

ENG ME 302 Engineering Mechanics II**Spring 2023**

Prof. Raymond J. Nagem
110 Cummington St., Room 420
617 353-5925
nagem@bu.edu

Debra Huang
debrahh@bu.edu
Quan Nguyen
quan@bu.edu

Text: James H. Williams, Jr., *Fundamentals of Applied Dynamics*,
MIT Press, 2019, ISBN 9780262039710.

<u>Week Beginning</u>	<u>Topics</u>	<u>Reading</u>
1/16	Particle kinematics	Chs. 1, 2; Secs. 3-1, 3-2
1/23	Moving reference frames	Secs. 3-3 — 3-5
1/30	"	"
2/6	Momentum principles for particles	Ch. 4
2/13	"	"
2/20	Work and energy for particles	Secs. 5-1 — 5-3
2/27	Lagrange equations for particles	Secs. 5-4 — 5-7
3/13	"	"
3/20	Momentum principles for rigid bodies	6-1, 6-2
3/27	Dynamic properties of rigid bodies	6-3, 6-4
4/3	Rigid body dynamics	6-4
4/10	Lagrange equations for rigid bodies	6-5, 6-6
4/17	"	"
4/24	Mechanical vibrations	Secs. 8-1, 8-3
5/1	"	"

Grading: Two tests, each worth 25% of final grade;
Final exam, worth 25% of final grade;
Homework assignments, together worth 10% of final grade;
Laboratory project, worth 15% of final grade.