

Assignment Schedule – Fall 2022
ME 274 - BASIC MECHANICS II
 School of Mechanical Engineering - Purdue University

PERIOD	DATE	TOPIC	READING	HOMEWORK
KINEMATICS				
1	M	8/22	Point Kinematics – Cartesian description	1.A, H.1.A, H.1.B
2	W	8/24	Point Kinematics – Path description	1.A, H.1.C, H.1.D
3	F	8/26	Point Kinematics – Polar description	1.A, H.1.E, H.1.F
4	M	8/29	Point Kinematics – Joint description	1.C, H.1.G, H.1.H
5	W	8/31	Point Kinematics – Relative and Constrained Motion	1.D, H.1.I, H.1.J
6	F	9/2	Planar Kinematics – Rigid Bodies	2.A, H.2.A, H.2.B
	M	9/5	No Class - Labor Day	
7	W	9/7	Planar Kinematics – Rigid Bodies	2.A, H.2.C, H.2.D
8	F	9/9	Planar Kinematics – Rigid Bodies	2.A, H.2.E, H.2.F
9	M	9/12	Planar Kinematics – Instant Centers	2.B, H.2.G, H.2.H
10	W	9/14	Planar Kinematics – Rigid Body Summary	2.C, H.2.I, H.2.J
11	F	9/16	Moving Reference Frame Kinematics – 2D	3.A, H.3.A, H.3.B
12	M	9/19	Moving Reference Frame Kinematics – 2D	3.A, H.3.C, H.3.D
	W	9/21	No class meeting due to evening exam	
	W	9/21	Exam 1: Wed 9/21, 8:00p - 9:00p, SMTH 108	
13	F	9/23	Moving Reference Frame Kinematics – 3D	3.B, H.3.E, H.3.F
14	M	9/26	Moving Reference Frame Kinematics – 3D	3.B, H.3.G, H.3.H
15	W	9/28	Moving Reference Frame Kinematics – 3D	3.B, H.3.I, H.3.J
KINETICS				
16	F	9/30	Particle Kinetics – Newton's Second Law	4.A, H.4.A, H.4.B
17	M	10/3	Particle Kinetics – Newton's Second Law	4.A, H.4.C, H.4.D
18	W	10/5	Particle Kinetics – Newton's Second Law	4.A, H.4.E, H.4.F
19	F	10/7	Particle Kinetics – Work/Energy	4.B, H.4.G, H.4.H
	M	10/10	No Class - October Break	
20	W	10/12	Particle Kinetics – Work/Energy	4.B, H.4.I, H.4.J
21	F	10/14	Particle Kinetics – Linear Impulse/Momentum	4.C, H.4.K, H.4.L
22	M	10/17	Particle Kinetics – Linear Impulse/Momentum	4.C, H.4.M, H.4.N
	W	10/19	No class meeting due to evening exam	
	W	10/19	Exam 2: Wed 10/19, 8:00p - 9:00p, SMTH 108	
23	F	10/21	Particle Kinetics – Central Impact	4.C, H.4.O, H.4.P
24	M	10/24	Particle Kinetics – Angular Impulse/Momentum	4.D, H.4.Q, H.4.R
25	W	10/26	Particle Kinetics – Angular Impulse/Momentum	4.D, H.4.S, H.4.T
26	F	10/28	Planar Kinetics of Rigid Bodies – Newton/Euler Equations	5.A, H.5.A, H.5.B
27	M	10/31	Planar Kinetics of Rigid Bodies – Newton/Euler Equations	5.A, H.5.C, H.5.D
28	W	11/2	Planar Kinetics of Rigid Bodies – Newton/Euler Equations	5.A, H.5.E, H.5.F
29	F	11/4	Planar Kinetics of Rigid Bodies – Work/Energy	5.B, H.5.G, H.5.H
30	M	11/7	Planar Kinetics of Rigid Bodies – Work/Energy	5.B, H.5.I, H.5.J
31	W	11/9	Planar Kinetics of Rigid Bodies – Impulse/Momentum	5.C, H.5.K, H.5.L
32	F	11/11	Planar Kinetics of Rigid Bodies – Impulse/Momentum	5.C, H.5.M, H.5.N
33	M	11/14	Planar Kinetics of Rigid Bodies – Summary	5.A-D, H.5.O, H.5.P
	T	11/15	Exam 3: Tue 11/15, 8:00p - 9:00p, MTHW 210	
	W	11/16	No class meeting due to evening exam	
VIBRATION				
34	F	11/18	Vibrations – Equations of Motion	6.A, H.6.A, H.6.B
35	M	11/21	Vibrations – Free, Undamped Response	6.B, H.6.C, H.6.D
	W	11/23	No Class - Thanksgiving Vacation	
	F	11/25	No Class - Thanksgiving Vacation	
36	M	11/28	Vibrations – Free, Damped Response	6.B, H.6.E, H.6.F
37	W	11/30	Vibrations – Free, Damped Response	6.B, H.6.G, H.6.H
38	F	12/2	Vibrations – Harmonic Excitation	6.C, H.6.I*, H.6.J*
39	M	12/5	Vibrations – Harmonic Excitation	6.C, H.6.K**, H.6.L**
40	W	12/7	Vibrations – Harmonic Excitation	6.C, H.6.M**, H.6.N**
41	F	12/9	Course Overview	
			Final exam: Time and location TBD	

*: H.6.I and H.6.J are due at 11:59 pm on Sunday, 12/4

** : Homework assignments for the last week of the semester will NOT be collected

Final Examination: During the final examination period (12/12-12/17). Date, time, and location TBA during the semester.

Homework Assignments: Homework problems are due on Gradescope by 11:59 pm on the day of the next class period after they are assigned.

Solution Videos: Solution videos are provided for the assigned problems above on the course blog after the due date.