

GEO 594 / GLE 594 - INTRODUCTION TO APPLIED GEOPHYSICS
Lecture Schedule and Reading Assignments

Introduction

L1 Sep. 2 RA Introduction - Techniques and Targets Ch. 1, pp. 1 - 10.

Potential Field Methods

L2 Sep. 7 RA Gravity - Theory and Measurement Ch. 2, pp. 11 - 22.

L3 Sep. 9 RA Gravity Corrections and Analysis I Ch. 2, pp. 22 - 39.

L4 Sep. 14 RA Gravity Analysis II, Gravity Applications Ch. 2, pp. 39 - 64.

L5 Sep. 16 DF Magnetism - Concepts and Rock Properties Ch. 3, pp. 65 - 75.

L6 Sep. 21 DF Magnetism - Instruments and Surveying Ch. 3, pp. 75 - 86.

L7 Sep. 23 DF Magnetism Interpretation and Applications Ch. 3, pp. 86 - 111.

Electrical Methods

L8 Sep. 28 DF Resistivity, Earth Properties and Basic Theory Ch. 6, pp. 207 - 221.

L9 Sep. 30 DF Resistivity Theory and Measurement Ch. 6, pp. 218 - 228.

L10 Oct. 5 DF Resistivity Interpretation and Applications Ch. 6, pp. 228 - 252.

L11 Oct. 7 **QUIZ 1 - Gravity and Magnetism**

Applied Seismology

L12 Oct. 12 RA Seismic Waves and Rays I Ch. 4, pp. 112 - 123.

L13 Oct. 14 RA Seismic Waves and Rays II Ch. 4, pp. 123 - 133.

L14 Oct. 19 RA Seismic Reflection I Ch. 4, pp. 133 - 143.

L15 Oct. 21 RA Seismic Reflection II Ch. 4, pp. 143 - 149.

L16 Oct. 26 RA Seismic Reflection III – Lab Ch. 4, pp. 149 - 158.

L17 Oct. 28 RA Seismic Reflection IV Ch. 4, pp. 158 - 166.

L18 Nov. 2 RA Seismic Refraction I – Planar interfaces Ch. 4, pp. 158 - 166.

L19 Nov. 4 RA Seismic Refraction II – Analysis Ch. 4, pp. 166 - 175.

L20 Nov. 9 RA Seismic Refraction III – Applications Ch. 4, pp. 175 - 186.

Electrical and Electromagnetic Methods

L21 Nov. 11 DF Induced Polarization Ch. 6, pp. 252 - 261.

L22 Nov. 16 DF Electromagnetic Theory and Classification Ch. 7, pp. 265 - 272.

L23 Nov. 18 DF Electromagnetics, Continuous Wave Methods Ch. 7, pp. 273 - 286.

L24 Nov. 23 **QUIZ 2 – Resistivity and Seismic Methods**

L25 Nov. 25 **Thanksgiving**

L26 Nov. 30 DF Electromagnetics, Time Domain Methods Ch. 7, pp. 286 - 293.

L27 Dec. 2 DF Electromagnetics, Magnetotelluric Methods Ch. 7, pp. 296 - 302.

L28 Dec. 7 DF Ground Penetrating Radar - Methods Ch. 8, pp. 309 - 316.

L29 Dec. 9 DF Ground Penetrating Radar - Applications Ch. 8, pp. 316 - 329.

Borehole Methods

L30 Dec. 14 DF Borehole Geophysics Ch. 11, pp. 377 - 394.

Dec. 17 **FINAL EXAM – Friday at 12:25 PM – Room 140 Weeks**

8/25/04