

## GLY 2010 - Honors Physical Geology, Fall 2016

Time: MWF Period 5 (11:45-12:35)

Place: Williamson 210

Instructor: R. M. Russo

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Course Description: Nature is sublime, and the Earth is central to the human experience of awe inspired by the physical world. Deducing Earth's structure; its workings as a set of interlocking physical, chemical, and biological mechanisms; and the long term evolution of these processes and structures challenges the intellect and is magnificently beautiful. Come find out how our planet works - in detail - at all scales, and why it uniquely in all the known universe supports abundant, complex life. Emphasis will be on the processes that control the formation and modification of the Earth, especially plate tectonics and the evolution of the lithosphere, hydrosphere, and atmosphere from the time of Earth formation; sedimentary, igneous, and metamorphic rocks and minerals of the Earth's crust and upper mantle; interactions of the solid Earth with the atmosphere and hydrosphere (processes of weathering and mass wasting, hydrologic cycle, groundwater flow, climate change, glaciation) and resulting geomorphology, and coastal, riparian, and eolian systems; evolution of life on Earth; and processes and effects of solid Earth dynamics: volcanism, seismicity, and crustal deformation.

Grading Method: Four in-class exams 75%, weekly labs 25%.

Textbook: *Earth*, 5th Ed., by Marshak Web Site: [www.wwnorton.com/college/geo/earth5](http://www.wwnorton.com/college/geo/earth5)

Lab Textbook: *Laboratory Manual for Introductory Geology*, 3rd Ed. by Ludman & Marshak

Make up exams/work: by negotiation in advance with Prof ONLY.

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

Month	Day	Reading
August	22	Chapter 1: Solar System Formation
	24	Chapter 1: Solar System Formation
	26	Chapter 2: Earth Structure
	29	Chapter 3: Continental Drift
	31	Chapters 3-4: Continental Drift / Plate Tectonics
September	02	Chapter 4: Plate Tectonics
	05	LABOR DAY – <i>No Class</i>
	07	Chapter 5: Minerals
	09	Chapter 5: Minerals / Interlude A: Rocks
	12	Chapter 6: Igneous Rocks
	14	Chapter 6: Igneous Rocks
	16	<b>EXAM No. 1</b>
	19	Interlude B: Sediments / Chapter 7: Sedimentary Rocks
	21	Chapter 7: Sedimentary Rocks
	23	Chapter 8: Metamorphism
	26	Chapter 8: Metamorphism / Interlude C: Rock Cycle
	28	Chapter 9: Volcanoes
	30	Chapter 10: Earthquakes
October	03	Chapter 10: Earthquakes / Interlude D: Deep Earth
	05	Chapter 11: Mountain Building
	07	Chapter 11: Mountain Building

Month	Day	Reading
October	10	<b>EXAM No. 2</b>
	12	Interlude E: Life on Earth
	14	HOMEcomings – <i>No Class</i>
	17	Chapter 12: Geologic Time
	19	Chapter 12: Geologic Time
	21	Chapter 13: Earth History
	24	Chapter 13: Earth History
	26	Interlude F: Hydrologic Cycle
	28	Chapter 17: Streams
	31	Chapter 17: Streams
November	02	Chapter 18: Oceans
	04	Chapter 18: Oceans
	07	Chapter 19: Groundwater
	09	Chapter 19: Groundwater
	11	VETERANS DAY - <i>No Class</i>
	14	<b>EXAM No. 3</b>
	16	Chapter 20: Atmosphere
	18	Chapter 20: Atmosphere
	21	Chapter 21: Deserts
	23	THANKSGIVING break – <i>No Class</i>
	26	THANKSGIVING break – <i>No Class</i>
	28	Chapter 22: Glaciers & Ice Ages
	30	Chapter 22: Glaciers & Ice Ages
December	02	Chapter 23: Global Change

<b>Month</b>	<b>Day</b>	<b>Reading</b>
December	05	Chapter 23: Global Change
	07	<b>EXAM No. 4</b>
		<b>NOTE: NO FINAL EXAM</b>