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

Instructor: Dr. Kathleen Harper
email: 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: To 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:
  - Geoscientists use repeatable observations and testable ideas to explain and understand our planet
  - Earth is 4.6 billion years old and has a complex and varied history
  - Earth is a complex system of interacting rock, water, air, and life
  - Earth is continuously changing, primarily due to active plate tectonics
  - Humans depend on Earth for resources that are formed by geologic processes
  - Natural hazards pose risks to humans and must be understood in order to minimize and mitigate risks
  - Geologic processes have impacted the development of human civilization and the actions of humans can significantly impact the Earth


Textbook: Both the textbook and access to the Norton Smartwork website are essential for this course. There is an ebook option (see 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 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.

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

Smartwork and Geotours: Access to the website for online assignments is included with purchase of new textbooks or can be purchased online separately at wwnorton.com. A two-week free trial is available. Note that it easier to extend this access before the free trial expires! 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! Don't forget to make a note of what email and password you use for your account!
The Smartwork enrollment key for this course is ESSGEO4E9772

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. They are available for extended hours including evening and weekend hours. The online chat option is the best way to get your question answered quickly – they take several days to respond to emails. The chat box 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.

Assessment:

<table>
<thead>
<tr>
<th>Item</th>
<th>Percent of course grade</th>
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<tbody>
<tr>
<td>Two midterm exams and Final Exam</td>
<td>30</td>
</tr>
<tr>
<td>Smartwork Quizzes</td>
<td>25</td>
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<tr>
<td>Activities (other assignments)</td>
<td>15</td>
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<tr>
<td>Discussion Forum submissions</td>
<td>20</td>
</tr>
<tr>
<td>Geotours</td>
<td>10</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
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**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 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/
**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
GEO101-50 Spring, 2016 Course Schedule

Week One - Mon, Jan. 25
- Introductions Forum – by Thurs. 1/28 9PM
- Syllabus quiz – by Sun 1/31 midnight
- Watch Scientific Process video
- One entry in Week One Forum – by Sun 1/31 midnight

Week Two - Mon., Feb. 1
- Reading – Prelude and Chapter 1: The Earth in Context
- Assignments due Sunday 2/7, midnight
- Smartwork Ch. 1 (on Norton Website)
- Activity of the week - videos and video quiz
- Week Two Forum*

Week Three – Mon., Feb. 8
- Reading – Ch. 2: How the Earth Works: Plate Tectonics
- Assignments due Sunday 2/14, midnight
- Smartwork Ch. 2
- Geotour B: Plate Tectonics
- Activity of the week TBA
- Week Three Forum*

Week Four – Mon., Feb. 15
- Reading – Ch. 3 – Minerals; and Ch. 4: Magma and Igneous Rocks
- Assignments due Sunday 2/21, midnight
- Smartwork Ch. 3/4 combined
- Activity of the week – Asbestos in Libby, Montana
- Week Four Forum*

Week Five – Mon., Feb. 22
- Reading – Ch. 5: Volcanoes
- Assignments due Sunday 2/28, midnight
- Smartwork Ch. 5
- Geotour E: Volcanoes
- Activity of the week –Mount Saint Helens
- Week Five Forum*

Week Six – Mon., Feb. 29
- Reading – Interlude B (B.1 and B. 2 only); and Ch. 6: Sedimentary Rocks and Ch. 7: Metamorphic Rocks
- Assignments due Sunday 3/6, midnight
- Smartwork Ch. 6/7 combined
- Midterm Exam 1

Week Seven – Mon, Mar. 7
- Reading – Ch. 10: Geologic Time
- Assignments due Sunday 3/13, midnight
- Smartwork Ch. 10
- Geotour J: Geologic Time
- Activity of the week TBA
- Week Seven Forum *
Week Eight – Mon., Mar. 14
- Reading – Ch. 9: Deformation and Mountain Building
- Assignments due Sunday 3/20, midnight
- Smartwork Ch. 9
- Geotour I: Geologic Structures
- Activity of the week TBA
- Week Eight Forum*

Week Nine – Mon., Mar. 21
- Reading – Ch. 8: Earthquakes
- Assignments due Sunday, 3/27, midnight
- Smartwork Ch. 8
- Activity of the week TBA
- Week Nine Forum*

Week Ten – Mon., Mar. 28
- Reading – Ch. 12: Energy and Mineral Resources
- Assignments due Sunday 4/3, midnight
- Smartwork Ch. 12
- Geotour L: Earth Resources
- Activity of the week TBA
- Week Ten Forum*

Week Eleven – (April 4-10)
- Spring Break!

Week Twelve – Mon. April 11
- Reading – Ch. 14: Streams
- Assignments due Sunday 4/17, midnight
- Smartwork Ch. 14
- Midterm Exam 2

Week Thirteen – Mon., April 18
- Reading – Ch. 16 in text
- Assignments due Sunday 4/24, midnight
- Smartwork Ch. 16
- Activity of the week TBA
- Week Twelve Forum*

Week Fourteen – Mon., April 25
- Reading – Ch. 18: Glaciers and Ice Ages
- Assignments due Sunday 5/1, midnight
- Smartwork Ch. 18
- Geotour R: Glacial Features
- Activity of the week TBA
- Week Thirteen Forum*

Week Fifteen – Mon., May 2
- Reading – Ch. 19: Global Change
- Assignments due Sunday 5/8, midnight
- Smartwork Ch. 19
- Geotour S: Global Change
- Assignment of the week TBA
- Week Fourteen Forum*
Final Exam Week (May 9-13)

- Final exam – you will have a several day period during which to schedule your exam

*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 student learning.