Physics 2610: General Physics I

Course Outline

Description: (From the course catalog) “... kinematics and dynamics of masses in translation and rotation; Newton’s Laws; Gravity, the conservation laws of energy and momentum; simple harmonic motion and an introduction to wave motion and sound.”

General Education Learning Outcomes: This course is a General Education course in the Natural Science Domain and emphasizes General Education goals 2 (acquiring, processing, and presenting quantitative and qualitative information using the most appropriate technologies, including computers), 3 (reasoning critically, drawing sound conclusions, and applying those conclusions to one’s life and society), 6 (understanding the scientific method, forming and testing hypotheses as well as evaluating results), 7 (realizing the evolving relationships among science, technology, and society), and 13 (understanding and appreciating the natural environment and the processes that shape it).

Course-specific goal statement: This course will increase students’ ability to apply the basic ideas of calculus, algebra and trigonometry to solve problems involving kinematics, forces, energy, momentum, gravitation, fluids, and waves. The course will also help the student develop conceptual reasoning skills in the context of these same physical topics. The main vehicle for reinforcing the theoretical development will be the through its application to many examples. In doing this for themselves, students will improve their critical thinking skills and scientific reasoning.

Prerequisites: (From the course catalog) High School physics or PHYS 1501. Also you must have completed or be concurrently enrolled in MATH 1571 (Calculus I).

Facility with basic algebra, trigonometry and other forms of quantitative reasoning (reading and writing graphs, conversions of units, etc.) will be assumed and these skills will be practiced throughout the semester.


Supplemental references available upon request.

Attendance: Although attendance will not be recorded, there will be no makeups for exams, quizzes, and in class work that counts toward your grade, and so it is imperative that you are in class and ready to participate fully. The class will meet Mon, Tues., Wed., Fri. in room 2006 of Ward Beecher Hall at 11:00am

Assignments:

Homework Doing the homework and understanding it completely yourself is a prerequisite for success in this class. Work together, but make sure that you understand it for yourself. We grade for understanding, not for answers! Anyway, many of these homework-like questions will be the basis of quiz and exam problems, and so it is imperative that you work the problems assigned and ones like them in your book!

The homework is an automated individualized question/grading system, available through the course website. As each homework due date passes a full (probably hand-written) answer key for each of the assigned problems will be posted on the website as well. We are going to stick with a weekly homework schedule, with the homework typically being due Sunday evening.

Concept/Reading Quizzes (which tests whether you have been reading and trying to understand the text, but will not generally test your quantitative comprehension) will be given at the beginning of some of the sections.

It is imperative that you do your very best to keep up-to-date on the topic we are studying by reading the assigned sections of the book before the lecture. The concept/reading quizzes are meant to stimulate that activity.

Chapter Quizzes: There will be chapter quizzes, typically a few days after we finish a chapter in lecture. It will be announced before hand and there will not be a quiz for every chapter. Each quiz will take about 30
minutes, and will test **conceptual and analytical** mastery of the chapter material. Answer keys will be made available immediately to you. The quiz problems and the assigned homework are likely to overlap significantly. There will be about 4-5 quizzes over the course of the semester.

There will be no make up quizzes. There will be no exceptions to this rule.

**Midterms:** There will be three midterms; Each of these midterms will be a full class period (50 minutes) long. They are all closed book, though you will be allowed one 8'-by-11' inch “cheat sheet” (both sides) that you will sign and hand in with you exam. The midterm dates are

- Friday, Sept. 28 (on chapters 1 through 4),
- Friday, Oct. 26 (emphasizing chapters 5 through 10), and
- Wednesday, Nov. 21 (emphasizing chapters 11-15).

There will be no make up exams. If you miss one for a valid excuse (which must be agreed upon with the professor before the exam) the average of your other two exams will count as the missed exam.

**Final Exam:** The comprehensive final exam will cover chapters 1 through 16. It will be a two hour exam on Monday Dec. 10, 10:30am.

