SEPTEMBER 2021

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
29	30	31	1	2	3	4
5	6 Labor Day	7	8	9 **Lec 1-3**	10	11
12	13	14 **Lec 4-6**	15	16 No classes	17	18
19 **HW1 due by 11:59 pm**	20	21 **Lec 7-9**	22	23 **Lec 10, Lab 1**	24	25
26 **HW2 due by 11:59 pm**	27	28 **Lec 11-13**	29	30 **Lec 14, Lab 2**	1	2

OCTOBER 2021

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
26	27	28	29	30	1	2
3 **HW3 due by 11:59 pm**	4	5 **Lec 15-17**	6	7 **Lec 18, Lab 3**	8	9
10 **HW4 due by 11:59 pm**	11 Columbus Day	12 **Exam 1**	13	14 **Lec 19-21**	15	16
17	18	19 **Lec 22-24**	20	21 **Lec 25, Lab 4**	22	23
24 **HW5 due by 11:59 pm**	25	26 **Lec 26-28**	27	28 **Lec 29, Lab 5**	29	30
31 Halloween **HW6 due by 11:59 pm**	1	2	3	4	5	6

NOVEMBER 2021

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
31 Halloween	1	2 **Lec 30-32**	3	4 **Lec 33, Lab 6**	5	6
7 **HW7 due by 11:59 pm**	8	9 **Lec 34-36**	10	11 Veterans Day **Lec 37, Lab 7**	12	13
14 **HW8 due by 11:59 pm**	15	16 **Exam 2**	17	18 **Lec 38, lab 8**	19	20
21	22	23 **Lec 39-41**	24	25 Thanksgiving Day College Closed	26	27
28 **HW9 due by 11:59 pm**	29	30 **Lec 42-44**	1	2	3	4

DECEMBER 2021

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
28	29	30	1	2 Lec 45-47	3	4
5 HW10 due by 11:59 pm	6	7 Lec 48, Review	8	9 Reading Day	10	11
12 HW11 due by 11:59 pm	13	14 Final Exam	15	16	17	18
19	20	21	22	23	24	25 Christmas
26	27	28	29	30	31	1

Lec. #01: Class introduction. Scientific notations. Units. Unit conversion.
Lec. #02: Scalars and vectors. Speed and velocity.
Lec. #03: Constant velocity motion. Acceleration.
Lec. #04: Constant acceleration motion.
Lec. #05: Free fall.
Lec. #06: Vectors.
Lec. #07: 2D-motion.
Lec. #08: 2D-motion.
Lec. #09: Uniform circular motion.
Lec. #10: Galilean transformation.
Lec. #11: Inertial frames. Newton's laws of motion.
Lec. #12: Newton's 2nd law.
Lec. #13: Atwood machine.
Lec. #14: Static and kinetic friction.
Lec. #15: Inclined plane.
Lec. #16: Examples.

Lec. #17: Work. Work done by a constant force.
Lec. #18: Work. Work done by gravitational and spring forces.
Lec. #19: Work done by the net force.
Lec. #20: Kinetic energy. Power.
Lec. #21: Examples.
Lec. #22: Conservative forces and Potential energy.
Lec. #23: Potential energy: gravitational and elastic. Energy conservation.
Lec. #24: Energy conservation law.
Lec. #25: Linear momentum. Impulse. Second Newton's law.
Lec. #26: Linear momentum conservation.
Lec. #27: Elastic and inelastic collisions in 1-D.

Lec. #28: Position and velocity of the Center of Mass (CoM).
Lec. #29: Rotation (kinematic). Kinetic energy of rotation.
Lec. #30: Rotational inertia. Huygens–Steiner theorem (parallel axis theorem).
Lec. #31: Rolling. Kinetic energy of rolling.
Lec. #32: Examples.

Lec. #33: Torque and equilibrium.
Lec. #34: Angular momentum. Angular momentum of a rigid body.
Lec. #35: Newton's second law for rotation.
Lec. #36: Angular momentum conservation.
Lec. #37: Review of rotation. Examples.
Lec. #38: Newton's law of universal gravitation.
Lec. #39: Free fall acceleration and circular orbits.
Lec. #40: Kepler's laws of planetary motion.
Lec. #41: Kepler's laws of planetary motion.
Lec. #42: Pressure and density. Fluids at rest.
Lec. #43: Pascal's and Archimedes' principles.
Lec. #44: Ideal fluids. Continuity and Bernoulli's equations.
Lec. #45: Examples and applications.
Lec. #46: Oscillations. Simple Harmonic Motion (SHM).
Lec. #47: Equation of motion and mechanical energy of SHM.
Lec. #48: Mathematical and physical pendulum.