Instructor: Nels Forsman, Leonard Hall 322B, ph. 777-4349  
email: nels_forsman@und.nodak.edu

Lecture: 10:00 - 10:50 MWF, Leonard 100


HomePage: http://hello.to/gaia (or: http://www.und.nodak.edu/instruct/nforsman)

Grading: Semester exams, three, totaling 50% of the grade; (lowest exam counts 10%, other two exams count 20% each)  
Comprehensive final exam counts 30% of the grade.  
Special homework, quizzes and adherence to course policies is 10% of the grade  
Compliance with the Knowledge Survey* process counts 10% of the grade  
So, 10 + 20 + 20 + 30 + 10 +10 = 100

Course Objectives:

1. To gain an understanding of Earth— its materials, processes, systems, and history.  
2. To help you understand how conclusions are reached in science.  
3. To appreciate the relevance of geologic knowledge to ourselves and our societies.  
4. To be able to communicate our geologic knowledge to others.

Order of Topics:

<table>
<thead>
<tr>
<th>Assigned Reading:</th>
<th>Order of Topics:</th>
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<tbody>
<tr>
<td>Course Introduction Chapter 1</td>
<td>Course Introduction</td>
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<tr>
<td>Earth as a Planet Chapter 1</td>
<td>Earth as a Planet</td>
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<tr>
<td>Minerals Chapter 3</td>
<td>Minerals</td>
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<td>Igneous Rocks Chapter 4</td>
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<tr>
<td>Volcanism Chapter 5</td>
<td>Volcanism</td>
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<tr>
<td>Weathering and Soil Chapter 6</td>
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Exam #1 — Wednesday, September 21

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<tr>
<th>Assigned Reading:</th>
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<tr>
<td>Sedimentary Rocks Chapter 7</td>
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<tr>
<td>Metamorphic Rocks Chapter 8</td>
<td>Metamorphic Rocks</td>
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<tr>
<td>Geologic Time Chapter 9</td>
<td>Geologic Time</td>
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<tr>
<td>Fossils Chapter 9</td>
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<tr>
<td>Streams Chapter 16</td>
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Exam #2 — Friday, October 14

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<th>Assigned Reading:</th>
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<tr>
<td>Mass Wasting Chapter 15</td>
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<tr>
<td>Glaciers Chapter 18</td>
<td>Glaciers</td>
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<tr>
<td>Groundwater Chapter 17</td>
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<tr>
<td>Shorelines Chapter 20</td>
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Exam #3 — Wednesday, November 9

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<tr>
<th>Assigned Reading:</th>
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<tr>
<td>Earth Structures/Deformation Chapter 10</td>
<td>Earth Structures/Deformation</td>
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<tr>
<td>Earthquakes Chapter 11</td>
<td>Earthquakes</td>
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<tr>
<td>Plate Tectonics Chapter 2, 13, 14</td>
<td>Plate Tectonics</td>
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<tr>
<td>Resources Chapter 21</td>
<td>Resources</td>
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</tbody>
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Final Exam (comprehensive) — 8:00 a.m., Monday, December 12, room 100 Leonard Hall
Course Policies/Characteristics.

