Earth Science 104

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Beginning fourth year at WOU
14 years college teaching experience
Master of Science in Geology

Syllabus

Earth System Science I (ES 104)
Fall 2007—Syllabus
Western Oregon University
Natural Science Building, Room 101
Tuesday and Thursday, at 9:30-10:50
Instructor: Karen Brown
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Office Hours: Monday: Noon to 3:20 PM
Wednesday: 2 to 3:20 PM
Or by appointment.

Goal:
Understand the character and formation of the Solar System; become familiar with the processes of the interior of Planet Earth, including plate tectonics, earthquakes and volcanism; and investigate the properties of Earth materials.

Textbook:
Earth Science

Grading:

Midterm exam
75 points
October 18

Final exam
125 points
Thursday, Dec 6, 8:00 to 10:00 AM

In-class activities
40 points total
Cannot be made up for any reason

Review Questions
60 points total (30 points each)
Due on Exam days

Lab
100 points
Percent from lab instructor
YOU MUST PASS

Points Percent Letter grade
400-360 100-90% A
359-320 89.9-80% B
319-280 79.9-70% C
279-240 69.9-60% D
Less than 240 Less than 60% F

(Plus and minus grades may be assigned at the instructor’s discretion.)

If you are having problems attending class, contact me as soon as practicable. If you know ahead of time that you will not be in class for an exam, contact me before the exam to make some arrangements. If you miss an exam without prior notice, please have some written evidence of your emergency situation, or use the Office of Student Affairs to communicate. I am understanding, but need verification of each case.

If you find yourself unable to complete this class, due to personal circumstances, you may request a grade report of ‘incomplete’. You must be passing when you request this; you must go through Office of Student Affairs to verify your situation; and you must sign a plan of completion with me. See page 22 of the WOU 2007-08 Catalog for details.

Schedule

Date Topic Chapter Pages Review questions
25-Sep Introduction To Earth Science 104
1-10, 12-14, 20-24 Ch 1: 1, 2, 4, 7

Box 1.1 on 4-5

10-12, 14-19, Ch 1: 9, 10, 13, 16, 6

21

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21, 22

586-596 Ch 21: 2-4, 8, 11

2-Oct Celestial Motion, Earth-Moon System
597-606, 615-618 Ch 21: 14-20; Ch 22: 4-6

4-Oct Planets of our Solar System
612-614, 619-629 Ch 22: 1, 2, 7, 8, 12, 14-16, 19

9-Oct Minor member of Solar System, Light, Telescopes
629-635, 640-649 Ch 22: 20-25; Ch 23: 1, 2, 7, 9, 11

11-Oct Sun, Stars
649-655, 660-667 Ch 23: 19-25; Ch 24: 1, 2, 5-7

16-Oct Stellar evolution, Galaxies
667-680 Ch 24: 15, 17, 19, 21, 22

18-Oct Exam BRING SCANTRON Review questions due
23-Oct Continental Drift and Plate Tectonics
215-225 Ch 8: 1, 2, 4, 5, 7, 8

25-Oct Plate Boundaries, Mechanism of Plate Motion
226-245 Ch 8: 9-14, 18, 19, 21

30-Oct Earthquakes, Seismology
187-199 Ch 7: 1, 2, 4, 8, 10, 13

1-Nov Earthquake Effects
199-211 Ch 7: 11, 15-20, 23

6-Nov Minerals
30-46 Ch 2: 1, 2, 4, 8, 9, 11-14

8-Nov Rock Cycle, Igneous Rocks, Mineral Resources
52-61, 74-78 Ch 3: 1-5, 17-18

13-Nov Volcanoes
250-267 Ch 9: 1-5, 8-10, 12

15-Nov Intrusive Processes, Plate Tectonics and Magmas
267-279 Ch 9: 19-24

20-Nov Video: Birth of a Theory

27-Nov Rock Deformation
284-294 Ch 10: 1-3, 6-8, 10, 12, 13

29-Nov Mountain Building
294-304 Ch 10: 14-15, 18, 20

6-Dec Final Exam--8 AM BRING SCANTRON Review questions due

Get a Large ‘Blue Book’ to do the review questions!

Reading: Chapter 1, p. 1-10, 12-14, 20-24, Box on 4-5

Pollution, Hazards

Population Growth

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**Scientific Inquiry**
- Gather data
- Formulate plausible explanations
- Devise tests and predictions
- Revise, reject or accept explanations

**Hypothesis vs. Theory**
- Hypothesis is an explanation that requires testing
- Theory has been tested, and is supported by the evidence, and predicts things not used to formulate the hypothesis
- Paradigm is a theory that explains wide ranging sets of observations

**Data Collection**

**Scales of Space and Time**
• No lab this week
• Must pass lab to pass this class
• Instructors will give percent lab grade to one another