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| PH 201-8  West Science 2607 | Introductory College Physics Lab 8 | Winter 2025 |

Instructor: Thomas Latza

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Office: 2507

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| Office Hour(s): | TBD or by appointment |
| Course Objective: | To demonstrate by example applications of topics covered in the lecture portion of Introductory College Physics. This will involve the use of proper laboratory procedures for setting up and measuring the results of experimental apparatus and gaining experience comparing observations to expectations before preparing those findings for another person/persons to consume1. |

1. Attendance
   1. Being that the goals of this course include tactile interaction with lab equipment that will have been set up prior to your arrival, weekly attendance is mandatory and attending other lab sessions ranges from inadvisable to untenable due to availability of equipment. If you have any NMU related excused absence please email both me (tlatza@nmu.edu) and the instructor of another lab session that you will be able to attend in order to facilitate this accommodation as early as you know of the conflict.
   2. If you have been exposed to Covid-19 or are experiencing symptoms of a severe respiratory infection, email your lab instructor as soon as you can and do not attend class.
2. Lab session layout
   1. Each Lab session will begin with a quiz on last week’s lesson
   2. After the weekly quiz there will be a period of introduction to this week’s lab procedure and instruction on relevant data gathering and analysis practices. These portions together will generally occupy up to one third of the lab period with the goal of leaving about 2 hours to perform your lab work.
3. Materials
   1. **Lab notebook** - This will be where you take notes on your experiments and any lecture that takes place in the lab session for both doing your homework and studying for next week’s quiz
   2. **Computer** – Your NMU laptop is a necessary piece of equipment for performing data gathering and analysis for a number of the labs. You will be required to download information and programs from the class website throughout the semester and having it installed prior to the beginning of class is a good habit to be in.
   3. **Writing utensils** – Taking notes by hand is advantageous both in lecture and lab settings as the lack of constraints offered by avoiding word processors and similar programs cannot be understated, especially where equations/graphs are concerned.

1 The list of people who may be shown your work for this class includes but is not limited to the session instructor, the Lecture session instructor (Darren Smith), other instructor in the NMU physics department (for purposes of ensuring grades are marked in a manner that is fair and consistent with NMU policies) and individuals to whom documents must be provided in the event of an instance of academic dishonesty. Individuals who will not be shown your work includes your classmates, other students at NMU and, to the extent possible, all other persons not listed in the preceding clause.

* 1. **Physical calculator** – the use of phone calculators will not be allowed during quizzes. Additionally having a scientific calculator (more than a 4-function but not a graphing calculator) that you are familiar with using prior needing it for a quiz will be useful.
  2. **Digital resources** – The class website mentioned above can be found at <https://physics.nmu.edu/~dsmith/>. The username and password to access the site are ‘201’ and ‘Newton’ respectively
     1. Lab worksheets can be found in the table near the bottom of the page integrated into the weekly lab schedule.
     2. Pasco Capstone software installer can be found linked on this page and will be required by week 5
        1. Setup files will also need to be downloaded for labs that need Capstone
     3. Printer drivers for this classroom can be found on this page as well.
        1. Please limit printing on these printers to class related documents.
        2. You will not need to print the labs ahead of time, but you can if you choose to do so.

1. Class/homework and Grading expectations
   1. All students has to turn in their own copy of each assignment.
   2. Do not do work on the backs of pages. This has lead to mistakes and lost points in the past
   3. I will attempt to return all homework assignments and quizzes the session after they are turned in.
      1. All work will be due at the beginning of the class session after it is assigned. If you have an excused absence or illness, please attempt to provide evidence that the assignment is done by that time and turn it in at the earliest convenience.
   4. In the event of a delay in grading any mistakes or errors that are repeated on subsequent assignments will not be penalized until a given student is in possession of a graded assignment where the error has been noted.
   5. Lab quizzes will count as 1/3 of your total lab grade (about 7% of your total class grade) and lab handouts will account for the remaining 2/3 (about 13% of your total class grade). Failing the lab portion outright will result in failure of the class regardless of lecture grade.
2. Disability accommodations
   1. If you have a need for disability-related accommodations or services, please inform the Coordinators of Disability Services in the Dean of Students Office at 2001 C. B. Hedgcock Building (906-227-1737 or disability@nmu.edu ). Reasonable and effective accommodations and services will be provided to students if requests are made in a timely manner, with appropriate documentation, in accordance with federal, state, and university guidelines.
3. Non-discrimination
   1. Northern Michigan University does not unlawfully discriminate on the basis of race, color, religion, sex, national origin, age height, weight, marital status, familial status, handicap/disability, sexual orientation or veteran status in employment or the provision of services, and provides, upon request, reasonable accommodation including auxiliary aids and services necessary to afford individuals with disabilities an equal opportunity to participate in all programs and activities. Persons having civil rights inquiries may contact the Affirmative Action Office at 204 Cohodas (227-2420).
4. Academic honesty
   1. You are required to do your own work on each lab. That means inputting all data on your own computer or writing out data columns and graphs as needed by hand. Any copying or electronic transferring of another person’s work including spreadsheets or graphs will be considered plagiarism