply scientific principles to construct explanations of natural phenomena;
3. Communicate an understanding of scientific explanations of natural phenomena.
Title IX/Clery Act Notification

Sexual misconduct (sexual harassment, sexual assault, and sexual/dating/domestic violence) and sex discrimination are violations of University policies. Anyone experiencing sexual misconduct and/or sex discrimination has the right to obtain confidential support from the PEACC Program 852-2663, Counseling Center 852-6585 and Campus Health Services 852-6479.

Reporting your experience or incident to any other University employee (including, but not limited to, professors and instructors) is an official, non-confidential report to the University. To file an official report, please contact the Dean of Student's Office 852-5787 and/or the University of Louisville Police Department 852-6111. For more information regarding your rights as a victim of sexual misconduct, see the Sexual Misconduct Resource Guide: (http://louisville.edu/hr/employeerelations/sexual-misconduct-brochure).