

ENG ME 302 Engineering Mechanics II**Spring 2025**

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

<u>Week Beginning</u>	<u>Topics</u>	<u>Reading</u>
1/20	Particle kinematics	Chs. 1, 2; Secs. 3–1, 3–2
1/27	Moving reference frames	Secs. 3–3 – 3.5
2/3	"	"
2/10	Momentum principles for particles	Secs. 4–1 – 4–4
2/17	Work and energy for particles	Secs. 5–1 – 5–3
3/24	Lagrange equations for particles	Secs. 5–4 – 5–7
3/3	"	"
3/10	Spring Break	
3/17	Momentum principles for rigid bodies	6–1 – 6–2
3/24	Dynamic properties of rigid bodies	6–1 – 6–3
3/31	Rigid body dynamics	6–4
4/7	Lagrange equations for rigid bodies	6–5 – 6–6
4/14	"	"
4/21	Mechanical vibrations	Secs. 8–1, 8–3.1 – 8–3.3
4/28	"	"

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.

Test dates Test 1: February 20, 2025 Lab dates: 3/24/25 – 3/28/24
Test 2: April 3, 2025