Extended Analytical Physics 1A
01:750:115
Fall 2020

Instructor: Professor Geraldine Cochran

Summary: An introductory level course in physics, primarily classical mechanics, aimed at students majoring in engineering or physics. This course is intended for students who have placed into pre-calculus. This is the first part of two semester sequence (with 01:750:116), which serves as a pre-requisite for 01:750:227. The sequence 01:750:115-116 is equivalent to 01:750:123-124.

Co-requisite: Pre-calculus

Meeting times: Two 55 minute lectures per week.
Lecture: M-Th 3 (12:15-1:10 pm)
Recitations: Two 80 minute recitations per week, T-F.

Text:

- *College Physics: Explore and Apply, 2e by Etkina, Planinsic, and Van Heuvelen.* ***You do not need to buy the entire textbook. You can purchase the e-text combined with Mastering Physics access.*** **(algebra-based textbook)**
- *College Physics by OpenStax, available for free online at: https://openstax.org/details/college-physics* ***(This is a standard textbook and it is free).***
- University Physics with Modern Physics: 14th edition: by Young and Freedman **(calculus-based textbook)**

LMS: Canvas

Provisional Plans for Remote Instruction:
Lectures will be held synchronously and recorded using Big Blue Button. Office hours will be held synchronously at scheduled times (3 hours/week), with options for one-on-one office hours for students who cannot meet during normal hours. Recitations will be held synchronously through BigBlue Button on Canvas; students will have the option to join any of 4 recitation hours or to complete recitation work on their own within a 24-hour window. Homework will be administered through Mastering Physics, but accessed directly from Canvas. Homework assignments will have due dates, but late penalties will not apply. Exams will be administered via Canvas Quizzes. Exams will be a mixture of question types: numerical, multiple-choice, matching short essay, and fill-in-the blank. No monitoring system will be used. Exams will be timed, but students will have a 24-hour window to complete midterm exams and a 5-day window to complete the final exam. Access to the internet is required.

Provisional Grading Plans:
Midterm Exams (2): 15% each
Online Homework: 15%
Recitations/Workshops: 15%
Design Practicals: 10%
Final Exam: 30%

Schedule (provisional):

Week:	Topic
1	Introduction to Measurement
2	Physical Quantities
3	One dimensional motion
4	One dimensional motion
5	One dimensional motion
6	Exam and practical
7	Newtonian Mechanics
8	Newtonian Mechanics
9	Applying Newton's Laws
10	Exam and practical
11	Impulse and Linear momentum
12	Work and Energy
13	Practical
14	Review

Academic Integrity:

Students are expected to maintain the highest level of academic integrity. You should be familiar with the university policy on academic integrity: http://academicintegrity.rutgers.edu/academic-integrity-policy/ Violations will be reported and enforced according to this policy.

Use of external sources to obtain solutions to homework assignments or exams is cheating and is a violation of the University Academic Integrity policy. Cheating in the course may result in penalties ranging from a zero on an assignment to an F for the course to expulsion from the University. Posting of homework assignments, exams, recorded lectures, or other lecture materials to external sites without the permission of the instructor is a violation of copyright and constitutes a facilitation of dishonesty, which may result in the same penalties as explicit cheating.

Not only does the use of such sites violate the University's policy on Academic Integrity, using such sites interferes with your achievement of the learning you are paying tuition for. Assignments, quizzes, and exams are given not simply to assign grades, but to promote the active learning that occurs through completing assignments on your own. Getting the right answer is much less important than learning how to get the right answer. This learning is critical to your success in subsequent courses and your careers.

Student wellness Services

Student Counseling, ADAP & Psychiatric Services (CAPS) wellness for non-emergency psychological health issues services (848) 932-7884, 17 Senior Street, New Brunswick, NJ 08901 http://health.rutgers.edu/medical-counseling-services/counseling/

Violence Prevention & Victim Assistance (VPVA), (848) 932-1181, 3 Bartlett Street, New Brunswick, NJ 08901, http://www.vpva.rutgers.edu/

Office of Disability Services (848) 445-6800, Lucy Stone Hall, Suite A145, Livingston, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854, https://ods.rutgers.edu/

Scarlet Listeners for confidential peer counseling and referral hotline, (732) 247-5555, http://www.scarletlisteners.com