# lgplogo

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| Course Information | Instructor Information |
| **Course Title:** *Geology 2: Earth’s Surface* | **Instructor:** *Professor Sarah Cadieux* |
| **Course Number:** *ERTH 1200* | **Office location:** *Science Center 2C01-B* |
| **Credit Hours:** *3* | **Email Address:** *cadies@rpi.edu* |
| **Semester / Year:** *Spring 2019* | **Office Hours:** *Mondays 1-3 pm, after class on Tuesdays/Fridays, or by appointment on campus or skype* |
| **Meeting Days:** *TF 10-11:50 am* |
| **Room Location:** *Academy Hall Auditorium* |

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| Course Description This course will focus on learning about geological environment of humankind: the atmosphere, oceans, groundwater, rivers, glaciers, deserts, and coasts. We will explore the processes by which these and other features develop and change, the opportunities or hazards they present, and the ways in which humans can modify their development. |

## Central Course Question: “How does the surface of the Earth change?”

## Course Topics

PART 1: How does wind change the surface of the Earth?

PART 2: How does water change the surface of the Earth?

PART 3: How does ice change the surface of the Earth?

PART 4: How does life change the surface of the Earth?

## Student Learning Outcomes

At the completion of this course, you will be able to:

* Understand how wind, water, ice and biology can change the surface of the Earth
* Understand Earth’s climate system
* Apply principles of logic and reasoning to analyze geologic problems
* Understand how geology relates to your everyday life
* Travel to new and exciting places and explain to friends and family how those landscapes formed and may change in the future

## Course Text and Materials

**Text (required):** Christopherson, Cunha, Thomsen and Birkeland: Geosystems Core 1e

Additional scientific and popular literature/media will be posted on BlackBoard.

**Materials (required):** iClicker

To registrar your iClicker, visit [**https**](file:///Users/sarahcadieux/Dropbox/RPI/Planning%20for%20Geo2/https)[**://www.iclicker.com/remote-registration-form-for-classic**](https://www.iclicker.com/remote-registration-form-for-classic)

* Student ID is your RCSID (beginning part of your email address; i.e. cadies)
* Record your iClicker Remote ID in another spot as the clickers can get worn and the numbers can rub off
* To receive credit for quizzes/participation, you must registrar your iClicker by the beginning of class on Jan 22nd

## Course Assessment Measures

Your progress will be evaluated through exams, pre-class reading quizzes, and in-class participation.

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| **Assessment** | **%** |
| In class activities and participation | 10 |
| Pre-class reading quizzes | 10 |
| Weekly quizzes | 15 |
| Take a Hike Assignment | 10 |
| Exams (3) | 55 |

**Pre-class reading quizzes:** Lecturing about terminology is no fun for me or you! In order to introduce you to topics we will be discussing and working on in class that day, there will be a short quiz based upon designated reading and/or video prior to ***every*** class. These quizzes will allow us to spend class time working through more complex concepts. The readings/videos for each day are listed on the schedule, and all BlackBoard readings/videos (BB) can be found in the “Readings” folder on BlackBoard.

* You may submit as many attempts for each pre-class assignment as you would like, and your grade on each assignment will be the average of all attempts.
* All pre-class assignments are due **by 9:30 am** on class days.
* After 9:30 am, the quiz will close and you will be unable to start it.
* There will be **no** make-ups for missed quizzes, however, the lowest 10% will be dropped at the end of the semester.
* Quizzes will open approximately 2 weeks prior to due date.
* It is possible that due to schedule changes, you may read and take a quiz on a topic that we do not discuss in class (not all learning is for exam preparations!). Nevertheless, the reading is still connected to the material and will enhance your understanding of course concepts.

**In-class participation:** We will be using iClickers and in-class activities to check for preparation and understanding, generate discussion, encourage participation, and deepen comprehension of the course material. For some of these activities, full points will be awarded for participation. For other activities, half points will be awarded for participation and full points will be awarded for correctness.

* There will be **no make-ups** for missed participation (either for technical difficulties or for absences), however, the lowest 10% of grades will be dropped at the end of the semester. The dropped participation acts as your missing class freebies and can be used for any reason (illness, studying, travel, athletic event, family emergency, wild monkeys breaking into your dorm room, binge watching Netflix, etc.). Any additional missed classes will count as zeros for those days’ activities.
* To receive credit for the responses you submit with iClicker, you must register your iClicker before class on Tuesday Jan 22th. If you do not, I will not be able to match your responses with your name and you will not receive credit.
* Using multiple iClickers will result in a zero for the participation for all parties involved.

