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Fall 9-2015

### GEO 101N.50: Introduction to Physical Geology - Online

Kathleen M. Harper

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# **Introduction to Physical Geology (GEO 101N, Sect. 50, 3 credits) Fall, 2015**

Instructor: Dr. Kathleen Harper  
email: [kathleen.harper@umontana.edu](mailto:kathleen.harper@umontana.edu)

**Virtual office Hours: Monday and Wednesday 9-10AM or by appointment.** Please do not hesitate to contact me by email to arrange a different meeting time to have a web conference meeting.

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**Course Description:** This course is an introduction to geosciences; the study of how Earth works. Humans around the world are impacted every day by interaction with our planet, including geologic hazards and access to natural resources. This course will help you to develop your understanding of both the physical processes that have gone into making the Earth what it is today, and an awareness of how Montana fits into the global picture.

**Course Objectives:** describe, analyze, and assess the geologic features, events, and processes that impact your daily life

- use evidence (e.g., from graphs, rocks, maps, etc.) to support an interpretation or explain a concept
- understand the general principles associated with the discipline of geosciences including:
  - 1) Geoscientists use repeatable observations and testable ideas to explain and understand our planet
  - 2) Earth is 4.6 billion years old and has a complex and varied history
  - 3) Earth is a complex system of interacting rock, water, air, and life
  - 4) Earth is continuously changing, primarily due to active plate tectonics
  - 5) Humans depend on Earth for resources that are formed by geologic processes
  - 6) Natural hazards pose risks to humans and must be understood in order to minimize and mitigate risks
  - 7) Geologic processes have impacted the development of human civilization and the actions of humans can significantly impact the Earth

## **Required materials:**

1) <b><u>Essentials of Geology (4<sup>th</sup> Edition)</u>, Steven Marshak (ISBN: 978-0-393-91939-4), including online access to Norton Smartwork website</b>
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**Textbook:** Both the textbook and access to the Norton Smartwork website are essential for this course. There is an ebook option (see [wwnorton.com](http://wwnorton.com)). Access to the Norton Smartwork website access is included with a new text and some used texts (if access card has not been previously used), or can be purchased separately online at [wwnorton.com](http://wwnorton.com) for a small fee. For registration info, see [Smartwork Assignments](#) below. New textbooks at the bookstore have a free Geotours workbook packaged with them. The workbook is optional – duplicate information can be accessed online. So if you have purchased a textbook without the workbook, you will still have the info you need.

**Moodle:** You can log into Moodle by going to UMonline from the UM homepage and entering your NetID and password. You will see your courses listed when you enter Moodle. If you have technical problems with Moodle, call the UMonline Techs at 243-4999 (during regular working hours only) or send them an email at [umonline-help@umontana.edu](mailto:umonline-help@umontana.edu)

**Smartwork and Geotours:** Online Assignments need to be completed on Smartwork (follow link from course page on moodle). **A two-week free trial is available**, if you need more time to purchase your book/access or if you are not sure you will stay in the course.

To access the online assignments, create a SmartWork account and self-enroll into our class following the "First Time User" instructions at <http://smartwork.wwnorton.com>. Please enter your name **as it appears in the university directory (no nicknames, please!)** and your **UM email address!**

**The Smartwork enrollment key for this course is ESSGEO4E8345**

You will have three attempts with no time limit to correctly answer each of the questions in the Smartwork assignments. Your grade will be visible immediately in the Smartwork gradebook. I will transfer these periodically to the Moodle gradebook.

Google Earth Geotour assignments (on course schedule) should also be submitted via the Smartwork website. If you do not have a paper workbook, you will use the instructions and text for Geotours on Smartwork. There is no time limit for Geotours – you will have three attempts at each question.

**Please note that the Norton website has its own technical support staff.** Please do not email me for technical support or help with your Smartwork account access. They are available for extended hours including evening and weekend hours, by online chat or by email. The online chat option (most efficient way to get your question answered!) will appear after you have submitted the online help request form. Please do let me know if you think your responses have been scored incorrectly or have a question about the accuracy of an exercise, or if you have trouble getting the assistance you need.