1. You must have the correct textbook.
2. Deadlines are important. Late work will receive only **partial credit or none**.
3. Lecture attendance is important. Traditionally, students who miss lectures do not do well on exams in this course. **You** are responsible for obtaining the information presented during classtime, regardless of your reason for missing class.
4. You are required to be present for exams. No makeup exams will be given.
5. All work turned in **must be original**: feel free to work together to understand homework assignments, but **always turn in independent results**. Do not copy from each other, and do not copy from the text or from the internet. **Learn** the material, then turn away from your classmate and close the book as you compose your answer. **Any** exceptions will be judged as cheating. Make yourself familiar with the UND Code of Student Life.
6. You are encouraged to form study groups with your classmates.
7. **Do not turn in paper with frayed edges.** If you use spiral notebook paper, trim it before turning it in. Also, **staple pages**-- do not use "dog-ears". [buy a stapler]
8. All writing you turn in for this course **must be written as if educating a layperson reader**. This may seem a chore, but it will help your learning.
9. This course receives General Education credit in Mathematics, Science, and Technology. Please review UND’s General Education goals described beginning on page 25 of the UND Academic Catalog. Please be reminded that all writing you do in this course will be expected to meet a certain standard of competency and quality. If you have particular problems with writing, you are encouraged to seek assistance from the Writing Center, room 12 Merrill Hall, phone 777-2795.
10. **There will be no “extra credit” to make up for earlier performance.** “Extra” credit can be acquired only after mastery of material has already been demonstrated.
11. Each exam is semi-comprehensive. And the final exam is fully comprehensive. This means that tests may contain information from throughout the semester. Therefore recognize that long term retention comes from genuine understanding and an ability to visualize, as well as an ability to teach others. For best learning, try to engage the long-term memory "portion" of your brain. i.e., replace "memorization" with "visualization". Do a lot of writing, sketching, and talking about the information in this course. Writing as if to a layperson, especially, is a great way to consolidate information, to organize your memory for long-term storage and retrieval, to become an "owner" of information.

Additional Study tips:

You will learn many new terms and concepts in this course. Geology is a very visual science, so it helps if you can make your brain “see” what the geologic term is referring to. For instance, when learning the meaning of the word “tarn”, it helps if you can “see” a tarn in your mind’s eye. And this next tip is especially important: Always connect **features** (things) with the **processes** that formed them. In this way, you can become an owner of knowledge, not just a memorizer of facts. Try always to see connections. Don’t simply memorize things just before exams.

It is a good idea to keep a list of new terms, and add to this list throughout the semester. You can go to each term or phrase in the list one at a time, and check yourself for level of understanding. Can you “see” the feature? Can you connect that feature with the process that formed it? Can you teach someone else about it?
My posted office hours this semester are 10:00-12:00 MWF. I am normally available at other
times as well. I am also normally quick to respond to email. All students are welcome! to seek
assistance from me, whether it be to check your notes, to clarify concepts, to suggest study aids,
or to assist with homework. If you need help, please come and get it!

‘The Knowledge Survey:

• Provides helpful feedback to instructors about the conduct of their course.
• Provides to students a complete disclosure of course contents and expectations.
• Provides a study guide for students.
• Is a good thing, with no real negatives for anyone.

To comply with the Knowledge Survey process, which is conducted on-line, you must first
register at:

http://www.ks.und.edu/register.php

The instructions there are very clear, so just do what it says.

After registering, you will take Round 1 of the knowledge surveys, spaced throughout the
semester, by going to:

http://www.ks.und.edu

Note that each knowledge survey will have a narrow time window for completion. Once
the deadline for taking a given survey has passed, that survey can no longer be taken. The
times and deadlines for surveys will be announced in class, and posted on the course homepage.

The knowledge surveys are not graded; that is, the answers you give do not affect your grade in
any way. The Round 1 surveys are simply a “before” look at your understanding of topics in the
course. Each knowledge survey discloses all of the topics that will be covered prior to the next
exam. And the questions are worded in a way that reveals the instructor’s expectation of your
understanding. So these surveys are very good study guides for exams. You should use these
study guides frequently and repeatedly; they are a roadmap of the course, and will greatly assist
you in learning the course material.

At the end of the semester, your “before” results will be compared with an “after” look; that is,
just prior to the final examination, you will complete Round 2 of the knowledge survey, which
repeats the questions from all the Round 1 surveys, but this time you’ll be answering those
questions after having had the course.

This process helps inform instructors about how to adjust their coverage of topics. Results from
student knowledge surveys may reveal that certain topics require little class time, or that other
topics may require expanded treatment in class. So these surveys help instructors fine-tune their
courses for student needs. The surveys are quite easy to take, typically requiring less than 15
minutes of a student’s time for each survey. And students can take them wherever they have
access to the internet.

It is crucial that each student actually read and carefully consider each knowledge survey
question before selecting an answer choice for that question. The process is otherwise of very
little benefit to either the student or the department.