

**DELAWARE TECHNICAL & COMMUNITY COLLEGE**  
**COLLEGEWIDE CAMPUS COURSE SYLLABUS**

<b>Campus:</b>	Stanton	
<b>Department:</b>	Mathematics/Physics	
<b>Course Number And Title:</b>	PHY 281 – Physics I with Calculus	
<b>Instructor Name:</b>	<b>Telephone:</b>	<b>E-mail:</b>
<b>Prerequisites:</b>	MAT 281 – Calculus I	
<b>Corequisites:</b>	None	
<b>Course Hours And Credits:</b>	4 Credits – 3 Hours Lecture/Week 2 Hours Laboratory/Week	
<b>Course Description:</b>	This calculus-based physics course includes vectors, kinematics, dynamics, energy, momentum, gravitation, rotational motion and dynamics, equilibrium, and mechanical properties of matter.	
<b>Materials:</b>	To be selected by each campus department	
<b>Method Of Instruction:</b>	Campus classroom	
<b>Manuals:</b>	To be selected by each campus department	
<b>Disclaimer:</b>		

## **CORE COURSE PERFORMANCE OBJECTIVES**

The student will be able to:

1. Demonstrate an understanding of the basic concepts required for study of physics. (CCC 2, 3, 9)
2. Demonstrate a theoretical and practical knowledge of motion in one dimension. (CCC 2, 3, 9)
3. Demonstrate a theoretical and practical knowledge of vectors and two-dimensional motion. (CCC 2, 3, 9)
4. Demonstrate a theoretical and practical knowledge of the laws of motion. (CCC 2, 3, 9)
5. Demonstrate a theoretical and practical knowledge of work and energy. (CCC 2, 3, 9)
6. Demonstrate a theoretical and practical knowledge of momentum and collisions. (CCC 2, 3, 9)
7. Demonstrate a theoretical and practical knowledge of circular motion and the law of gravity. (CCC 2, 3, 9)
8. Demonstrate a theoretical and practical knowledge of rotational equilibrium and rotational dynamics. (CCC 2, 3, 9)
9. Demonstrate a theoretical and practical knowledge of solids and fluids. (CCC 2, 3, 9)
10. Demonstrate a theoretical and practical knowledge of thermal physics. (CCC 2, 3, 9)
11. Demonstrate a theoretical and practical knowledge of heat. (CCC 2, 3, 9)
12. Demonstrate a theoretical and practical knowledge of the laws of thermodynamics. (CCC 2, 3, 9)
13. Demonstrate a theoretical and practical knowledge of vibrations and waves. (CCC 2, 3, 9)
14. Demonstrate a theoretical and practical knowledge of sound. (CCC 2, 3, 9)

## **MEASURABLE PERFORMANCE OBJECTIVES**

(To be selected by each campus department)

## **EVALUATION CRITERIA**

Students will demonstrate proficiency on all Measurable Performance Objectives at least to the 75% level. The grade will be determined using the College Grading System:

92 – 100	A
83 – 91	B
75 – 82	C
0 – 74	R

**Students should refer to the Student Handbook for information on Academic Standing Policy, Academic Honesty Policy, Student Rights and Responsibilities and other policies relevant to their academic progress.**