Mayville State University - PHYS 252L: University Physics II Lab - Spring 2020 - 1 credit

Instructor:	Dr. Thomas Gonnella ← please address me as "Dr. Gonnella"
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Hours of Availability:	As needed, e-mail account is checked quite frequently.
LMS for this Course:	Blackboard
Instruction Mode:	Online – asynchronous
Time Zone:	All times indicated throughout this syllabus reflect Central Time (CT).

Required Text: None, the instructional materials are available in Blackboard.

Required Materials: For this course you will need the Physics I online lab kit, a computer that is capable of running the Pasco Capstone software package, and a few miscellaneous items. Physics I online lab kits available from the MSU Bookstore and are eligible for the MSU buyback program. Keep all packing materials and return in the original box. Repack each package into its bag. A return address label is included. DO NOT THROW THE RETURN LABEL. If you do, you will be responsible for the additional shipping expense. If items are damaged or not returned, the replacement cost will be deducted from your buyback amount. Beginning buyback amount on complete kit postmarked before 04/24/19 will be $340.00. The buyback is applied to your student account. You will receive a check; please allow 10 business days for processing of your buyback. If you find you are unable to use the computer program for this course and withdraw from the lab: your return must be postmarked by 01/24/20 in order to receive a 100% refund of the kit.

Purpose of the Course: This course is designed to provide students with a skill set appropriate to working in a Physics lab.

Course Description: This course consists of lab activities that are applicable to corresponding PHYS 252 lecture content. The students will mathematically model data and examine complex mathematical functions using spreadsheet software, and collect data using interfaced probeware. Students should already have a strong understanding of Microsoft Excel before enrolling in this course.

Course Objective: The Physics 252L lab is designed to help the students grasp the fundamentals of physics from a hands-on approach enhanced with technology. The lab content encompasses topics involving heat, thermodynamics, simple harmonic motion, waves, sound, electricity, magnetism, light, optics, and an introduction to modern physics.

In the section below the term "teacher" pertains to the student taking this course that will soon become a student teacher.

	INTASC Standards
1	The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he/she teaches.
6	The teacher uses knowledge of effective verbal and nonverbal communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.

Learning Experiences: The students will be provided instruction pre-lab lectures or written materials to introduce the laboratory experiments. Student will then conduct the laboratory experiments, perform the appropriate analysis, answer questions, and submit the require materials back to the instructor.

Program Student Learning Outcomes: The Academic Program Student Learning Outcomes document can be found under the Student Resources tab under the MyMSU tab or by clicking here. It contains all learning outcomes pertaining to Essential Studies courses and all majors and minors. The document has an index so you can quickly find the degree you are pursuing.

Course Improvements Based on Most Recent Assessment Findings: Nearly all course will be assessed in the future (based on the 2019-2025 assessment curriculum map) and the findings will be reported in this syllabus. This course is not one of them.

Method of Evaluation:	Labs Reports and Activities	100%
Grading:	A > 90% B > 80% C > 70% D > 60%	

It is the responsibility of the instructor to post the scores on corrected lab materials within one week of submission due date. It is the responsibility of the students to submit work in a timely manner and continuously monitor their academic performance throughout the term.

Expectations/Protocols

Pre-requisites: Students are expected to have a fundamental understanding of Microsoft Excel prior to enrolling in this course. Students are expected to have successfully completed Calculus I (Math 165) prior to enrolling in this course. If these topics are/were challenging to the student then they should utilize a tutor outside of this class as needed.

Enrollment Verification: The U.S. Department of Education requires instructors of online courses to provide an activity which will validate student enrollment in this course. The only way to verify that a student has been in this course is if he or she takes an *action* in Blackboard, such as completing an assignment or a taking a quiz. Logging into Blackboard is **NOT** considered attendance. Please complete these activities within the first five days of the course. If it is not complete your enrollment in this course will be at risk. Students may be asked to complete this quiz again later in the course.

Communication: The instructor's preferred method of contact is e-mail and, although it is typically much sooner, students should expect a response to their e-mails at least within 48 hours. Despite e-mail responses are usually sent to whichever account the students initially e-mails the instructor from, students are still accountable for all academic communications sent to their Mayville State University e-mail address. It is the responsibility of each student to check and maintain their own their e-mail accounts throughout the day so the information sent by the instructor can be received in a timely manner.

Completed lab work: Students will submit the required documentation outlined by the instructor for each experiment via a Blackboard drop box in the course shell. All labs need to be completed and submitted to the instructor before the deadlines listed at the end of this document. Labs submitted will be evaluated on the quality of the data collected, analysis performed, and answers provided. These factors will not necessarily be weighted equally, for example, if a useless data is submitted then the quality of the analysis and the answers provided are not considered valuable. Please feel free to e-mail the instructor your data set ahead of time if you have any questions. Formal lab reports are weighted

twice as much as other lab activities because 50% of the scores are focused on the data/data analysis and the other 50% of the scores are based on the written report.

