

AP Physics C (Mechanics)

Course	Dates	Schedule	Instructor
AP Physics C (Mechanics)	9/20/2026 - 5/2/2027	Sunday 5:00 PM – 6:30 PM	Mr. Kovalcin
Practice Test & Review	3/21 - 5/2	Sunday 5:00 PM – 6:30 PM	
Off	10/4/2026, 10/11, 12/20, 12/27, 2/14/2027, 2/21, 2/28		

Course Description

AP Physics C (Mechanics) is a calculus-based, introductory college-level physics course.

#Classes	Date	Unit	AP Physics C
1	20-Sep	1	Lab Activity - Freefall /Graphics Generation
2	27-Sep	1	Graphical Analysis - d,v & a graphs/Develop Kinematics Equations & Problem Solving - Calculus Application - Polynomial Integration and Differentiation
3	18-Oct	2	Lab Activity - Two Dimensional Projectile Motion
4	25-Oct	2	Adding Vectors - Qualitative and Quantitative
5	1-Nov	2	Lab Activity - Centripetal Acceleration
6	8-Nov	3	Introduction to Newton's Laws - Lab Activity - Forces at Equilibrium
7	15-Nov	3	Free Body Diagrams and 1st Law Problems Solving
8	22-Nov	3	Static and Kinetic Friction - Lab Activity - Measuring the Force of Friction - Various Techniques
9	29-Nov	3	Introduction to Torque - 2nd Condition for equilibrium - Lab Activity - Torques at Equilibrium & Center of Mass - Calculus Application - Center of Mass
10	6-Dec	3	Developing Newton's 2nd Law - Lab Activity - $F = ma$ - Calculus Application - Drag Forces

#Classes	Date	Unit	AP Physics C
11	13-Dec	3	Newton's 2nd Law & Rotating Systems/Universal Gravitation/Kepler's Laws
12	3-Jan	4	Introduction to Work, Energy & Energy Conservation - Lab Activity - Hooke's Law & Energy Conservation
13	10-Jan	4	Develop problem solving involving Energy Conservation/Universal Gravitational Energy - Calculus Application - Work vs Potential Energy Functions
14	17-Jan	5	Introduction to Momentum & its Conservation - Lab Activity - Momentum Conservation
15	24-Jan	5	Problem Solving - Momentum Conservation/Two Dimensional Momentum Conservation
16	31-Jan	6	Introduction to Rotating Systems - Lab Activity - Rotational Kinematics, Dynamics & Energy - Calculus Application - Rotational Inertia
17	7-Feb	6	Problem Solving Involving Rotating Systems/Introduction to Angular Momentum Conservation
18	7-Mar	7	Introduction to Simple Harmonic Motion (SHM) - Lab Activity - Simple & Physical Pendulums
19	14-Mar	7	Completing SHM - Simple Harmonic Motion - Equations and Problem Solving - Calculus Application
20	21-Mar	APC - #1	APC Mechanics - Exam Practice & Review
21	28-Mar	APC - #2	APC Mechanics - Exam Practice & Review
22	4-Apr	APC - #3	APC Mechanics - Exam Practice & Review
23	11-Apr	APC - #4	APC Mechanics - Exam Practice & Review
24	18-Apr	APC - #5	APC Mechanics - Exam Practice & Review
25	25-Apr	APC - #6	APC Mechanics - Exam Practice & Review
26	2-May	APC - #7	APC Mechanics - Exam Practice & Review
	3-May		<i>APC Mechanics Exam</i> - Session 1 - Morning

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Teacher Profile

Mr. Kovalcin

Physics



Mr. Kovalcin, a physics enthusiast, has coached many students [one of which is currently the Department of Engineering Dean at Princeton] on the US Olympiad team and has contributed to a physics textbook. He has taught classroom physics for over 41 years at various institutions, including the Monmouth County Science and Engineering Center at Manalapan High School. His extensive experience includes teaching AP Physics 1, 2, C: Mechanics, and C: Electricity and Magnetism, as well as Honors and Olympiad Physics. In addition, he has been tutoring physics online for 13 years. Additionally, he coached the Manalapan High School Physics team to first place in the National Science League. Mr. Kovalcin's classes feature engaging laboratory experiments and demonstrations, and he is known for clearly explaining difficult concepts, specifically the origins and applications of the laws of physics.