**Assessment:**

<b>Item</b>	<b>Percent of course grade</b>
Midterm (2) and Final Exams	30
Smartwork Quizzes	30
Other assignments	15
Threaded discussions	15
Geotours (7 total)	10
<b>Total</b>	<b>100</b>

**Final grade:** This course must be taken for a traditional letter grade to apply it to Gen Ed.

A minimum of C- must be earned to apply the course for Gen Ed credit.

The following scale can be adjusted at my discretion.

A 93-100%	A- 90-92%	B+ 87-89%	B 83-86%	B- 80-82%
C+ 77-79%	C 73-76%	C- 70-72%	D+ 67-69%	D 63-66%
D- 60-62%	F 59 or below			

**Extra Credit** – Extra Credit options up to 5% of the course grade will be offered.

**Communication:** Please note that I will only use your official UM email to communicate with you. This is required to comply with FERPA (the Federal Educational Rights and Privacy Act). Email is the preferred way to contact me – a message left on my office phone will take longer to reach me. **It is your responsibility to make sure you read messages sent to your UM email address.**

**Studying & Time Expectations:** A standard benchmark for studying for a college science class is **3-4 hours/week for each semester credit hour**. This means that for our 3-hour class, you should plan to spend 9-12 hours per week. Part of that time you will be reading the textbook chapters. Some of the time will be spent working on Smartwork quizzes, Geotours, and other assignments, or participating in discussions.

**Students with Disabilities:** Whenever possible, and in accordance with civil rights laws, the University of Montana will attempt to provide reasonable modifications to students with disabilities who request and require them. Please feel free to setup a time with me to discuss any modifications that may be necessary for this course. For more information, visit the Disability Services for Students website at [www.umt.edu/dss/](http://www.umt.edu/dss/)

**Academic Integrity:** All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the Student Conduct Code. The Code is available for review online at [http://life.umt.edu/vpsa/student\\_conduct.php](http://life.umt.edu/vpsa/student_conduct.php)

## GEO101-50 Fall, 2015 Course Schedule

Week	Week starting	Chapter in <i>Essentials</i>	Checklist of all activities
<b>One</b>	Mon, Aug. 31	none	<input type="checkbox"/> Introductions Forum – <b>by Thurs. 9/6 9PM</b> <input type="checkbox"/> View Scientific Process video <input type="checkbox"/> Syllabus quiz – by Mon 9/7 midnight <input type="checkbox"/> Week One Forum
<b>Two</b>	Mon, Sept. 7	Ch. 1 Prelude and The Earth in Context	<input type="checkbox"/> Reading – Prelude and Chapters 1 in text Assignments due Sunday 9/13, midnight <input type="checkbox"/> Smartwork Ch. 1 (on Norton Website) <input type="checkbox"/> Activity of the week - TBA <input type="checkbox"/> Week Two Forum*
<b>Three</b>	Mon, Sept. 14	Ch. 2 Plate Tectonics	<input type="checkbox"/> Reading – Ch. 2 in text Assignments due Sunday 9/20, midnight <input type="checkbox"/> Smartwork Ch. 2 <input type="checkbox"/> Geotour B: Plate Tectonics <input type="checkbox"/> Activity of the week – Google Earth Exploration <input type="checkbox"/> Week Three Forum*
<b>Four</b>	Mon, Sept. 21	Ch. 3 Earth Materials and Ch. 4 Igneous Environments	<input type="checkbox"/> Reading – Ch. 3 and Ch. 4 in text Assignments due Sunday 9/27, midnight <input type="checkbox"/> Smartwork Ch. 3/4 <input type="checkbox"/> Activity of the week – Asbestos in Libby, Montana <input type="checkbox"/> Week Four Forum*
<b>Five</b>	Mon, Sept. 28	Ch. 5 Volcanoes	<input type="checkbox"/> Reading – Ch. 5 in text Assignments due Sunday 10/4, midnight <input type="checkbox"/> Smartwork Ch. 5 <input type="checkbox"/> Geotour E: Volcanoes <input type="checkbox"/> Activity of the week –Eruption of Mount Saint Helens <input type="checkbox"/> Week Five Forum*
<b>Six</b>	Mon, Oct 5	Ch. 6 Sedimentary Rocks and Ch. 7 Metamorphic Rocks	<input type="checkbox"/> Reading – Interlude B (B.1 and B. 2 only) Ch. 6 and Ch. 7 in text Assignments due Sunday 10/11, midnight <input type="checkbox"/> Smartwork Ch. 6 <input type="checkbox"/> Exam 1
<b>Seven</b>	Mon, Oct. 12	Ch. 10 Geologic Time	<input type="checkbox"/> Reading – Ch. 10 in text Assignments due Sunday 10/18, midnight <input type="checkbox"/> Smartwork Ch. 10 <input type="checkbox"/> Geotour J: Geologic Time <input type="checkbox"/> Activity of the week TBA <input type="checkbox"/> Week Seven Forum *

