

Date	Lc# - Day	Topic, Reading, Comment
14-Jan	1-Wed	<p>Course structure, grading practices, and establishing a routine. My expectations. What do we (you) know? First-day survey. Who we are (as a class)!</p> <p>Reading: Table of Contents, p. v-x; Preface, p. xi-xiv; examine Appendices A, B, and C and Glossary</p> <p>No Lab this week</p>
16-Jan	2-Fri	<p>The Big Bang, formation of the Solar System</p> <p>Reading: Ch. 1, emphasis on p. 6-11 Reading: Ch. 8, emphasis on p. 147-151</p> <p>In Lab next week: Geologic Time and Tour</p>
19-Jan	3-Mon	<p>No class. Martin Luther King Jr. Day observance</p> <p>Lab 1: Geologic time and Tour (explanation given last Friday)</p>
21-Jan	4-Wed	<p>Earth history - Telling time on a grand scale</p> <p>Reading: Ch. 1, emphasis on introductory material, p. 1-5; geologic time and uniformitarianism, p. 10-13 Reading: Ch. 4, emphasis on geologic time, p. 60-67</p> <p>Lab 1: Geologic Time and Tour</p>
23-Jan	5-Fri	<p>Formation of the Solar System and Early Earth: The physical process of the Hadean</p> <p>From Nebula to solid Earth to hot body</p> <p>Reading: Ch. 8, emphasis on p. 151-159</p> <p>In Lab next week: Earth Materials</p>
26-Jan	6-Mon	<p>Earth materials - Earth's Interior and structure of our planet</p> <p>Early bombardment and the making of continents and oceans</p> <p>Reading: Ch. 8, emphasis on p. 151-159</p> <p>Lab 2: Earth Materials</p>
28-Jan	7-Wed	<p>Early Earth: Rocks and processes of the Archean</p> <p>Pillow basalt and cratons and shields</p> <p>Reading: Ch. 1, emphasis p. 8-10, Figs. 1.4-1.8 Reading: Ch. 3, emphasis, p. 54-55 (more later)</p> <p>Lab 2: Earth Materials</p>
30-Jan	8-Fri	<p>Early Earth: Evidence of life in the Archean Eon</p> <p>Iron formations</p> <p>Reading: Ch. 8, emphasis on p. 159-164; Reading: Ch. 9, emphasis on p. 176-178</p> <p>In Lab next week: Plate Tectonics</p>
2-Feb	9-Mon	<p>Archean and Proterozoic Earth: Stromatolites and microbes</p> <p>Reading: Ch. 8, emphasis on p. 159-164; Reading: Ch. 9, emphasis on p. 176-180</p> <p>Lab 3: Plate Tectonics</p>
4-Feb	10-Wed	<p>Proterozoic Earth: Red beds and microbe diversification</p> <p>A recognizable Earth?</p> <p>Reading: Ch. 8, emphasis on p. 159-164; Reading: Ch. 9, emphasis on p. 176-180</p> <p>Lab 3: Plate Tectonics</p>
6-Feb	11-Fri	<p>Test 1 (in class) Lectures 1-10 and readings noted above</p> <p>Lab 3: Plate Tectonics</p>
9-Feb	12-Mon	<p>Earth Materials - Minerals and rocks and how they form</p> <p>Overview of the rock cycle, rock categories, and how to know what you're looking at</p> <p>Reading: Ch. 2, p. 16-34, Igneous and metamorphic</p> <p>Lab 4: Early Earth</p>
11-Feb	13-Wed	<p>Our Dynamic Earth - Plate tectonics</p> <p>Reading: Ch. 1, emphasis p. 8-9, 13, Figs. 1.7-1.8 Reading: Ch. 3, emphasis, p. 35-59</p> <p>In Lab next week: Early Earth</p>
13-Feb	14-Fri	<p>Earth materials - Minerals and rocks and how they form</p> <p>Reading: Ch. 2, p. 15-30, Sedimentary</p> <p>Sedimentary rocks - Interpreting ancient environments 1</p> <p>The archives of Earth history: Sedimentary structures, deformed strata (which way is up), and depositional environments</p> <p>Reading: Ch. 6, emphasis p. 101-111</p> <p>Lab 4: Early Earth</p>
16-Feb	15-Mon	<p>No class. President's Day observance</p>

