



PROFESSOR MOE TABANLI WELCOMES YOU TO GENERAL PHYSICS I

PHYS 123

MIDDLESEX COUNTY COLLEGE

Meets Tuesday 1:00 PM - 1:50 PM 9/6/2022 - 12/16/2022 at Main Hall, 134 for Lecture

Meets Thursday 11 AM-1:50 PM 9/6/2022 - 12/16/2022 via zoom link online

Course Description:

Emphasizes theoretical models and basic physical principles. The course is precalculus based and uses some basic calculus in the development and applications of physical principles in a scientific environment. Students will use computers in the laboratory for developing programming skills for the analysis of experimental data. Topics include kinematics, dynamics, conservation of energy and momentum, rotational motion, gravity, waves, temperature and heat and thermodynamics. The first semester of a two-semester college-parallel sequence for liberal arts science and pre-professional students.

What this course is and what it is not!!!:

Gen-Ed Physics is not a mysterious bottomless sea nor a magical realm with infinite possibilities and it's not even a maze. Gen-ED Physics is a set of well-defined learning objectives. You either know it, do not know it or you are learning it. But once you have the content knowledge and skills, you will be able to solve any problem from this curriculum.

Prerequisites:

MAT-129 or MAT-129A/MAT-129B

True prerequisites are basic trigonometry, solving algebra problems up to two unknowns and the word problems in math.

Instructor: Dr. Moe Mustafa Tabanli

Phone: 732.548.6000 Extension:3726

E-mail: mtabanli@middlesexcc.edu

Office: Tuesday 10AM-11AM and Friday based on student schedule

Textbooks and Material:

<https://openstax.org/details/books/college-physics>

Access to CANVAS

Scientific calculator

Student Learning Outcomes:

Analyze and solve physics problems systematically and logically. Apply mathematical techniques and use appropriate computing tools to obtain quantitative solutions to problems in physics and other disciplines. Synthesize results for the purposes of discussion and written work.

Study Habits:

Before the class: Read the glossary and the section summary. Be familiar with the symbols and concepts. Bring the equation page from the workbook to the class. This will help you with the classwork

During the class: Take notes and participate during lecture. During the lecture some model problems will be presented from the workbook. Try to solve them yourselves, ask questions and check the answers.

After the class: Focus on the worked out model sample problems from the book. Check the drawing for the problem, close the answer and try to solve it yourselves first. Compare your results. Afterwards close the drawing of the problem and draw it yourselves. Check the drawing.

At the end of the chapter: Do the homework problems, come to office hours if you need assistance. Do additional problems from the workbook.

Before the exam: Review all the homework and all the problems from the workbook. There will be a practice test either during the class or during office hours. Solve as many problems as possible and compare the instructors' solutions.

Grading Policy: Letter grades will be issued according to the following weights:

Homework-Quiz-Discussions	25 %
Exams	55 %
Final	20 %
Total	100 %

Grading Scale: Letter grades will be issued according to the following scale:

Final Grading Scheme

A 4.0 100%-95%

A- 3.7 94.99 %-90%

B+ 3.5 89.99%-85%

B 3.0 84.99%-80 %

B- 2.7 79.99% -75%

C+ 2.5 74.99%-70%

C 2.0 69.99%-65%

D 1.0 64.99%-60%

E 0.0 Credit by exam

F 0.0 Failure %59.99 or less

F grade assignment might be suspended due to College regulation. Check college website for more info.

CHAPTERS

Open Stax

Topic 01: Introduction

Topic 2: Kinematics (Chapter 2)

Topic 3: Projectiles and Motion in 2D (Chapter 3)

Topic 4: Dynamics (Chapter 4-5)

Topic 5: Uniform Circular Motion (Chapter 6)

Topic 6: Energy (Chapter 7)

Topic 7: Momentum (Chapter 8)

Topic 8: Statics, Torque and Angular Momentum (Chapter 9-10)

Topic 9: Fluids (Chapter 11-12)

Topic 10: Thermal Physics (Chapter 13)

Topic 11: Heat and Heat Transfer (Chapter 14)

Topic 12: Thermodynamics (Chapter 15)

Topic 13: Vibrations and Waves (Chapter 16)

Topic 14: Sound (Chapter 17)

Learning Physics: Learning physics, like any other discipline, takes practice. Furthermore, learning difficult material takes time, and repeated exposure helps solidify concepts. Students should expect to spend a minimum of eight hours per week on studying, practicing physics, and coursework outside of class. Although not all textbook problems will be assigned for homework, you are encouraged to work through as many questions and problems in the textbook as possible, particularly the odd numbered questions and problems at the end of each chapter that have answers given at the end of the book.