Unit	Week of	Chapter in <i>Exploring Geology</i>	Checklist of all activities
<b>Eight</b>	Mon, Oct. 19	Ch. 9 Deformation and Mountain Building	<input type="checkbox"/> Reading – Ch. 9 in text Assignments due Sunday 10/25, midnight <input type="checkbox"/> Smartwork Ch. 9 <input type="checkbox"/> Geotour I: Geologic Structures <input type="checkbox"/> Activity of the week TBA <input type="checkbox"/> Week Eight Forum*
<b>Nine</b>	Mon, Oct. 26	Ch. 10 Earthquakes	<input type="checkbox"/> Reading – Ch. 10 in text Assignments due Sunday, 11/1, midnight <input type="checkbox"/> Smartwork Ch. 10 <input type="checkbox"/> Activity of the week TBA <input type="checkbox"/> Week Nine Forum*
<b>Ten</b>	Mon, Nov. 2	Ch. 12 Energy and Mineral Resources	<input type="checkbox"/> Reading – Ch. 12 in text Assignments due Sunday 11/8, midnight <input type="checkbox"/> Smartwork Ch. 12 <input type="checkbox"/> Geotour L: Earth Resources <input type="checkbox"/> Activity of the week TBA <input type="checkbox"/> Week Ten Forum*
<b>Eleven</b>	Mon, Nov. 9	Ch. 14 Streams	<input type="checkbox"/> Reading – Ch. 14 in text Assignments due Sunday 11/15, midnight <input type="checkbox"/> Smartwork Ch. 14 <input type="checkbox"/> Exam 2
<b>Twelve</b>	Mon, Nov. 16	Ch. 16 Groundwater	<input type="checkbox"/> Reading – Ch. 16 in text Assignments due Sunday 11/22, midnight <input type="checkbox"/> Smartwork Ch. 16 <input type="checkbox"/> Activity of the week TBA <input type="checkbox"/> Week Twelve Forum*
<i>Thanksgiving Week -- Take a breather!</i>			
<b>Thirteen</b>	Mon, Nov. 30	Ch. 18 Glaciers and Ice Ages	<input type="checkbox"/> Reading – Ch. 18 in text Assignments due Sunday 12/6, midnight <input type="checkbox"/> Smartwork Ch. 18 <input type="checkbox"/> Geotour R: Glacial Features <input type="checkbox"/> Activity of the week TBA <input type="checkbox"/> Week Thirteen Forum*
<b>Fourteen</b>	Mon, Dec. 7	Ch. 19 Global Change in the Earth System	<input type="checkbox"/> Reading – Ch. 19 in text Assignments due Sunday 12/13, midnight <input type="checkbox"/> Smartwork Ch. 19 <input type="checkbox"/> Geotour S: Global Change <input type="checkbox"/> Assignment of the week TBA <input type="checkbox"/> Week Fourteen Forum*
	<b>Dec. 14-18</b>	<b>FINAL EXAM WEEK – Final Exam</b>	

**\*Discussion Forum deadlines: first submission Thursday at 9 PM, second submission/response by Sunday at midnight.**

The above schedule, policies, procedures, and assignments for this course are subject to change in the event of extenuating circumstances, by mutual agreement, and/or to ensure better student learning.