		Lab 5: Litho- and Chronostratigraphy
18-Feb	16-Wed	Proterozoic Earth: Microbe diversification A more recognizable Earth Reading: Ch. 9, emphasis on p. 176-180 Lab 5: Litho- and Chronostratigraphy
20-Feb	17-Fri	The Proterozoic Eon: The Ediacaran Period Multicellular life abounds Reading: Ch. 9, emphasis on p. 180-184 In Lab next week: Depositional Environments
23-Feb	18-Mon	The Proterozoic Eon: The Ediacaran Period Multicellular life abounds Reading: Ch. 9, emphasis on p. 180-184 Lab 6: Depositional Environments
25-Feb	19-Wed	The Cambrian radiation - The small shelly fauna Marine invertebrates, animals without backbones Reading: Ch. 12, p. 232-235 Lab 6: Depositional Environments
27-Feb	20-Fri	Interpreting layered rocks - Time stratigraphy Interpreting time in the geologic record; and correlation Reading: Ch. 5, emphasis p. 91-98; review geologic time (Chs. 1 and 4) In Lab this week: Biostratigraphy
2-Mar	21-Mon	Fossils and fossil preservation - Becoming a fossil 1 Processes and examples (lagerstätte deposits) Reading: Ch. 5, p. emphasis 85-90; be aware of Appendix B (Classification of Life) Lab 7: Biostratigraphy
4-Mar	22-Wed	Fossils and fossil preservation - Becoming a fossil 2 Processes and examples (hard parts and traces) Reading: Ch. 5, p. emphasis 79-86; be aware of Appendix B Lab 7: Biostratigraphy
6-Mar	23-Fri	Test 2 (in class) Test on Lectures 11-21 and readings noted above In Lab next week: Fossils 1
9-Mar	24-Mon	Paleozoic Periods and Paleozoic geology Plate positions and the development of North American sedimentary sequences Reading: Ch. 5, emphasis p. 91-93; Ch. 10, emphasis p. 189-204, 206-207 Lab 8: Fossils 1
11-Mar	25-Wed	Early Paleozoic geology Plate positions and the development of North American sedimentary sequences Reading: Ch. 11, emphasis p. 209-220 Lab 8: Fossils 1
13-Mar	26-Fri	Late Paleozoic geology Plate positions and the development of North American sedimentary sequences Reading: Ch. 11, emphasis p. 209-220 The impact of Plate Tectonics - Earthquakes, volcanoes, economic geology Reading: Ch. 3, p. 35-59 In Lab in two weeks: Interpreting Geologic Maps
16-20 Mar	27-Mon 29-Fri	No classes. Spring Break In Lab next week: Interpreting Geologic Maps
23-Mar	30-Mon	Paleozoic Appalachian mountain building Early Paleozoic, Reading: Ch. 10, emphasis p. 204-207 Late Paleozoic, Reading: Ch. 11, p. 224-226 Lab 9: Interpreting Geologic Maps
25-Mar	31-Wed	Snowstorm Lab 9: Interpreting Geologic Maps
27-Mar	32-Fri	Red River Flooding In Lab next week: Evolution
1-Apr	34-Wed	Red River Flooding Lab 10: Evolution
		Paleozoic western North American mountain building

3-Apr	35-Fri	Late Paleozoic, Reading: Ch. 11, p. 211, 221-222, 224, 226-227 Lab 10: Evolution
6-Apr	36-Mon	Invertebrate Paleozoic life Marine invertebrates, animals without backbones, China, the Burgess Shale, and development of marine ecosystems in the Tippecanoe Reading: Ch. 12, p. 231-246, 268-270 In Lab: Fossils 1 and 2
8-Apr	37-Wed	TEST 3 (take home) (Test due in class at 10:00 a.m. next Wednesday) Test on Lectures 12-14 and 21-22, 24-25, 35-37 Kaskaskia life and plant evolution of the Paleozoic Reading: Ch. 13, emphasis on p. 260-270, 244-245 Reading: Ch. 12, p. 231-246, 268-270 Lab 11: Fossils 1 and 2
10-Apr	38-Fri	Good Friday Observance No class In Lab next week: Geologic Maps
13-Apr	39-Mon	Easter Observance No class Lab 12: Geologic Maps
15-Apr	40-Wed	TEST 3 (take home) due at 10:00 a.m. in class Vertebrate Paleozoic life, in the seas, in freshwater, and invasion of the land Evolution of vertebrate life and ecosystems Reading: Ch. 13, emphasis on p. 249-260, 268-270 Lab 12: Geologic Maps
17-Apr	41-Fri	Vertebrate Paleozoic life on land followed by the Permo-Triassic Extinction Event Development of ecosystems on land followed by mass extinction Reading: Ch. 13, emphasis on p. 249-260, 268-270 In Lab next week: Terrain Model
20-Apr	42-Mon	Geology of the Mesozoic Era - Eastern North America Geologic periods, breakup of Pangaea, sedimentation and mountain building in eastern and Gulf Coast North America Reading: Ch. 14, emphasis on p. 272-282, 293 Lab 13: Terrain Model
22-Apr	43-Wed	Geology of the Mesozoic Era - Western North America Sedimentation and mountain building to the West Reading: Ch. 14, emphasis on p. 282-293 Lab 13: Terrain Model
24-Apr	44-Fri	Evolution of life in the Mesozoic Era: Life after ecosystem collapse Invertebrates, plants, and dinosaurs Reading: Ch. 15, emphasis on p. 295-310, 320 In Lab next week: Terrain Model
27-Apr	45-Mon	Life of the Cenozoic Era Radiation of mammals and other tibits Reading: Ch. 18, p. 371-396 Lab 14: Terrain Model
29-Apr	46-Wed	Geology of the Cenozoic Era North American orogenies and sedimentation patterns Reading: Ch. 16, p. 327-345 Lab 14: Terrain Model
1-May	47-Fri	Geology of the Cenozoic Era, part 2 North American orogenies and sedimentation patterns Reading: Ch. 16, p. 327-345 In Lab next week: Terrain Model <i>North Dakota Academy of Science (Fargo, April 30)</i>
4-May	48-Mon	Cenozoic and Quaternary climate change (modern glaciations) Reading: Ch. 17, p. 347-369 Reading: Ch. 18, p. 390-394 (Ice-age animals and migrations) Lab 15: Terrain Model
6-May	49-Wed	Primate and hominid evolution - Life and death struggles Reading: Ch. 19, p. 397-410 Lab 15: Terrain Model
8-May	50-Fri	Paper Due TODAY (in lieu of Test 4): Due latest today by 4:00 p.m... on a topic related since the last test. See instructions provided. Please follow instructions carefully. The instructions provide format and grading information. Hopefully, you will want to turn the paper in early. Reading and Review Day
11-May	51-Mon	Final Exam (Test 4) Comprehensive test, but based importantly on covered material from Lectures 40 to 49

17-May	Mon	109 Leonard Hall, 10:15 a.m. (2 hours)
19-May	Tue	Final grade reports due at Twamley by noon
		Have a lovely summer.