

Syllabus: Physical Geography

Geography 1010 - Fond du Lac Tribal and Community College - Fall 2022

Syllabus and schedule are subject to changes at the discretion of the course instructor.

Instructor

Dr. Carl M. Lemke Oliver Sack (he/they). I prefer to be called Carl; if you feel more comfortable referring to me by my last name, just use Sack (as in Dr. Sack and Professor Sack).

Contact Information

Email: carl.sack@fdltcc.edu. I reply to all student emails within 24 hours.

Cell Phone: (608) 712-8335. Call or text at any time; you will not bother or disturb me. If you call and I don't answer, please leave a voicemail. I generally reply to voicemails and texts within a few minutes to a few hours.

Office Hours

10:45 AM-12:45 PM Mondays & Wednesdays, or by appointment, in Room W222 on campus or via Zoom at <https://minnstate.zoom.us/j/91632633584>.

Minnesota Transfer Curriculum

This course satisfies Minnesota Transfer Curriculum (MTC) requirement for one course in Goal 3: Natural Sciences, and one course in Goal 10: People and the Environment.

Course Overview

Ever wanted to know how the Earth works? This is a 3-credit online course that covers just that. Physical Geography, also called Earth Systems Science, is the study of all of the Earth's systems and cycles: its relationship with the sun and moon, energy balance, atmosphere, oceans, ecosystems, water and nutrient cycles, soils, rocks, tectonic plates, and glaciers. The course will consist of a mix of traditional textbook lessons, videos, interactive media, lab-like activities, and self-guided outdoor field trips.

Course Goals

Upon completion of this course, students will be able to:

1. Discuss how the scientific method is used to learn about the Earth.
2. Explain structure of the atmosphere and the difference between weather and climate.
3. Describe soil horizons and discuss the distribution of various soil orders.
4. Identify the location of plate boundaries and investigate how this influences the location of tectonic and volcanic events.

5. Describe the hydrologic cycle.
6. Describe an ecoregion.
7. Discuss how physical processes influence topography.
8. Examine how humans interact with the physical environment.
9. Summarize a student's personal geography (local geographic characteristics).

Prerequisites

There are no academic prerequisites for this course.

Learning Resources

There is no physical textbook to buy for this class. We will use a mix of online resources, including the open online textbook [*Physical Geography and Natural Disasters*](#) by Adam R. Dastrup and other reading selections on specific topics. Some of these will discuss our local geography in northeastern Minnesota. I will also provide video lectures that overview each course topic. All learning materials will be linked from the course website on D2L.

Technology

This course is offered **online and asynchronously**, meaning there are no class meetings. This is a **mobile-ready** course, meaning you can complete it with a smartphone or tablet, although a full computer is recommended. You will need the following:

- Basic computer skills.
- Internet access (wired, wifi, or cell data plan).
- A laptop or desktop computer OR a tablet or smartphone.
- Speakers, microphone, and camera.
- Video capture software, such as your computer or phone's photos app.
- An up-to-date internet browser (Firefox, Chrome, Edge, or Safari).
- A word processor such as Microsoft Word, Google Docs, or LibreOffice. Word is available through your campus Microsoft 365 subscription.
- Microsoft Excel (desktop or mobile app; available through Microsoft 365).
- Access to D2L Brightspace through your campus StarID account. The Brightspace Pulse app is recommended for smartphones.
- Sturdy, weather-appropriate outdoor clothing and shoes.
- Transportation to a nearby natural area, preferably one with rocks, vegetation, and flowing water.

If you do not have or are unsure about any of the above requirements, contact Robin Anderson, our Instructional Technology Specialist, at robin.anderson@fdltcc.edu.

Computer Skills

Since this is an online class, you will need to be able to do the following:

- Obtain access to an internet connection for the duration of the course
- Navigate the Brightspace D2L learning management system
- Use word processing software (Microsoft Office or equivalent) to create documents
- Use Microsoft Excel to fill in spreadsheets
- Search for information on the internet
- Send and receive email using your campus email account (check it daily!)
- Use interactive web maps, such as Google Maps
- Follow directions provided for using specialized interactive websites

The college provides several training videos and tutorials on the use of these technologies through the [Student eServices page](#) on the college's website, and through the [FDLTCC Brightspace D2L home page](#). Contact Robin Anderson at the email address above for further assistance.

What you can expect from me

I try to bring passion and enthusiasm to the topics I teach. I intend to lay out course expectations in a clear and concise manner and provide user-friendly navigation on the course website. I will give you timely feedback on assignments (within 1 week after the due date if submitted on time) and reach out to you if I see your participation slip. I will post regularly in class discussion forums to facilitate a lively conversation. I will respond as quickly as possible to all communications from students—you are my highest priority. If you need special accommodation, please follow the procedure in the Disabilities Notice below first, then let me know as soon as possible so I can work with your plan accordingly.

