

## alg-based Physics I (Phys1230) Syllabus

Clifton Murray—UNM-Valencia

Fall 2020

*Prerequisites:* Completion of Math 1250 (Trigonometry and Precalculus) or Math 1430 (Applications of Calc I) with a C or higher.

*Class meets:* Online Tuesday & Thursday 3:00-4:15 p, via Zoom; a link will be sent just before each class.

*Instructor's Help Hours:* Wednesdays 10:30a-12:30p, Thursdays 11:45a-12:15p, 1:15p-2:45p, 4:15p-6:15p, by Zoom or by email [wcmurray@unm.edu](mailto:wcmurray@unm.edu)

*Useful things:*

**Computer with Internet Access.**

**Textbook:** *College Physics 7th ed.*, by Wilson, Buffa, & Lou, mainly for homework, occasionally referred to in class. It's good for Physics II (algebra-based) also, at UNM-Valencia. Available used.

**Calculator: Scientific type. Needed Very Soon.** Make sure it will do powers-of-ten numbers, and also that it has the basic trig functions sin, cos, and tan—those features make it scientific. Basic scientific calculators are not very expensive, and will do everything you need in Physics I & II. (Graphing calculators such as the TI-84 are scientific also, and will work, but are more expensive and will have more features than needed for Phyc1230 and 1240.)

*Disabilities:* If you have a disability that will interfere with online learning, please contact UNM-Valencia Student Services, 505-925-8560.

*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 class.

Any *Sexual Misconduct* or Gender Discrimination brought to the instructor's attention must be reported by the instructor to UNM's Office of Equal Opportunity and Title IX Coordinator. For information regarding what comprises sexual misconduct, see <http://policy.unm.edu/university-policies/2000/2740.html>

*"Netiquette"* Respect other's opinions which may differ from your own. Don't yell at anyone during meetings, and don't send messages in all caps (suggests yelling). When feeling angry, it's best to think twice before speaking or sending angry message.

Please mute your microphone except when actively discussing a topic with the class or professor, and especially if there is background noise—including even writing with a pencil—at your location. Background sounds can be very distracting to others in an online meeting.

*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 Instructor about options.)

*Missed Test:* Default policy is No Makeup Tests. For genuine emergencies, the instructor may, at his discretion, make exceptions. No 2<sup>nd</sup> makeups will be given. (For unavoidable and pre-planned absences, we may be able to arrange an *early* test without penalty.) You will need to sign an Honor Statement regarding tests.

*Homework:* Chapter homeworks are due at the start of class on Review days, done in your own handwriting, photographed or scanned, grouped by Complete Chapter. Do not put problems from two different chapters on the same page. Even though some chapters problems are split across two days on the Calendar accompanying this document, do not split the problems 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).

*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	200
Drop lowest one score of tests:	-100
Final Exam* (comprehensive; score not dropped):	<u>150</u>
Maximum possible grand total:	750

***\*Note: Minimum Final Exam Score to pass course = 70%.***

x : end-of-semester score

$731 \leq x \leq 750$  A+ (unless a test is missed or homework score is less than 70%).

$694 \leq x < 731$  A (unless a test is missed).

$675 \leq x < 694$  A-

$656 \leq x < 675$  B+

$618 \leq x < 656$  B

$600 \leq x < 618$  B-

$581 \leq x < 600$  C+

$544 \leq x < 581$  C

$525 \leq x < 544$  C-\*Note Below\*

$450 \leq x < 525$  D

$x < 450$  F

\*Depending on your program of study and courses, a C- may Not meet the prerequisite for a future course or degree. It is your responsibility to know what minimum grade you need for your individual academic pursuit.

Something Else which might be Helpful: Tutoring is available for free, online, at the Tutoring Center. If interested, check out UNM Valencia Campus Tutoring Services:

<http://valencia.unm.edu/campus/resources/the-learning-center/learning-center-html>.

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*Course Learning Objectives:*

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

- units of mechanical measure
- 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.