

*Geology 251 Sect. 2 Syllabus; Spring, 2014*

<b>GEOL251 Section 2</b>	<b>Spring, 2014</b>	<b>Earth and Space Systems Laboratory</b>
<b>Dr. Scott Werts</b>		<b>Office: Sims 212A</b>
<b>Course Classroom: Sims 201</b>		<b>Meeting Time: MW 11 – 12:15</b>
<b>Email: <a href="mailto:wertss@winthrop.edu">wertss@winthrop.edu</a></b>		<b>Office Hours: TR 9:30-11</b>
<b>Lab Manual:</b> Download and print out activities from the GEOL 251 Web page at <a href="http://chem.winthrop.edu">chem.winthrop.edu</a>		<b>Office Phone: 323-4930</b>

**Co-Requisite:** Geol 250 (Earth and Space Systems Lecture).

**Course Goals and Objectives:** The objective of this course is to give the students a basic understanding of the composition and structure of the earth and space systems through investigations and experimentation. Topics are introduced in GEOL 250 and students work through investigative applications of those topics in GEOL 251.

This course, combined with GEOL 250, fulfill 4 hours of the general education requirement for natural science courses at Winthrop University. The general education requirements met by this course are included below.

1. **Students should be conversant with a few fundamental concepts from among the three main areas of natural science, including Earth, life, and physical sciences.** In this course, some example topics that meet these requirements will include astronomy, weather systems, plate tectonics, earthquakes, soil formation (with biological influences) and biostratigraphy.
2. **Students should be able to apply the scientific methodologies of inquiry.** Students in this course will perform many experiments and testing strategies on both solid and liquid earth materials.
3. **Students will be able to discuss the strengths and limitations of science.** This will be accomplished through discussions of scientific methodology, our understanding of space and time and the very definition of the natural world.
4. **Students will demonstrate an understanding of the history of scientific discovery.** Discussions of the development of the theory of plate tectonics, radioactivity and geologic time will be featured prominently as well as the timing of our understanding of climate change.
5. **Students will be able to discuss the social and ethical contexts within which science operates.** In this course, we will be discussing aspects of air, soil and water pollution as well as domestic energy policy in relation to our personal responsibility and societal needs.
6. **Students will be able to communicate about scientific subjects.** Several homework and in class assignments will ask students to explain and expand on many of the subjects covered in both lecture and reading assignments.

7. **Students will be able to discuss the application of scientific knowledge to the social sciences and to non-scientific disciplines.** For example, this class will provide students insight into energy policy and environmental justice and basic information regarding considerations when purchasing a home (flood zones, soil types, land movements, etc.)

**Course Attendance:** There will be no makeup quizzes or laboratory exercises without prior arrangement from the instructor *and/or* documentation of an emergency that necessitates the student missing class. If you are in danger of missing class, it is best if you notify me by email or phone message as soon as possible.

Lab write-ups will be due exactly one week from their issuance at the beginning of class. For each day a lab is late after the due date, a deduction of 2 points will be applied.

**Course Grading:** Your grade for this course will be based on the following distribution of work:

<b>19 Laboratory Assignments</b>	<b>10 Pts. Each</b>	<b>190 Pts.</b>
<b>7 Quizzes</b>	<b>10 Pts. Each</b>	<b>70 Pts.</b>
<b>Total</b>		<b>260 Pts.</b>

The scheduled quizzes will be both practical exercises in rock and mineral terminology and identification and test some of the basic ideas and terminology from the preceding labs. The quizzes on metric conversions, weather, groundwater and rocks may not be repeated. The identification quizzes on mineral specimens may be repeated once to attempt to improve your score.

Some of the assignments will be turned in on Turnitin.com, a website designed for online grading and plagiarism analysis. The turnitin class ID for this course is **7498360**.

The dates for the exams are included below. There will be no make-up exams or quizzes without prior arrangement from the instructor *and/or* documentation of an emergency that necessitates the student missing class. If you are in danger of missing class, it is best if you notify me by email or phone message as soon as possible.

Grades for the course will be determined based on the following grading scale:

A	< 89%
B	80 - 89%
C	70 – 79%
D	60 – 69%
F	> 59%

A grading curve may be applied at the instructor's discretion, but the point value required for a particular grade will never be more than indicated above. A grade average above 89% of points earned for the course will always equal an A.

Opportunities for extra credit may be offered at the instructor's discretion. If an extra credit assignment becomes available, further details and instructions will be provided.

**Statement on Cheating:** Your grade in this course will be based solely on your work alone. Any attempt to copy another student's answers during tests or quizzes or any use of unauthorized materials (cheat sheets/information stored on calculators/etc.) during test and quiz time is strictly forbidden and could result in an "F" for the entire course in conjunction with other unpleasant administrative actions. Unethical behavior with regard to course material will not be tolerated.

**Students with Disabilities:** Winthrop University is dedicated to providing equal access to education for all students. If you have a disability and need classroom or testing accommodations, please contact Gena Smith, Coordinator, Services for Students with Disabilities, at 323-3290 as soon as possible. Once you have your professor notification, please tell me immediately so that I am aware of your accommodations.

**Course Schedule (Tentative):**

<b>Date/Day</b>	<b>Activity</b>	<b>Notes</b>
Jan-13	<i>No Lab</i>	
Jan-15	Metric Conversions	
Jan-20	<i>MLK Holiday – No Class</i>	
Jan-22	Apparent Solar Movement	Quiz #1 – Metric Conversions
Jan-27	Earth Atmosphere (Part 1)	
Jan-29	<i>No Lab</i>	
Feb-3	Seasonality	
Feb-5	Weather (Part 1)	
Feb-10	<i>No Lab</i>	
Feb-12	Weather (Part 2)	
Feb-17	Streams	Quiz #2 - Weather
Feb-19	Groundwater (Part 1)	
Feb-24	Groundwater (Part 2)	
Feb-26	Atmosphere (Part 2)	Quiz #3 - Groundwater
Mar-3	Earth Composition Lab	
Mar-5	Plate Tectonics (Part 1)	
Mar-10	<i>No Lab</i>	
Mar-12	Topographic Maps	
Mar-17	<i>No Lab—Spring Break</i>	
Mar-19	<i>No Lab—Spring Break</i>	
Mar-24	Minerals	
Mar-26	Igneous Rocks	Quiz #4 - Minerals
Mar-31	Weathering	Quiz #5 – Igneous Rocks
Apr-2	Soils and Sediments	
Apr-7	Sedimentary Rocks	
Apr-9	Metamorphic Rocks	Quiz #6 - Sedimentary Rocks
Apr-14	<i>No Lab</i>	
Apr-16	Seismology	Quiz #7 Metamorphic Rocks
Apr-21	Coastal Processes	
Apr-23	Geologic Time	
Apr-28	Geologic Time (2)	
	<i>There is no final exam in this course</i>	