

ENG ME 441 Mechanical Vibrations**Fall 2018**

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Text: S. S. Rao, *Mechanical Vibrations*, 6th ed., Pearson, 2017.

<u>Week Beginning</u>	<u>Topics</u>	<u>Reading</u>
9/3	Single-degree-of-freedom vibratory systems	1.1–1.10
9/10	Free vibration	2.1–2.8
9/17	Harmonic forcing	3.1–3.4
9/24	"	3.5–3.7, 3.11–3.14
10/1	Nonharmonic forcing	4.1–4.5
10/8	Stability analysis	2.11
10/15	Rotating shafts	9.5
10/22	Two degrees of freedom	5.1–5.4
10/29	"	5.5–5.7
11/5	Vibration isolation	9.10–9.11
11/12	Modal analysis	6.9–6.10
11/19	"	6.11–6.15
11/27	Continuous systems	8.1–8.2
11/27	Modes of vibration	8.3–8.4
12/3	"	8.5
12/10	Response to initial conditions	"

Grading: Three tests, each worth 25% of final grade.
Homework assignments, together worth 25% of final grade.