



**MIDWESTERN
STATE UNIVERSITY**

A Member of the Texas Tech University System

Course Syllabus: Mechanics, Wave Motion & Heat
McCoy College of Science, Mathematics and Engineering
PHYS 1624 Section 11324-101
Fall 2025

Contact Information

Instructor: Dr. Muatez Mohammed

Office: 219 D, McCoy Engineering Hall

Office phone: (940) 397-4182

Office Hours: Available by Zoom or In Office, By Appointment Only.

During the week M, W (1-2) pm and T, R (1-2:30) pm. Email
for appointment.

Class and Time: 205 McCoy Engineering Hall at (9:30- 10:50) am on T, R

Lab Timings: Sec. 11329- 11A, M, (2:00– 3:50) pm, McCoy Hall Room 203

Sec. 11335- 11B, T, (3:00– 4:50) pm, McCoy Hall Room 203

E-mail: muatez.mohammed@msutexas.edu

Course Description

An introduction to the principles of mechanics, oscillations, wave motion, and thermodynamics. Topics include motion, forces, energy, momentum, rotational dynamics, sound, temperature, heat transfer, and the laws of thermodynamics. Laboratory experiments reinforce lecture topics and emphasize problem-solving.

Textbook & Instructional Materials

Physics for Scientists and Engineers-A Scientific Approach, 4th edition, Randall D. Knight. (Required: **You need to purchase the access code.**)

Study Hours and Tutoring Assistance

If you need physics tutoring, please contact the library. They have a list of physics tutors. When assistance is needed for this course, please do not hesitate to reach out and contact the library for tutoring in physics courses.

Student Handbook

Refer to: [Student Handbook](#)

Academic Misconduct Policy & Procedures

Academic Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of work not the individual's to whom credit is given). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct.

[Office of Student Conduct](#)

Grading

Assignments	Points
Pre-lecture homework	10
Post-lecture homework	10
Labs	20
Exams	60
Total Points	100

Total points for final grade.

Grade	Points
A	89 to 100
B	79 to 88
C	69 to 78
D	59 to 68
F	Less than 59

Homework

Pre- and Post-Chapter Homework:

This is done before and after each chapter and has problem solving. Through Mastering, access code needed.

Lecture/Study Homework:

This will have problem solving and be available after each lecture on D2L. This is for study use only, not for a grade. **It will not be graded but the material will be used on the exams. Please do not ask for the answers, once I provide the answers, the question will not be used on the exam.**

Labs

Labs will start the week of September 8. Everything will be provided to you in the lab, McCoy room 203, by your TA. Also, I will keep you updated via email. This is an important part of the course. The experiments introduce you to the world of experimental Physics. **You cannot miss more than two labs. If you miss the 3rd lab your grade will drop drastically by a letter grade and continue to drop a letter grade for every lab missed afterwards.**

Unless there has been an unforeseen circumstance like a medical emergency etc., have a medical or other valid excuse. Notify me prior to missing or no later than 24 hours after. Always keep me informed via email when missing labs and assignments etc. I will drop the lowest lab.

Questions

I will send solved questions after each chapter to use for study material on the exam.

Exams

There will be 5 exams from the chapters, in this semester. They are constructed of multiple choice, true/false, and problem solving. The tests will contribute 60% of the final grade. There is no comprehensive final.

Final Exam

I will drop the lowest exam grade, but you must take the final exam. The final exam must be at least 45/60 to be able to drop the lowest exam grade, but not the final exam. You must take the final exam. If you do not take the final exam, you will receive a 0/60 and add it with the other exams. I will not drop the lowest exam grade. This will greatly affect your final grade unless you have a valid excuse.

Extra Credit

There may be opportunities for extra credit during the semester, I will let you know if and when they become available. This is typically shared during class time.

Important Note

- **I do not follow the grade on D2L, because I will post the grade after each exam to let you know where you are in this class.** If you have any questions, please feel free to ask me about the details of your grade.
- Make sure to use your school email when contacting me. I do not respond to personal emails. Additionally, do not email me via D2L, please use my school email for any communication.
- Also, note that audio devices such as earphones, AirPods, and earbuds are not permitted during class or exam time.
- Be aware that any cheating will result in being dropped from the class.

Late Work

Late work is unacceptable without a valid excuse. Please reach out to me to inform me so we can work together to avoid any loss of points.

Make Up Work/Test

There will be no make-up labs because the lowest lab grade will be dropped unless there is a valid excuse. If you miss an exam due to personal illness, emergency, or a school related activity, you will be allowed to take a make-up exam. It is your responsibility to schedule a make-up exam by contacting me via e-mail. You must contact me within 24 hours and schedule a time to make up the exam. You will be allowed to make-up only one exam. If you miss a second exam, you will earn a zero on the second exam missed unless you have a valid excuse. The final exam cannot be made-up.

Important Dates

Check date on [Academic Calendar](#):

- last day for term schedule changes.
- deadline to file for graduation.
- last day to drop with a grade of "W".
- deadline to file for graduation.