**Grading policy:** Each midterm is worth 100 points. The quizzes will be averaged to a 100 point score (thus they will be worth approximately 25 points each), and the concept/reading quizzes will account for about 50 points. The homework will also be averaged into a 300 point score. The final exam will count for 250, leading to a total of 1000 points.

The resulting grading scale will be

- 850+   A
- 750-850 B
- 600-750 C
- 500-600 D
- 500-   F

**Course Web Site:** go to [http://mjcrescimanno.people.ysu.edu/](http://mjcrescimanno.people.ysu.edu/) and pick the “PHYS 2610” link there.

What is on the web site? Everything...your homework, answer keys to lecture notes to practice problems. Over the years of teaching this course students have generally found the web site useful.

**Contact Information:** Mike Crescimanno
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e-mail: dcphtn@gmail.com ... please do not use my YSU e-mail as I find it very clunky and check it only about once a week.  
Office Hours: Mondays 12-1, Tuesdays 8-9am and 10-11pm, Wednesdays 9-10am  
but any day also by appointment!

**Students with Disabilities:** In accordance with University procedure, if you have a documented disability and require accommodations to obtain equal access in this course; please contact me privately to discuss your specific needs. You must be registered with the Disability Services Office located in Room 2082 in Kilcawley Center and provide a letter of accommodations to verify your eligibility. You can reach the Disability Services Office at 330-941-1372.

**Class Cancellation:** If this class is being cancelled for any one day due to instructor illness, or other reasons, an e-mail will be sent to the students YSU e-mail account as soon as possible, and a cancelled class notice will be put on the classroom door. University-wide class cancellation is a decision made by the Presidents Office, and officially announced via the YSU homepage and on WYSU (88.5 FM) radio. Students may also register at the YSU Portal to receive a text message about University-Wide closures via the Emergency Alert Notification System.

**Incomplete Grade Policy:** An incomplete grade of I may be given to a student who has been doing satisfactory work in a course, but, for reasons beyond the control of the student and deemed justifiable by the instructor,
has not completed all requirements for a course when grades were submitted. A letter grade MAY NOT be changed to an I (Incomplete) after the term has ended and grades have been recorded. For Fall Term courses, the final date to complete an I will be March 1 of the following term; for Spring Term courses, September 1; for Summer Term courses, October 1. These dates can only be extended with the approval of the instructor and the Dean of the College where the course is taught. Forms for extension of the deadline may be obtained in the Physics & Astronomy office and after obtaining the proper signatures, this form must be to the University Records office 24 hours before the original deadline (i.e. for Fall Term courses, March 1 of the following term).

Center for Student Progress (CSP): The Marion G. Resch Center for Student Progress is a resource on Campus established to help students successfully complete their University experience. Please phone 330-941-3538 or visit the Center for assistance in tutoring or for individualized assistance with social and academic success. The main Center is located in Kilcawley West below the bookstore.

Academic Dishonesty Policy: As outlined in The Student Code of Conduct, all forms of academic dishonesty are prohibited at Youngstown State. This includes plagiarism, the unauthorized use of tools or notes in taking tests or completing assignments, fabrication of data or information used for an assignment, working with others without permission from the instructor, and more. A student who is believed to have violated the academic integrity policy will meet with the instructor to discuss the allegations. The student may accept responsibility for the violation and any sanctions selected by the instructor, or they have the right to ask for a hearing before a hearing panel. The full Academic Integrity policy can be found in Article III. 1. of The Student Code of Conduct, while further information on University procedures for alleged academic integrity violations can be found in Article V.

Nondiscrimination Statement: Youngstown State University does not discriminate on the basis of race, color, national origin, sex, sexual orientation, gender identity and/or expression, disability, age, religion or veteran/military status in its programs or activities. Please visit www.ysu.edu/ada-accessibility for contact information for persons designated to handle questions about this policy.

Last day to Drop/Add is August 29, 2018.
Last day to withdraw with a 100% refund is September 4, 2018.
Last day to withdraw without a refund is October 26, 2018.