

Earth Sciences 734/834, Applied Geophysics, Fall 2007

CLASS	DATE	TOPIC
1	W Sept 5	Seismic Refraction, Seismic Waves
2	F 7	Snell's Law of Refraction
3	M 10	Single Horizontal Layer
4	W 12	Multiple Horizontal Layers
5	F 14	Dipping Layers
6	M 17	Irregular Layers
7	W 19	Seismic Tomography
8	F 21	HOUR EXAM I
9	M 24	Seismic Reflection, Travel Times
10	W 26	Common-Mid-Point Method
11	F 28	Velocity Analysis
12	M Oct 1	Migration
13	W 3	Rayleigh Reflection Coefficients and "AVO"
14	F 5	Surface Wave Dispersion
15	M 8	Horizontal and Vertical Resolution
16	W 10	Seismic Stratigraphy
COLUMBUS DAY Friday, October 12		
17	M 15	HOUR EXAM II
18	W 17	Resistivity Method, Apparent Resistivity
19	F 19	Arrays, Two-Layer Soundings
20	M 22	Three-Layer Soundings, Nonuniqueness
21	W 24	Inversion of Soundings, Least Squares
22	F 26	Inversion of Soundings, Genetic Algorithms
23	M 29	Inversion of Soundings, Occam's Inversion
24	W 31	Azimuthal Resistivity
25	F Nov 2	Resistivity of Earth Materials
26	M 5	HOUR EXAM III
27	W 7	Newton's Law of Gravitation, Field of the Earth
28	F 9	Gravity Anomaly Definitions
VETERAN'S Day Monday, November 12		
29	Tu 13	Simple Geometrical Bodies
30	W 14	Simple Geometrical Bodies
31	F 16	Regional and Residual Separation
32	M 19	Gradient Anomalies
33	W 21	Case History
THANKSGIVING, Thursday November 22		
34	M 26	HOUR EXAM IV
35	W 28	Magnetic Field B
36	F 30	B Field of Dipoles and Earth
37	M Dec 3	Induced Magnetization, Susceptibility
38	W 5	Remanent Magnetization
39	F 7	Vertical Field Anomalies
40	M 10	Total Field Anomalies
41	W 12	Temporal Variations of Field
42	F 14	Case Histories

Text: Kearey, P., M. Brooks and I. Hill, "An Introduction to Geophysical Exploration", Third Edition, Blackwell Publishing.