What I Expect from You

This is a college-level course, and you will need to put in just as much effort into it as you would an in-person course. For 3 credits, this is **8-9 hours per week**. I expect you to keep up with the course reading, participate fully in class discussions, and turn in assignments on time or let me know in advance of the due date if you need an extension. This class is not just a collection of facts and information, but an opportunity to learn and practice the process of scientific inquiry used by researchers in many fields. I strongly encourage you to be curious about the material we are learning, ask lots of questions, and consider yourself part of an engaged community of learners.

Course Feedback

Your direct and timely feedback will help improve the class. I am open to any suggestions you have. If you are experiencing a problem, the sooner you let me know, the sooner I will be able to address it and the easier it will be to solve.

Course Structure and Activities

The topic sequence is listed in the schedule at the end of the syllabus. Topics and assignments are organized into learning modules, each worth **90 points**. Work from one module will be due each week, except for the Final Project, which is given two weeks. Activities for each module will include:

Readings, Lectures, Notes, and Quizzes

You will be assigned sections from the textbook and/or supplemental readings with each learning module. There will also be a short lecture video that mirrors and explains the reading content. You are expected to view each lecture and complete the assigned readings *in their entirety*, and *take complete notes* on at least one of lecture and readings.

You must submit notes on *either* the lecture or the reading for a grade each week. Studies have shown that taking notes by hand promotes recall better than typing notes, but I will accept notes in either form. Notes are worth **20 points**.

Additionally, each learning module includes a short, open-book quiz on concepts and vocabulary from the readings and lecture. You will be able to take the quiz up to 3 times to improve your score. Quizzes are worth **10 points**.

Activity Assignments

Each week's learning module will include an activity assignment. Some activities involve videos, interactive maps, spreadsheets, and other online multimedia. Other activities involve field trips that require you to go outside and examine something in your area. Whether you are taking this class from Cloquet, China, or anywhere in between, your own backyard can teach you a surprising amount about how the Earth works. An alternative writing assignment will be available to substitute for each field trip assignment if you are unable to do the field trip. Each assignment will also include an optional extra credit component. Assignments are worth **50 points**.

Discussions

Discussion is vital to an online course, in that it helps us create a learning community and gives you a chance to reflect on what you learned from the reading and activities. Education researchers call this reflection process "metacognition" as it helps you both remember what you learned and better understand *how* you learn. Your final assignment for each learning module is to create a "KLW" reflection post in that week's discussion forum, in written or video form, with three pieces of information:

1. **Knew it (K):** A key idea, concept, or piece of information from the reading or activity that you already knew something about,
2. **Learned it (L):** A key idea, concept, or piece of information from the reading or activity that was new to you or that you learned more about, and

3. **Want to know more (W):** A deeper question about the module topic that wasn't answered by the material or something you want to know more about.

Discussion posts are worth **10 points**. You may earn extra credit by replying to your classmates' posts with an insightful comment or answer to their question (2 points per reply, up to 4 points per discussion topic).

Final Project

During the last two weeks of the course, you will write a paper or create a multimedia product that describes a specific place from an Earth systems perspective. More details are given in the final project directions.

There will not be any exams in this course. All assignments will be due at **11:59 PM on Sunday** of the week indicated on the schedule, except the Final Project, which is due at 11:59 PM on the last day of the course (**Friday, December 16**).

Late Work and Extensions

Late work without an extension will be penalized 10% per day, up to 50% deduction. An assignment turned in 1-24 hours after the due date will be considered 1 day late, etc. (note that this differs from the way D2L counts lateness). An extension will be granted on request, no explanation needed, if you email me before the due date. If you email me after that, I will freeze your late deduction wherever it stands. There is no limit on the number of extensions you can get, but you must request each one individually, or work out a plan with me to catch up. Late work may be submitted until the end of the course for partial credit. No work will be accepted after the last day of the course (December 16).

Grading

Percentages of your final grade:

- Reading Notes and Quizzes: 30%
- Activities: 50%
- Discussions: 10%
- Final Project: 10%

Final grade breakdown:

- A. 90-100%
- B. 80-89%
- C. 70-79%
- D. 60-69%

I reserve the right to curve grades upward based on the class distribution of final grades. You will never get a lower grade based on your score than what is indicated above.

