

Meeting	Topic(s)
1 9/26	I. Introduction
	A. Simple Wave Examples
2 9/28	Longitudinal waves in compressible fluids
3 9/30	Review of phasor conventions for waves
4	C. Dispersion
5	B. Introduction to Hamilton's Principle
	A "Common Thread" for all waves
6 10/7	D. Constitutive Relationships
7	II. Waves in Simple Media
	A. Plane Waves in Homogeneous, Isotropic, Elastic Solids
8	B. EM Waves in Homogeneous, Isotropic Media
9 10/14	III. Inhomogeneous Media
	A. Reflection and refraction of EM waves
	Plane EM wave normally incident on a single dielectric interface
10	Multiple dielectric interfaces at normal incidence
11	Alternative Forms for Z-transformation with position
12–14 10/21	Oblique incidence on a dielectric interface
15 10/28	B. Reflection and Refraction in Elastic Solids
16	IV. Special Cases of Plane Interfaces
	A. Wave guiding by a surface
17	B. Applications (Useful ways EM fields can be bound to surfaces)
18 11/4	Solution of dielectric clad guide
*Week of 11/7*	<< "Take-Out" Midterm Exam, Material through 10/28 only >> ***
19	Dielectric slab guides (2)
	Conducting parallel plate guide
20	TBD — Day held in reserve
21 11/11	V. Propagation of Waves in Stratified Media
	Three Dimensional Pressure Wave Equation from Hamilton's Principle
22	Three dimensional acoustic waves dispersion examples
23	Transmission and Reflection of Elastic Waves
24 11/18	Interpretation of $\omega_0 = n c$
25 11/25	Group velocity example for stratified fluid
	Demonstration of group velocity concepts
*Week of 11/21*	*** << Thanksgiving Holiday Break >> ***
27 12/2	VI. Boundary wave example – Discussion of internal waves
28–30 12/9	General Discussion or Day in Reserve
12/16	FINAL EXAM: 8:30–11:30 AM Open Notes, Open Book(s) ***