Introduction To Earth Science

ENV 1050 Course Syllabus – Fall 2006

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Office hours: Scheduled office hours are from 8:30 to 9:30 on Wednesday and Thursday; otherwise, stop in anytime or schedule an appointment. Location: 307 Bentley.

Lecture: Tuesday and Thursday, 10:00 to 11:15, in 203 Bentley

Laboratory: Monday, 1:00 to 3:00, in 102 Bentley

Texts: Tarbuck, E.J. and F.K. Lutgens, 2006. *Earth Science*, Eleventh Edition, Prentice Hall, New Jersey, 726 pages.
AGI/NAGT, 2006. *Laboratory Manual in Physical Geology*, Seventh Edition, Prentice-Hall, New Jersey, 302 pages.

Assessment:

20%	First Exam:	Thursday, 28 September 2006
20%	Second Exam:	Thursday, 9 November 2006
25%	Final Exam:	8:00 a.m., Thursday, 21 December 2006
35%	Laboratories:	Expect a variety of quizzes and exercises

- Two-minute quizzes will be given throughout the semester at the beginning of the class period.
- All exams and quizzes are cumulative – the pyramid exam style will be used in this class.
- Everything counts – no grades are dropped.
- All material submitted for a grade must be presented in professional form – type everything.
- Assignments are due at the beginning of the class period – otherwise they are late.
- For each calendar day (24-hour period) an assignment is late it will be down graded by 10%.
- Day-long, field trip on Saturday, 28 October 2006 – please make note in your calendar.

Objectives: Introduction to Earth Science will expose you, the student, to the principles that underlie our understanding of how and why the Earth evolves. You will learn about the wide variety of processes associated with geological activity and begin to develop an appreciation for geological time, plate tectonics, and many of Earth's cycles. This knowledge may help you make intelligent decisions about events that affect humankind.

Comments: It is expected that you will **read** appropriate sections of the textbook and **attend** all laboratory sessions; use the laboratory manual as a secondary textbook. I shall cover the material in the books during lectures and augment it with examples not cited in either text.

Please **read** the appropriate sections of both books **prior** to attending lecture, keep **good lecture notes**, **ask questions in class**, and **come see me** if you are having any difficulties. Please, do not wait to seek additional assistance in this course. Be prepared for lecture and lab – **read the material first**.

Students with a documented disability who require accommodations should acquire an Academic Accommodations Form from Academic Support Services (see Dian Duranleau, Dewey 123, phone 635-1264). Students at Johnson State College are expected to be honest in all their academic work. You are responsible for knowing what specific acts constitute plagiarism. If you are unsure, then consult me, or read the Undergraduate Catalogue. Academic dishonesty in any form is prohibited and unacceptable.

(course outline on reverse)

ENV 1050 Course Outline – Fall 2006

Week	Lecture Topics	AGI/NAGT 7th ed. Lab Manual	T & L, 11th ed. Textbook
1	Introduction to Earth science	1-11	2-6, 9-24
	The nature of science		7-9
	Topographic maps	x-xi,19,167-191,198-199	684-686
2	Origin of the universe		449-450, 640-643, 663-680
	Origin of the solar system and Earth		336-339, 612-635
	Minerals and rocks	47-76	52-54
3	Atoms, bonding, and symmetry		30-47
	Geologic time and relative dating	151-157	310-322, 327-331
4	Unstable isotopes and absolute dating	160-162	322-327
	Earthquakes and the interior of the Earth	38, 291-302	14-18, 188-212
5	Magnetism and magnetic reversals	additional	237-241
	First Exam: Thursday, 28 Sep 06	-	*(all of the above)*
6	Gravity and isostacy	23-29	302-304
	Fall Recess begins – last class is Tuesday		
7	Winter Recess ends – classes resume on Wednesday		
	Plate tectonics	30-37	18-19, 216-225
8	Plate tectonics	42-46	226-246, 295-302, 364-376
9	Plate tectonics and igneous rocks	77-86, 91-110	54-61, 273-280
	Volcanoes and volcanic processes		250-273
10	Weathering, soils, and mass wasting		84-112
	Glacial processes and landforms	245-263	154-173
	Sedimentary rocks and structures	111-132, 264-265	61-69
11	Surface water and sedimentary environments	210-229, 265-277	116-133, 173-184
	Second Exam: Thursday, 9 Nov 06	-	*(all of the above)*
12	Groundwater and Karst topography	230-244	133-149
	Oceans, tides, and eustacy	278-290	384-389, 404-431, 604-606
13	*Thanksgiving Recess*	-	-
14	Metamorphic rocks and rock deformation	133-150, 195-209	69-74, 284-294
	Atmospheric structure and composition		436-443
15	Climate, weather, and seasons	additional	443-448, 560-563
	Atmospheric temperature		450-460, 573-581
	Atmospheric moisture, clouds, and precipitation		466-473, 480-496
16	Air pressure, wind, and circulation	additional	502-518
	Air masses, fronts, and severe weather		474-476, 518-522, 528-554
F	*Cumulative final exam: 8:00 a.m., Thursday, 21 December 2006 (no make-ups and no excuses)*		

Weekly laboratory exercises are underlined.
Please use the index in the back of the textbook for additional reading.

We shall modify and improve upon the course outline as the term progresses.