

alg Physics I-1230 Syllabus Fall 2024

Clifton Murray (Dr., Mr., Professor)—UNM-Valencia

Prerequisites: Completion of Math 1240 (PreCalc) or Math1250 (Trig and Precalc) or Math 1430 (Applications of Calc I) or Math 1512 (Calc I) with a C or higher, or Accuplacer Math score 284-300, or Math ACT 28+ , or Math SAT 640-699.

Class meets: In Person Tuesdays & Thursdays 5:00p-6:15 p, UNM-Valencia Arts & Sciences Bldg Rm A126

Instructor's Help Hours: Remote wcmurray@unm.edu Wednesdays 1:00-4:00p, In Person Thursdays 11:45a-12:15p, 1:15p-2:45p. Office phone 505-925-8727

Credit Hours: 3 credit hours. It is recommended you plan to spend at least 6 hours per week for homework and study.

Course Learning Objectives:

By semester's end, you should be able to demonstrate that you understand and can solve quantitative problems involving:

- units of measure, and how to convert between units.
- constant-speed and accelerated motion in one and two dimensions (kinematics), including free-fall situations
- forces, esp. net force, as the cause of changes in motion (dynamics)
- the first, second, and third laws of motion
- the law of gravitation
- mechanical energy
- linear momentum
- circular motion, especially centripetal acceleration and force
- rotational motion, including torque, rotational kinetic energy, and angular momentum;
- vibrational and wave motion;
- sound;
- fluid pressure and fluid flow;
- thermal energy, heat and thermodynamics.

Useful things:

Textbook: *College Physics 8th ed. Vol One—Mechanics, Thermodynamics, Waves* by Wilson, Buffa, & Lou.

Calculator: Scientific type. Needed Immediately. (If it will do powers-of-ten numbers and has the basic trig functions sin, cos, and tan, it's scientific.). Basic scientific calculators are not very expensive—examples include the TI-30 series and Casio fx series--basic will do everything you need in Physics I & II.

Accommodations: Should you have a disability requiring special accommodation, please bring the instructor appropriate documentation from Accessibility Services. You can do an online search for UNM-Valencia Accessibility Services, and/or email Sarah Clawson at sjclawson@unm.edu, and/or call 505-925-8540.

Academic Dishonesty: From the UNM-Valencia Catalog: "Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, including dismissal, against any student who is found responsible for academic dishonesty. Any student who has been judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course." "Academic dishonesty" includes, but is not limited to, "dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others..." See <http://pathfinders.unm.edu/campus-policies/academic-dishonesty.html>

Disruptive Behavior: Any behavior which interferes with other students' education. Examples include loud talking/laughing which require repeated warnings from the instructor, making fun of other students' answers in class, making derisive or sarcastic comments toward the instructor during class, etc. Continued disruptive or unruly behavior will result in the student's being dropped from the course.

Title IX: The University of New Mexico and its faculty are committed to supporting our students and providing an environment that is free of bias, discrimination, and harassment. The University's programs and activities, including the classroom, should always provide a space of mutual respect, kindness, and support without fear of harassment, violence, or discrimination. Discrimination on the basis of sex includes discrimination on the basis of assigned sex at birth, sex characteristics, pregnancy and pregnancy related conditions, sexual orientation and gender identity. If you have encountered any form of discrimination on the basis of sex, including sexual harassment, sexual assault, stalking, domestic or dating violence, we encourage you to report this to the University. You can access the confidential resources available on campus at the LoboRESPECT Advocacy Center (<https://loborespect.unm.edu>), the Women's Resource Center (<https://women.unm.edu>), and the LGBTQ Resource Center (<https://lgbtqrc.unm.edu>). If you speak with an instructor (including a TA or a GA) regarding an incident connected to discrimination on the basis of sex, they must notify UNM's Title IX Coordinator that you shared an experience relating to Title IX, even if you ask the instructor not to disclose it. The Title IX Coordinator is available to assist you in understanding your options and in connecting you with all possible resources on and off campus. For more information on the campus policy regarding sexual misconduct and reporting, please see <https://policy.unm.edu/university-policies/2000/2740.html> and CEEO's website.

If you are pregnant or experiencing a pregnancy-related condition, you may contact UNM's Office of Compliance, Ethics, and Equal Opportunity at ceo@unm.edu. The CEEO staff will provide you with access to available resources and supportive measures and assist you in understanding your rights.

Attendance will be taken and will be a factor considered at semester's end if you are borderline between two grades. After five accumulated absences, a student may be dropped from the course altogether. (If you have an emergency or work conflict, contact the professor about options.)

Missed Test: Default policy is No Makeup Tests. For genuine emergencies, the professor may, at his discretion, make exceptions. No 2nd makeups will be given. (For unavoidable and pre-planned absences, consult with the Instructor; we may be able to arrange an *early* test without penalty.)

Homework: Chapter homeworks are due at the start of class on Review days, done in your own handwriting, **grouped (stapled) BY CHAPTER**. Do not put problems from two different chapters on the same page. Even though some chapters problems may be split across two class days on the Calendar accompanying this document,

do Not split the chapter at turn-in. Clearly separate problems, and clearly demarcate them—with an extra **BIG** main prob # (e.g. **7, 13, 21** a), b), c) etc. (do NOT make a,b,c extra big). A **Sketch** is expected (required) on all homework problems having to do with a physical or geometric situation—and nearly all problems are that way.

Late homework; minus 50% for first class day late; Zero % (not accepted) after that.

Grading :

Accomplishment	Maximum possible points
5 tests, worth 100 points each	500
Homework: Scaled to max possible of	100
Drop lowest one score of tests or homework	-100
Final Exam* (comprehensive; score not dropped):	<u>150</u>
Maximum possible course total:	<u>650</u>

****Note: Minimum Final Exam Score to pass course with grade > D: 70%.***

x : end-of-semester score

$634 \leq x \leq 650$ A+ (unless a test is missed or homework score is less than 70%).

$601 \leq x < 634$ A (unless a test is missed).

$585 \leq x < 601$ A-

$569 \leq x < 585$ B+

$536 \leq x < 569$ B

$520 \leq x < 536$ B-

$504 \leq x < 520$ C+

$471 \leq x < 504$ C

$455 \leq x < 471$ C- *Note Below*

$390 \leq x < 455$ D

$x < 390$ F

*Depending on your program of study, a C- may not meet the prerequisite for a future course or degree; for example, a C- in Physics I/1230 does not qualify you to enroll in Physics II/1240. It is your responsibility to know what minimum grade you need for your individual academic pursuit.

Tutoring may be available in the Learning Commons (in Library bldg.), by students who have taken and done well in this course. tutor@unm.edu, or Shalaine Castillo, sbuck07@unm.edu.