**Quizzes:** Using iClickers, we will have 10 quizzes throughout the semester to check for content understanding and to ensure you are engaging in distributive studying. Each quiz will be administered at the start of class on Tuesdays. Late arrivals will not be given additional time. There will be no make-ups for missed quizzes (either for technical difficulties or for absences), however the lowest quiz grade will be dropped at the end of the semester. The dates of the quizzes are on the schedule and will not change.

* Using multiple iClickers will result in a zero for the quiz for all parties involved.
* iClickers must be visible on tables during quizzes.

**Take a Hike Assignment:** Over the course of the semester, this course will cover many topics that are easily observable on a casual but attentive walk through a natural area. This assignment allows you to put your observation skills and knowledge to the test by taking a hike and describing 4 surficial geology features or processes that you observe. These features and processes might include things like weather, streams, hillslope erosion, soil, ecological succession, etc. More information about this assignment will be discussed in class and uploaded on BlackBoard. **Due Friday Apr 12th at 5 pm.**

**Exams:** There will be 3 cooperative exams throughout the semester. Each exam will cover the topics preceding that exam (**not cumulative**-however, keep in mind that we will be building upon prior knowledge). There will be **no** make-up of exams without a legitimate excuse discussed **prior** to the exam (I reserve the right to determine what is “legitimate”).

Exam Part 1: You will independently take the exam (80%) for the first hour. After the hour has elapsed, all exams must be turned in.

Exam Part 2 (optional): You will take a new version of the exam but can discuss with classmates. No internet/books/notes/phone-a-friend allowed. You will have 45 minutes to take this exam. Each person must hand in their own exam.

**→**If you choose not to complete Part 2 OR if your score is higher from Part 1, the Part 1 score will be your grade. Bottom line, taking the cooperative exam will not negatively affect your grade!

**→** If you finish Part 1 before the hour is over, you can review notes/internet/etc. as long as you leave the room. Once you turn in your exam and leave, you cannot re-enter the exam room until Part 2 begins.

## Course Policies

**Late Policy:** If an assignment is due in class, it will be due at the start of class. If it is turned in at the end of class, it is considered late. Assignments will be accepted up to 1 week past the due date. Scores on late assignments will be penalized 10% each day they are late. So, if an assignment is due in class on a Tuesday at 2:00 pm and you turn it in between Tuesday at 2:01 pm and Wednesday at 2:00 pm, you will lose 10%. *After 1 week, the grade becomes a zero.*

**Grading Criteria:**

The letter grade is as follows:

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| **Letter Grade** | **Percent Equivalent** |  | **Letter Grade** | **Percent Equivalent** |  | **Letter Grade** | **Percent Equivalent** |
| A | 93-100 |  | B- | 80-82 |  | D+ | 65-69 |
| A- | 90-92 |  | C+ | 77-79 |  | D | 60-64 |
| B+ | 87-89 |  | C | 73-76 |  | F | 0-59 |
| B | 88-86 |  | C- | 70-72 |  |  |  |

* I do not curve grades. I also do not ***give*** grades. Your final grade in this course will be based on what you earned.
* Students wishing to appeal grading on assignments must do so within 1 week of receiving the graded work.
* If at any point you would like to discuss your grade, please see Dr. Cadieux in person during office hours or make an appointment.

**Technology use:**

* During class, cell phones must be silenced and put away/out of sight, unless given specific instructions to use them. I understand that time-to-time there may be an emergency/extenuating circumstance, which may require you to have your cellphone visible. In these events, please discuss with Dr. Cadieux. *Cell phones cannot be used as a calculator on any quizzes or exams.*
* If you would like to take notes on your personal laptop/tablet in class, you must talk with Dr. Cadieux first. Use of laptops or tablets during class is strongly discouraged unless we are doing a computer-based activity, or to reference digital copies of course materials. You should take notes by hand. This practice reinforces active engagement with lecture and discussion and limits the endless possibilities for diversion online. Research shows that electronics impairs learning and is distracting to others (even when it is entirely on-topic). Additionally, hand writing notes allows for the use of sketches, which is very important in science, and requires some processing of the information in order to decide what is important to write in your notes. Class PowerPoint Presentations will be provided to you after class via BlackBoard. Use of laptops to surf the web, log into FaceBook, Skype or other networking/chat during class is unprofessional and unacceptable and will result in the loss of the privilege to use a laptop during class.

