



OWENS
COMMUNITY COLLEGE

Course Syllabus
SEMESTER
School of Sci, Tech, Engineering, and Math

Course Name: Physics for the Trades

Course Number: PHY143-XXX

Credits: 3

Contact Hours: 3

Instructor's Name:

Office Hours & Location:

Campus Phone:

Campus E-mail:

Additional Contact Information:

Catalog Description: Discusses the laws and principles of mechanics, electromagnetism, elementary thermodynamics, propagation, reflection & refraction of light and sound.

Prerequisites/Co-Requisites: MTH 110, MTH 111, MTH 151, MTH 170 or MTH 175

Current Textbooks, Materials, Equipment (software/hardware requirements):

Applied Physics, 11th Edition; Ewen, Schurter & Gundersen, (Pearson/Prentice Hall).

A calculator is required with the basic functions plus squares, square roots, Sin, Cos, Tan and their inverse. Bring both the text and the calculator to each class.

General Information

For information on FERPA, Cheating and Plagiarism, Assessment of Student Learning Outcomes and Student Code of Conduct, please refer to the appropriate section of the current Owens Community College Catalog or online at www.owens.edu.

Course Objectives:

This Course will provide:

1. Solid working knowledge of the principles of mechanics, heat, thermodynamics, light and sound allowing him/her to become a better all-around skilled craftsman.
2. Knowledge which will assist in the better understanding of problems encountered in future courses and in the workplace.

Student Learning Outcomes:

The student will be able to:

1. Demonstrate knowledge of basic physics terminology and be able to work with measurements in the metric system.
2. Use vectors to describe various physical situations.
3. Apply the basic concepts of concurrent and parallel forces.
4. Identify Newton's Laws of Motion.
5. Describe the relationships between work, energy, and power.
6. Identify the basic concepts of rotational motion.
7. Examine the basic concepts of simple machines
8. Apply the basic concepts of basic electricity, magnetism, and AC current electricity to electromagnetism problems.
9. Apply the basic concepts of heating and cooling systems, and heat engines to thermodynamics problems.
10. Describe the basic concepts used for heating and cooling systems and heat engines.
11. Identify the basic concepts of sound, including propagation, wave theory, resonance and the Doppler effect.
12. Apply the theories of light to optics problems.
13. Distinguish between the different types of lenses and mirrors.

Grading Procedure:

Evaluation: The student's grade will be based on homework & quizzes, three test scores, a mandatory comprehensive final exam, and attitude & attendance.

Three tests: See the tentative schedule.

One comprehensive Final: See the tentative schedule.

Homework and Quizzes: Homework will be assigned on Blackboard. There will a quiz on finishing each homework.

Attendance and Class Participation: Attendance will be taken daily. Class participation will be determined solely by instructor during classes.

The course grade is computed as follows:

Homework & quizzes	20%
3 tests	45%
Final Exam (Mandatory)	25%
Attendance and Class Participation	10%

The following Grading Scale will be used:

A: 90 – 100%

B: 80 – 89%

C: 70 – 79%

D: 60 – 69%

F: 0 – 59%

Disability Services:

If you have a disability or acquire one, you may be entitled to receive individualized services and/or accommodations intended to assure you an equal opportunity to participate in and benefit from the program. To receive more information or to apply for services, please contact the Office of Disability Services in College Hall 116 at 567-661-7007 or email disability@owens.edu.

Anti-Disability and Harassment & Title IX/Sexual Misconduct:

All students, and staff expected to follow Owens Community College's Anti- Discrimination and Harassment Policy and the College's Title IX/Sexual Misconduct Procedures and Guidelines. The College strictly prohibits and will not tolerate harassment, discrimination, intimidation, or hostile/offensive working or learning environments.

If you are unfamiliar with the Anti-Disability and Harassment Policy, it can be found at: <https://www.owens.edu/trustees/procedures/proc3358-11-4-17.pdf>

If you are unfamiliar with the Title IX/Sexual Misconduct Procedures and Guidelines, it can be found at: <https://www.owens.edu/trustees/procedures/proc3358-11-4-17-titleIX.pdf>

Student Printing

Starting June 2019, Owens Community College will use Papercut for classroom and other academic printing. Papercut works much like our previous printing software. However, instead of tracking pages as previously done, Papercut is based on currency. A student will receive a \$3.00 allotment which is equivalent to 100 black and white prints per semester (black and white prints are \$0.03, color prints are \$0.06). If additional funds are required, deposits may be made via the web using a debit or credit card (Mastercard, Visa, or Discover) by following the link in each users' Papercut portal. To get the portal go to <https://papercut.owens.edu> and log in with your Owens' username and password. Note that though funds deposited by credit card are not refundable, they do carry over into future semesters.

Student Code of Conduct:

All students are expected to follow Owens Community College's Student Code of Conduct. If you are unfamiliar with the code, it can be found at https://www.owens.edu/student_services/code_conduct.html

Miscellaneous Information:

Resources: Science Lab for tutoring: MS 105
Study Skills Center : FH 1123

TENTATIVE COURSE SCHEDULE

DATE	1. Physics Tool Kit 3. Vectors
DATE	4.1 Speed vs Velocity 4. 2 Acceleration & Free Falling & Projectile motion
DATE	5- 6 Force & Momentum
DATE	7- Concurrent and Parallel Forces Revision
DATE	Test 1 (assignment / Based on sub)
DATE	8. Work and Energy 9. Rotational Motion
DATE	10. Simple Machines 17. Basic electricity
DATE	Revision & Test 2
DATE	18. Magnetism 19. Alternating Current Electricity
DATE	12. Matter 13. Fluids
DATE	14. Temperature and Heat transfer 15. Properties of Gases
DATE	Revision & Test 3
DATE	16. Wave motions and Sound 20. Light
DATE	21. Reflection and Refraction 22. Color
DATE	Revision Final DATE

Disclaimer: "The instructor reserves the right to amend this syllabus as deemed necessary and will communicate such amendment to the students in the course.