

## Syllabus for **Introduction to Physical Geology** (GEO 101N, Sect. 50, 3 credits) Fall, 2016

Instructor: Dr. Kathleen Harper  
email: [kathleen.harper@umontana.edu](mailto:kathleen.harper@umontana.edu)  
office phone: (406)243-4720

**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 or talk by phone

---

**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) **Essentials of Geology (5<sup>th</sup> Edition), Steven Marshak (ISBN: 978-0393601107), including online access to Norton Smartwork website**

**Textbook:** Both the textbook and access to the Norton Smartwork website are essential for this course. There is an ebook option (purchase through Norton Smartwork link on Moodle). Access to the Norton Smartwork website access is included with a new text. For registration info, see [Online Assignments](#) below. New textbooks at the bookstore have a Geotours workbook packaged with them for no additional cost (the paper Geotours workbook is optional, as you can access the info online).

One copy of [Essentials of Geology](#) is on reserve at the Mansfield Library circulation desk. It is most effective for your learning to read chapters of the text prior to the class in which they will be discussed.

**Moodle:** You can use Moodle to see your grades, access course documents, access and register for Smartwork and register an iclicker remote. Access the Moodle course supplement by going to UMontana from the UM homepage. Log on with your NetID. GEO101 will be listed when you enter Moodle. For Tech Support, call the UMontana Techs at 406.243.4999 or 866.225.1641 (toll-free) or email them at [umonline-help@umontana.edu](mailto:umonline-help@umontana.edu). They are available from 8 AM to 5 PM, Monday through Friday.

**Online Assignments (Smartwork and Geotours):** Access Norton Smartwork on the course moodle page, then follow the directions to enter an access code or choose other options. You will have three attempts at each question with no time limit for the Smartwork assignments.

If you do not have a paper Geotour workbook, you will find the instructions and text of Geotour questions within the assignment on Smartwork. Your grades will be visible immediately in the Smartwork gradebook. Your total score for Smartworks and Geotours will appear in the Moodle gradebook.

You will have three attempts at each question with no time limit for 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 should also be submitted via the Smartwork website. If you do not have a paper text, this is where you will find the instructions and text of Geotour questions.

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. Norton tech support has extended hours including evenings and weekends. The online chat option is the best way to get your question answered quickly. The (green) chat box will appear after you have submitted the online help request ticket. Please do let me know if you think your responses have been scored incorrectly or have a question about the accuracy of an exercise.

**Assessment:**

Item	Percent of course grade
Two midterm exams and Final Exam	30
Smartwork and Geotour assignments	30
Weekly activity assignments	20
Discussion Forum submissions	20
<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, videos, 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, 2016 Course Schedule

### Week One - Mon, Aug. 29

- Introductions Forum – **by Thurs. 9/1 9PM**
- Syllabus quiz – by Sun 9/4 midnight
- Watch Scientific Process video
- One entry in Week One Forum – by Sun 9/4 midnight

### Week Two -Mon., Sept. 5

- Reading – Prelude and Chapter 1: The Earth in Context
- Assignments due Sunday 9/11, midnight
- Smartwork Ch. 1
- Activity of the week - videos and video quiz
- Week Two Forum\*

### Week Three – Mon., Sept. 12

- Reading – Ch. 2: How the Earth Works: Plate Tectonics
- Assignments due Sunday 9/18, midnight
- Smartwork Ch. 2
- Geotour B: Plate Tectonics
- Activity of the week
- Week Three Forum\*

### Week Four – Mon., Sept. 19

- Reading – Ch. 3 – Minerals; and Ch. 4: Magma and Igneous Rocks
- Assignments due Sunday 9/25, midnight
- Smartwork Ch. 3/4 combined
- Activity of the week – Asbestos in Libby, Montana
- Week Four Forum\*

### Week Five – Mon., Sept. 26

- Reading – Ch. 5: Volcanoes
- Assignments due Sunday 10/2, midnight
- Smartwork Ch. 5
- Geotour E: Volcanoes
- Activity of the week –Mount Saint Helens
- Week Five Forum\*

### Week Six – Mon., Oct. 3

- Reading – Interlude B (B.1 and B. 2 only); and Ch. 6: Sedimentary Rocks and Ch. 7: Metamorphic Rocks
- Assignments due Sunday 10/9, midnight
- Smartwork Ch. 6/7 combined
- Midterm Exam 1

### Week Seven – Mon, Oct. 10

- Reading – Ch. 10: Geologic Time
- Assignments due Sunday 10/16, midnight
- Smartwork Ch. 10
- Geotour J: Geologic Time
- Activity of the week
- Week Seven Forum \*

#### Week Eight – Mon., Oct. 17

- Reading – Ch. 9: Deformation and Mountain Building
- Assignments due Sunday 10/23, midnight
- Smartwork Ch. 9
- Geotour I: Geologic Structures
- Activity of the week
- Week Eight Forum\*

#### Week Nine – Mon., Oct. 24

- Reading – Ch. 8: Earthquakes
- Assignments due Sunday, 3/30, midnight
- Smartwork Ch. 8
- Activity of the week
- Week Nine Forum\*

#### Week Ten – Mon., Oct. 31

- Reading – Ch. 12: Energy and Mineral Resources
- Assignments due Sunday 11/6, midnight
- Smartwork Ch. 12
- Geotour L: Earth Resources
- Activity of the week
- Week Ten Forum\*

#### Week Eleven – Mon. Nov. 7

- Reading – Ch. 14: Streams
- Assignments due Sunday 11/13, midnight
- Smartwork Ch. 14
- Midterm Exam 2

#### Week Twelve – Mon., Nov. 14

- Reading – Ch. 16: Groundwater
- Assignments due Sunday 11/20, midnight
- Smartwork Ch. 16
- Activity of the week
- Week Twelve Forum\*

#### Week Thirteen – (Nov. 21-27)

- Thanksgiving Week!
- To keep the schedule consistent, we will take the whole week off in this class!

#### Week Fourteen – Mon., Nov. 28

- Reading – Ch. 18: Glaciers and Ice Ages
- Assignments due Sunday 12/4, midnight
- Smartwork Ch. 18
- Geotour R: Glacial Features
- Activity of the week
- Week Thirteen Forum\*

#### Week Fifteen – Mon., Dec. 5

- Reading – Ch. 19: Global Change
- Assignments due Sunday 12/11, midnight
- Smartwork Ch. 19
- Geotour S: Global Change

- Assignment of the week
- Week Fourteen Forum\*

#### Final Exam Week (Dec. 12-16)

- Final exam – you will have a several day period during which to schedule your exam
- Our exam week will overlap with the beginning of the on-campus final exam period, which this year is Wednesday, Dec. 7 through Tuesday, Dec. 13.

\*Discussion Forum deadlines: first submission Thursday at 9PM, 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