**Accommodations:** If you need any special accommodations (learning challenges, religious holiday conflicts, planned classes you will be missing), please set up a meeting with Dr. Cadieux during the first 2 weeks of classes.

## Academic Integrity

Student-teacher relationships are built on trust. For example, students must trust that teachers have made appropriate decisions about the structure and content of the courses they teach, and teachers must trust that the assignments that students turn in are their own. Acts that violate this trust undermine the educational process. The Rensselaer Handbook of Student Rights and Responsibilities defines various forms of Academic Dishonesty and you should make yourself familiar with these. In this class, all assignments that are turned in for a grade must represent the student’s own work. In cases where help was received, or teamwork was allowed, a notation on the assignment should indicate your collaboration. Submission of any assignment that is in violation of this policy will result in a penalty ofloss of credit for the assignment for the first offense and subsequent offenses can result in receiving a failing grade for the course. If you have any question concerning this policy before submitting an assignment, please ask for clarification.

## Course Calendar

*This is a tentative schedule and* ***subject to change*** *depending upon the progress of the class. Exam and quiz dates will not change. Check BlackBoard regularly for reading and topic changes.*

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| **Week** | **DATE** | **TOPIC** | **READING** |
| 1 | F Jan 11 | Introduction to Earth Materials and Geomorphology |  |
| 2 | T Jan 15 | What is in our atmosphere? | Pg. 16-19; 22-25 |
| F Jan 18 | Why does the atmosphere circulate? | Pg. 10-15; 34-39 |
| 3 | T Jan 22 | Why do we have winds?  ***Quiz 1*** | Pg. 64-69; 74-75 |
| F Jan 25 | How does wind form landforms? | Pg. 306-309 |
| 4 | T Jan 29 | Why do we have weather?  ***Quiz 2*** | Pg. 90-95; 100-104 |
| F Feb 1 | Why do we have storms? | Pg. 110-117 |
| 5 | T Feb 5 | How does the ocean circulate?  ***Quiz 3*** | Pg. 76-79;298-297 |
| F Feb 8 | Catchup/review |  |
| 6 | T Feb 12 | **EXAM 1** |  |
| F Feb 15 | How do weathering and erosion act together? | Pg. 248-253 |
| 7 | T Feb 19 | *No class-Monday schedule* |  |
| F Feb 22 | How do coastal processes influence the landscape? | Pg. 298-304 |
| 8 | T Feb 26 | How are streams formed?  ***Quiz 4*** | Pg. 270-275 |
| F Mar 1 | How do streams erode? | Pg. 276-281 |
| 9 | Mar 5-8 | No class-Spring Break |  |
| 10 | T Mar 12 | What are features of stream deposition?  ***Quiz 5*** | Pg. 282-283 |
| F Mar 15 | What happens if a stream floods? | Pg. 284-285 |
| 11 | T Mar 19 | Can underground water influence the surface of the Earth?  ***Quiz 6*** | Pg. 133-136; 254-255 |
| F Mar 22 | What happens if we use too much water? | Pg. 138-143 |
| 12 | T Mar 26 | **EXAM 2** |  |
| F Mar 29 | How do glaciers form and move? | Pg. 322-325 |
| 13 | T Apr 2 | How powerful is ice?  ***Quiz 7*** | Pg. 326-329 |
| F Apr 5 | How many glaciations have there been in Earth’s history? | Pg. 332-337 |
| 14 | T Apr 9 | How do we know that Earth’s climate has changed over geologic time?  ***Quiz 8*** | Pg. 176-177; 188-193 |
| F Apr 12 | How are soils formed? | Pg. 352-357; 384-391 |
| 15 | T Apr 16 | How does biology influence geology through nutrient cycling?  ***Quiz 9*** | Pg. 346-351 |
| F Apr 19 | How does landscape influence species? | Pg. 362-371 |
| 16 | T Apr 23 | How do humans influence the landscape?  ***Quiz 10*** | TBA |
| F Apr 26 | Catchup/review |  |
| 17 | Apr 30-May 4 | **EXAM 3 during Finals Week** |  |