

Geology for Engineers and Architects
15-040-374
Spring Quarter, 2001

Syllabus (Subject to Change)

Subject	Date	Reading Assignment
I. Orientation		
Geologic Time	Mar 26	
Geologic Time	Mar 28	p. 2-25, Lab manual p. 1-11
II. Minerals and Rocks		
Minerals and quiz on readings	Mar 30	p. 27-49
Minerals and the rock cycle	Apr 2	
Igneous rocks	Apr 4	p. 51-55, 77-83
Sedimentary rocks and quiz on readings	Apr 6	p. 86-118
Metamorphic Rocks and the Rock Properties	Apr 9	p. 120-135, 137-164 (much of latter reading will be familiar from Statics)
III. Crustal Instability and Deformation	Apr 11	p. 166-177
Volcanism		
Volcanism and quiz on readings	Apr 13	p. 55-77
Structural Geology		
Large-scale crustal deformation	Apr 16	p. 196-200
Seismicity and earthquakes	Apr 18	p. 207-230
Seismicity and earthquakes and quiz on readings	Apr 20	p. 231-245
Seismicity and Earthquakes	Apr 23	
Bending and Breaking	Apr 25	p. 177-196
Bending and Breaking and quiz on readings	Apr 27	
Bending and Breaking	Apr 30	
Mid-term Exam (20% of grade)	May 2	
IV. Breakdown & Transport of Material	May 4	p. 248-259, 338-344
Weathering and quiz on readings		
Weathering	May 7	Ferguson, <i>Valley stress in the Allegheny Plateau</i> ¹
Soils	May 9	p. 274-312
Mass Movement and quiz on readings	May 11	p. 358-392
Mass Movement	May 14	Chapter 11 of <i>Landforms and Surface Materials of Canada</i> ¹
Soil erosion	May 16	p. 259-271 & Wischmeier, <i>The erosion equation tool for conservation planning</i> ¹
Hydrologic cycle and ground water and quiz on readings	May 18	p. 315-338, 344-355
Rivers	May 21	p. 395-411
Rivers	May 23	p. 411-441
Glaciation and quiz on readings	May 25	p. 483-518
Glacial history of Cincinnati	May 30	Durrell, <i>A Recycled Landscape</i> ¹
Final review	Jun 1	
Final Exam (30% of grade)	Monday - June 4, 9:45-11:45 AM	

Required Text

Kehew, Alan E. 1995. *Geology for Engineers & Environmental Scientists*, 42nd ed., Englewood Cliffs: Prentice-Hall, Inc. 574p.

Busch, Richard M. 1999. *AGI/NAGT Laboratory Manual in Physical Geology*, 5th ed., New York: Macmillan Publishing Co. 285p.

Reserve Reading

- 1 Reading on reserve in the Geology/Physics Library, Room 225 Braunstein

Quizzes on Readings (20% of course grade)

Laboratory (30% of grade)

Schedule subject to change by Laboratory Instructor

Minerals	Week 1
Minerals and Igneous Rock	Week 2
Sedimentary and Metamorphic Rocks	Week 3
Lab Midterm and begin Structural Geology	Week 4
Structural Geology and Geologic Maps	Week 5
Geologic Maps	Week 6
Geologic Maps	Week 7
Topographic maps, Aerial Photos and Landforms	Week 8
Lab Final Exam	Week 9

Lecturer: David B. Nash
email: David.Nash@UC.Edu
603 Geology Physics Building
556-2834
Office Hours TBA and by appointment

Lab Instructors: Ms. Barbara Markley
606 Geology/Physics Building
geogal33@hotmail.com

Course homepage <http://oz.uc.edu:8000/~nashdb/courses/374/homepage.html>