

Date	Class	Topic	Text	Assignment				
				Internet	Lab manual	AV show (optional)		
Class No.		Topic	Text Pages	Geotours				
Jan.	14	1	Intro to Geology	1-11	1			
	16	2	Overview of the Earth	13-55 (skim)	4	{Ch 2&4}		
	18	3	Minerals I	118-143	5	{Ch 5}		
	23	4	Igneous Rocks	144-151	6	{Ch 6}		
	25	5	Intrusive Features	152-182			(40)	
	28	6	Volcanoes I	264-281	9	{Ch 9}		
	30	7	Volcanoes II	281-291				
Feb.	1	8	Igneous Processes	291-302			(38-39)	
	4	9	Volcano Film	257-263				[AV-32]
	6	10	Sedimentary Rocks	198-227			(56-57)	
	8	11	Sedimentary Features	415-447	12		(48); (74-75)	
	11	12	Metamorphic Rocks	228-256	8	{Ch 8}	(69-70)	
	13	13	Weathering	183-192				
	15	14	Soils	193-198	7	{Ch 7}		[AV-35]
	18	15	TEST 1 (class1-12; mineral & rock labs)					
	20	16	Mass Wasting	557-581	16	{Ch 16}	(123)	
	22	17	Stream Flow	582-591	17	{Ch 17}		
	25	18	Stream Dynamics	591-602				
	27	19	Stream Profiles and Patterns	602-614				
	29	20	Streams and Landforms	614-619			(106-108)	[AV-34]
Mar.	10	21	Alpine Glaciers	757-770				
	12	22	Alpine Glacial Landforms	771-777			(140-143)	
	14	23	Continental Glaciers I	777-788	22	{Ch 22}		
	17	24	Continental Glaciers II	789-800			(151-153)	
	19	25	Desert Processes	730-741				
	26	26	Desert Landforms	741-756	21	{Ch 21}		[AV-39]
	28	27	Ocean Wave Mechanics	635-648				[AV-36]
	31	28	TEST 2 (CLASSES 13-26)					
Apr.	2	29	Shoreline Processes I	648-653	18	{Ch 18}		
	4	30	Shoreline Processes II	654-659			(160-164)	
	7	31	Ground Water Processes	660-681	19	{Ch 19}		[AV-38]
	9	32	Ground Water Landforms	681-691			(129-130)	
	11	33	Earthquakes I	303-322	10	{Ch 10}		
	14	34	Earthquakes II	322-361	2	{Ch 2}		[AV-40]
	16	35	Interior of Earth [DRILLBIT due]	36-55				
	18	36	Ocean Floors I	56-76; 620-626			(223-227)	
	21	37	Plate Tectonics I	85-117	11	{Ch 11}	(238-239)	
	23	38	Plate Tectonics II	362-399	3, 4, 13	{Ch 4}	(252-253)	[AV-41]
	25	39	Plate Tectonics III	801-832 (skim)	14, 15, 23	{Ch 23}	(264-265)	

No bracket, brace, or parentheses indicates assignment from textbook.

() Indicates pages assigned from laboratory manual. The questions within the manual do not need to be answered.

{ } Indicates activities from <http://www.norton.com/studyspace>

[] Indicates optional slide/tape show which is on reserve in the library; number in bracket is reserve number.

The syllabus is provided to you so that you may plan your activities during the semester and follow along with the assignments. Lecture topics may run ahead or behind scheduled dates, but they will be taken in the order listed.

The final exam is scheduled by the Registrar. (final exam is comprehensive, with emphasis on the last third of the course).

Copies of the previous lecture tests are kept on reserve in the Library.

Cell phones and pagers should be turned off in the Earth Science Classroom.

Course Objectives: Students will understand the following:

- composition and properties of the important rocks and rock forming minerals
- the unifying theory of plate tectonics and how it applies to the geology of the local region
- methods by which geologic materials, structures, and landforms are measured, portrayed, analyzed and predicted.
- forces that affect earth materials on the surface and within the earth
- dynamics of earth processes on various spatial and temporal scales
- the earth as a system of separate but interacting parts
- effects of geologic processes on humans and vice versa
- application of appropriate fundamental scientific principles to complex natural systems
- the local area is a manifestation of the processes and products of former and current geological activity

	Date	Lab	Topic	Assignment		
				lab manual	Internet & slide shows	text
Jan.	16+17	1	Minerals	(10-25)		131-134; B2-B3
	23+24	2	Igneous Rocks	(26-43)		169-174
	30+31	3	Sedimentary and Metamorphic Rocks	(43-73)		199-203;235-241
Feb.	6+7	4	Making Topographic Maps	(88-91)		
	13+14	5	Aerial Photographs; Strike and Dip	(81-84); (92-100)		377
Mar.	20+21	6	Rock and Mineral Test , Folds	(186-193)		375-380
	27+28	7	Folds and Faults	(194-197)	[AV-33]	369-374
	12+13	8	Topographic and Geologic Maps			546-548
	19+20	9	Field Trip I (Structure to the south)			
	26+27	10	Field Trip II (Structure to the north)	(234-235)		391-394
Apr.	2+3	11	Field Trip III (Pleistocene glaciations)			
	9+10	12	Computer Applications			
	16+17	13	Maps and Aerial Photographs			
	23+24	14	Lab Exam (topographic and geologic maps)			

TEXT:

Earth: Portrait of a Planet, 3rd Ed., Stephen Marshak, Norton Publishing, 2008.

Internet web site: <http://wwnorton.com/studyspace>

LAB MANUAL

Exercises in Physical Geology, 12th edition, W. K. Hamblin and J. D. Howard, Prentice Hall, 2005.

NOTE:

Bring the laboratory manual to all laboratories except those times field trips are scheduled.

A pencil with eraser also should be brought to each laboratory period.

COMPUTER PROGRAMS ON THE MORAVIAN INTRANET

On all Moravian public computers at "Start – Programs – Moravian Courseware – Geology Programs –"

Most geology programs can be downloaded from "My Computer – S drive – Moravian Courseware – Geology Programs -"

PUBLISHER'S INTERNET RESOURCES Available from <http://wwnorton.com/studyspace>

FIELD TRIPS:

Three half-day field trips are scheduled. The trips usually are not cancelled unless the weather is most severe.

Consequently, students are advised to dress according to the prevailing weather and to keep in mind that temperatures in the mountains in the late afternoon are usually lower than those on campus at noon. Attendance on each field trip is required.

Trips depart from the front steps of the Hall of Science at 12:45 pm and return approximately 5:30pm. Field trips routes and summaries are on the web at http://home.moravian.edu/users/phys/mejg01/geology/field_trips/pages/field_trip_intro1.htm

and are pre-programmed into "Google Earth" on the Moravian College public computers.

COMPUTER: Students will run the DRILLBIT program and submit the completed assignment. The DRILLBIT assignment is due on the 35th class period

FINAL GRADE COMPOSED OF:

Rock & Mineral Quizzes	9 %	DRILLBIT assignment	10 %
Rock & Mineral Test	10 %	Lab Exam	15 %
Lecture Test 1	18 %	Final Lecture Exam	20 %
Lecture Test 2	18 %	Total	100 %

The academic policy stated on the appropriate pages of the most recent edition of the *Student Handbook* will prevail for all graded portions of this course.

ATTENDANCE POLICY:

Attendance will be taken in each class and laboratory period. Unexcused absences in excess of five will reduce the final average of a student at a rate of 1% per absence. Attendance for the field trips is required. Students have the responsibility to secure and present evidence of the nature of the excused absence.