Refer to: [Drops, Withdrawals & Void](#)

Desire-to-Learn (D2L)

Extensive use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into [D2L](#) through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

Attendance

Attendance will be taken at the beginning of each class. Those that have missed 5 days of class, in the first four weeks of the semester, will be dropped on the 6th day with a WN (Withdrawn for Non-Attendance) and will not receive a W grade. The only exception: Students representing the university away from campus or are on military orders will not be dropped as long as I am notified by email prior to first absence. Later, if you miss 6 lectures and/or 6 homework assignments in a row, you will be drop from class.

Online Computer Requirements

Taking an online class requires you to have access to a computer (with Internet access) to complete and upload your assignments. It is your responsibility to have (or have access to) a working computer in this class. Assignments and tests are due by the due date, and personal computer technical difficulties will not be considered reason for the instructor to allow students extra time to submit assignments, tests, or discussion postings. Computers are available on campus in various areas of the buildings as well as the Academic Success Center. There are many places to access your class. Our online classes can be accessed from any

computer which is connected to the internet. Contact your instructor immediately upon having computer trouble. If you have technical difficulties in the course, there is also a student helpdesk available to you. The college cannot work directly on student computers due to both liability and resource limitations; however, they are able to help you get connected to our online services. For help, log into [D2L](#).

Change of Schedule

A student dropping a course (but not withdrawing from the University) within the first 12 class days of a regular semester or the first four class days of a summer semester is eligible for a 100% refund of applicable tuition and fees. Dates are published in the Schedule of Classes each semester.

Refund and Repayment Policy

A student who withdraws or is administratively withdrawn from Midwestern State University (MSU) may be eligible to receive a refund for all or a portion of the tuition, fees, and room/board charges that were paid to MSU for the semester. HOWEVER, if the student received financial aid (federal/state/institutional grants, loans, and/or scholarships), all or a portion of the refund may be returned to the financial aid programs. As described below, two formulas (federal and state) exist in determining the amount of the refund. (Examples of each refund calculation will be made available upon request).

Services for Students with Disabilities

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Clark Student Center, Room 168, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to [Disability Support Services](#).

College Policies

Campus Carry

Effective August 1, 2016, the Campus Carry law (Senate Bill 11) allows those licensed individuals to carry a concealed handgun in buildings on public university campuses, except in locations the University establishes as prohibited. The new Constitutional Carry law does not change this process. Concealed carry still

requires a License to Carry permit, and openly carrying handguns is not allowed on college campuses. For more information, visit [Campus Carry](#).

Active Shooter

The safety and security of our campus is the responsibility of everyone in our community. Each of us has an obligation to be prepared to appropriately respond to threats to our campus, such as an active aggressor. Please review the information provided by MSU Police Department regarding the options and strategies we can all use to stay safe during difficult situations. For more information, visit [MSUReady – Active Shooter](#). Students are encouraged to watch the video entitled “*Run. Hide. Fight.*” which may be electronically accessed via the University police department’s webpage: [“Run. Hide. Fight.”](#)

Grade Appeal Process

Update as needed. Students who wish to appeal a grade should consult the Midwestern State University [MSU Catalog](#)

***Notice:** Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.

**Course Schedule, Tentative Schedule for
PHYS 1644-101, Mechanics, Waves & Heat,
CRN 11324 Fall 2025**

2-Weeks	Tuesday	Thursday	Tuesday	Thursday
Aug 26- Sep 4	Introduction: Syllabus, Course Policies	Ch. 1 Sec 1.1 -1.8	Ch. 2 Sec. 2.1 -2.3	Ch. 2 Sec. 2.4 - 2.7
Sep 9- Sep 18	Ch. 3 Sec. 3.1 - 3.4	Exam 1 Ch. 1, 2, 3	Ch. 4 Sec. 4.1 - 4.3	Ch. 4 Sec. 4.4 - 4.6
Sep 23- Oct 2	Ch. 5 Sec. 5.1 - 5.4	Ch. 5 Sec. 5.5 - 5.7	Ch. 6 Sec. 6.1 - 6.3	Ch. 6 Sec. 6.4 - 6.6
Oct 7- Oct 16	Exam 2 Ch. 4, 5, 6	Ch. 7 Sec. 7.1 - 7.3	Ch. 7 Sec. 7.4 - 7.5	Ch. 8 Sec. 8.1 - 8.4
Oct 21- Oct 30	Ch. 9 Sec. 9.1-9.3	Ch. 9 Sec. 9.4-9.7	Exam 3 Ch. 7, 8,9	Ch. 10 Sec. 10.1 - 10.8
Nov 4- Nov 13	Ch.11 Sec. 11.1 -11.6	Ch. 12 Sec. 12.1 – 12.11	Ch. 15 Sec. 15.1 -15.8	Exam 4 Ch. 10,11,12,15
Nov 18- Nov 27	Ch. 16 Sec. 16.1 – 16.9	Ch. 17 Sec. 17.1 – 17.	Ch. 18 Sec. 18.1 – 18.7	Thanksgiving Break
Dec 2- Dec 9	Ch. 19 Sec. 19.1 - 19.8	Ch. 20 Sec. 20.1 – 20.6	Final Exam, (8:00-10:00) am Ch. 16,17,18,19,20	

The schedule may change slightly as the semester develops. However, students will be notified on D2L and directly via e-mail of any changes.