Late work: If the deadlines for submitting work as passed then the work needs to be submitted within 72 hours of the deadline in order to receive partial credit. Within this 72-hour window, the later the work is submitted the less partial credit will be assigned.

Proctor Notification: There is no need for a proctor in this online course.

Late Arrivals: The deadlines for students adding this course after the first day of instruction will remain the same as students that were enrolled before or on the first day of class.

Academic Dishonesty: Academic dishonesty in this lab course will not be tolerated. Academic dishonesty in this course consist of fabrication of data, allowing someone else to copy your work, and submitting someone else's data or materials as your own. It is your responsibility to protect your work from being copied by others. There is no group work in this course so all data and work submit should be original and your own.

English Proficiency and other Academic Concerns: The State Board of Higher Education requires that all faculty members and teaching assistants in the NDUS have appropriate communications skills, including the ability to speak English clearly and with good pronunciation. Students who experience problems have the following obligation:

1. Discuss the situation with the instructor first to see if a resolution can be reached.
2. If the problem is still not resolved with the instructor, contact the instructor's Division Chair for assistance.
3. If the situation is still not resolved, the matter should be brought to the attention of the Vice President for Academic Affairs.
4. In the unlikely event that the situation has not been resolved through this procedure, students may contact the President of the University for final resolution.

Students with Disabilities: As required by Section 504 of the Rehabilitation Act and the ADA, appropriate and reasonable accommodations will be made for all students with documented disabilities (LD, Orthopedic, Hearing, Visual, Speech, Psychological, ADD/ADHD, Health-Related, & Other) that request those accommodations to ensure their full access to the academic opportunities of Mayville State University. If you need accommodations in this course because of a disability, need special arrangements in case the building must be evacuated, or if you have emergency medical information to share, please inform your instructor as soon as possible. The information will remain confidential. Accommodations and alternative format print materials (large print, audio, disk, or Braille) are available through Katie Richards, Director of Student Disability Support Services – katie.richards.2@mayvillestate.edu.

Emergency Notification: The State Board of Higher Education requires that all faculty and teaching assistants in the NDUS adhere to SBHE Policy 1902 regarding the emergency notification system. Given the distance involved, it is not necessary for online students to register their cell phones with "NotiFind" to receive emergency notifications.

Continuity of Academic Instruction for a Pandemic or Emergency: In the event of a major campus emergency resulting in temporary suspension of classes or early ending to the semester, the course requirements, deadlines, and grading percentages on the official syllabus are subject to change. The instructor will notify the students of such changes by email or Blackboard.

Family Educational Rights and Privacy Act of 1974 (FERPA): In compliance with the Family Educational Rights and Privacy Act of 1974, Mayville State University has information available regarding student and graduation records it maintains, see http://mayvillestate.smartcatalogiq.com/2018-2020/2018-2020-Academic-Catalog/Student-Services/Family-Education-Rights-and-Privacy-Act-of-1974

Starfish: Starfish is Mayville State's Early Warning System that the faculty and staff use to report feedback on your academic performance or lack of action on required course activities. If you receive a Starfish notification (which will be sent to your @mayvillestate.edu), please read and respond to it immediately because it will contain important information for you.

A more generic version of these last seven policies can be found in the Important Student Information document under the Student Resources tab under the MyMSU tab or by clicking here.

Course Schedule for PHYS 252L - University Physics II Lab Spring Semester 2020

Exp#	Experiment Topic(s)	Exp Type	Due Date
1	Finding Empirical Solutions Using Microsoft Excel	X	01/25/20
2	Thermal Conductivity	D	02/01/20
4	Thermal Efficiency	D	02/08/20
5	Simple Harmonic Motion *	P	02/15/20
6	Standing Waves on a String	D	02/22/20
7	Sound Waves in Air *	P	02/29/20
8	Electric Fields	S	03/07/20
9	DC Electronics: Lights in Circuits and Ohm's Law	P	03/14/20
10	DC Electronics: Currents in Circuits	P	03/21/20
11	DC Electronics: Kirchhoff's Rules *	P	03/28/20
12	DC Electronics: RC Circuits *	P	04/04/20
13	DC Power Supply	D	04/11/20
14	Optics	P	04/18/20
15	Single-Slit and Double Slit Light Diffraction *	P	04//25/20
3	Calculation of Blackbody Emission Spectra	X	05/02/20

* = Require formal lab reports
X = Microsoft Excel based
P = Probeware based
S = Simulation based
D = Initial data is provided

Red text = Experiments are out of sequential order

Schedule

Monday, January 13, 2020 – The first day of class, the course shell opens in Blackboard

Wednesday, January 23, 2020 – The deadline for the lab kit to be sent back for 100% refund if the Capstone software will not work with your computer

Friday, April 09, 2020 – The last day to withdraw from this course

Thursday, April 23, 2020 – The deadline to ship kit back for full buyback amount