Attendance Policy: Students are expected to attend all classes for every course in which they are enrolled. A record of attendance will be kept. To accommodate students' reasonable, personal situations that might prevent them from attending classes, each student is entitled to receive support for excused absences amounting to the equivalent of one week's class time in a semester

Withdrawal Statement: Students may withdraw from courses following procedures specified by the Office of Enrollment Services and in compliance with published deadlines. Students who cease attending classes and do not request an official withdrawal will receive a failing grade (F) for the course.

Credit Hour Equivalency Statement: Students should expect to spend a minimum of 6 hours per week on studying and coursework outside of class.

Course Management Statement: Attending all lectures is essential for success in this course. Lectures reinforce, explain and expand upon the material presented in the textbook. It is your responsibility to keep up with the class work and homework assignments. To stay updated, especially if you are absent, log on to the CANVAS a few times per week and click on our course. You will find announcements, syllabus, schedule, project assignments, tests, links and other useful material. You will be able to email me or your classmates. If you are absent, it is your responsibility to acquire information and assignments either from your classmates, the CANVAS or from me

Code of Conduct Statement: As stated in the Student handbook. College has a Code of Student Conduct. Students whose behavior disrupts the class will be subject to removal and may be charged with a violation of the Code of Student Conduct. Code of Conduct charges will be investigated by the Dean of Student Services. If the student behavior presents a concern for immediate safety of the student or members of the community, the student may be suspended until a hearing is held. Any student who is removed from a class against his/her will is entitled to a hearing.”

Reasonable Accommodation Statement: Students with disabilities who require accommodations (academic adjustments and/or auxiliary aids or services) for this course **MUST** provide documentation of accommodations from the Disability Services. No accommodations will be made without this documentation.

Make-up Policy: Make-up work is not allowed for unannounced and unapproved absences. Proper documentation such as a doctor’s note, court appearance, religious holiday or accident report must be presented ahead of time, and prior arrangements for a make-up must be made with the instructor. All make-up requests must be submitted in writing to the instructor prior to the absence or immediately after the absence in case of a medical emergency. If you know you’re going to miss class ahead of time, inform your instructor so that you can discuss make-up options. Make-ups are given at the discretion of the instructor. It is the student's responsibility to keep up with presented materials, obtain any missed information/handouts, and submit work on time.

Announcements, Communications, and Course Documents: Announcements and notices pertaining to the course assignments and scheduling will be sent to your MCC account at CANVAS.

HW Assignments: Learning the physics requires practice, and regular homework will be assigned. After completing each chapter, students should be able to analyze and solve all textbook examples and assigned homework problems without having to refer to the solutions. HW assignments will be graded cumulatively before each exam.

Exams: There will be exams all open ended. These exams will cover material presented during class. All exams will be administered in class and are open book/notes. At the end of the exams, you will be required to submit a word document with all the final answers before the class

ends. You also have to submit all the work as a pdf or jpg file subsequently. You must show all work, and you will get credit for a correct answer only if you show your calculations.

Academic Support: There are various options for getting help. Talk to your instructor if you are having difficulty with the coursework. Your instructor holds weekly office hours and is available at other times by appointment. You are also encouraged to contact your instructor via email. For free tutoring, computer stations with educational software, and study areas refer to the college website for details

Classroom Rules:

Attend class regularly and on time. Inform your instructor ahead of time otherwise.

Do not disrupt other students from learning and instructor from teaching.

Bring your textbook, calculator, and required materials to every class and lab.

It is the responsibility of the student to obtain notes/materials when absent or late.

Academic Dishonesty: Academic dishonesty, cheating, and plagiarism will not be tolerated, in accordance with college regulations. Violations of academic dishonesty and cheating include but are not limited to: Copying graded assignments from another student, looking at another student's paper during an exam, giving someone answers to exam questions, stealing or borrowing all or part of an exam's questions or answers, copying another student's project and submitting it as one's own, and falsifying data or sources of information.