Course Preparation

If this is your first online course, you may underestimate how easy it will be to fall behind. Once you fall behind, it can be difficult to catch up. An online class requires quite a bit of *independence* and *self-motivation*. On the flip side, online courses can benefit you if you prefer to learn at your own pace and through reading/viewing material rather than hearing it in lecture. Some strategies to make sure you have a positive experience with the course include:

- Set daily goals for yourself (“On Monday, I will complete...”)
- *In advance*, block out time on your schedule equal to 9 hours a week, then adjust as needed. If you finish a day’s work early, great! Go play. If not, you’ll at least have the time you need to keep up.
- Put all class deadlines in a personal planner or calendar you look at every day and can check anywhere (Google Calendar, Apple Calendar, and Outlook all work great).
- Do not procrastinate! Get started *early* in the week. If you wait until Sunday to start on the reading and assignment, *you will fail!*

If you do fall behind, please *e-mail, call, or Zoom with me ASAP* to work out a catch-up plan. I understand that sometimes work or life interferes or you just miscalculate what you need to do for the course. There is no judgement on my end; in fact, I’d much rather you let me know if you’re struggling than say nothing and keep failing!

Plagiarism

You may not copy others’ work without attribution/citation or have others complete your work for you. If you copy text, it must be in double-quotes (“”) with credit given to the original author, and should account for *a small minority* of your submission. Plagiarism, or presenting the writing of another as your own (a.k.a. “copying”), results in an automatic 0 on the assignment. Multiple instances of plagiarism may result in a F in the course and be subject to any other disciplinary actions mandated by this institution and the Minnstate system.

Disabilities Notice

Fond du Lac Tribal & Community College is committed to providing equitable access to learning opportunities for all students. Under the Americans with Disabilities Act and Section 504 of the Rehab Act, Fond du Lac Tribal & Community College provides students with disabilities (e.g., mental health, attentional, learning, chronic health, sensory or physical) reasonable accommodation to participate in educational programs, activities or services. Students with

disabilities requiring accommodation to participate in class activities or meet course requirements should first complete an intake form and necessary requirements with Nancy Olsen, Disability Services coordinator, to establish an accommodation plan. She can be reached at nancy.olsen@fdltcc.edu or 218-879-0819.

Sexual Violence

Fond du Lac Tribal & Community College is committed to providing an environment free of all forms of discrimination and sexual harassment, including sexual assault, domestic and dating violence, gender or sex-based bullying and stalking. If you or someone you know has experienced gender or sex-based violence (intimate partner violence, attempted or completed sexual assault, harassment, coercion, stalking, etc.), know that you are not alone. Fond du Lac Tribal & Community College has staff members trained to support survivors in navigating campus life, accessing resources, providing accommodations, assistance completing with protective orders and advocacy. For more information regarding the Campus Security Report, the following link will give you a report on the Clery Compliance and Security Report at FDLTCC: <http://fdltcc.edu/about-us/policies-reports/campus-security-policies-reports/>

Please be aware that all Fond du Lac Tribal & Community College employees are required to report any incidents of sexual violence and, therefore it cannot guarantee the confidentiality of a report, but it will consider a request for confidentiality and respect it to the fullest extent possible. If you wish to report sexual misconduct or have questions about school policies and procedures regarding sexual misconduct, please contact Anita Hanson, Dean of Student Services, at 218-879-0805 or anita.hanson@fdltcc.edu.

Data Privacy

Your right to data privacy as a student is specified by the federal Family Educational Rights and Privacy Act (FERPA) and the Minnesota Government Data Practices Act (MGDPA), and described in the [FDLTCC Data Privacy Policy](#). This course requires you to access several different websites, most of which temporarily place tracking Cookies in your browser's web cache. For information on how to delete tracking cookies, see [this article from PrivacyPolicies.com](#). Brightspace D2L receives certain personal information about you from the Minnesota State Colleges and Universities system. [The Brightspace D2L Privacy Policy is located here](#).

Accessibility Statements

Voluntary Product Accessibility Templates (VPATs) show how software products meet the requirements of Section 508 of the Rehabilitation Act. Follow the links below for VPATs for the main software and websites used in this course:

- [Brightspace D2L VPAT](#)
- [Microsoft Office 365 VPAT](#)
- [Pressbooks VPAT](#) (for the *Physical Geography* textbook)
- [Zoom VPATs](#)

Course Schedule

Readings and assignments are subject to change by the instructor.

Module (Due Date)	Topic, Readings, Activities
1 (8/28)	Topic: What is Physical Geography? Reading: <i>Physical Geography</i> Section 1.1 (Geography as a Science) Activity: <i>Nova: Earth From Space</i> video
2 (9/4)	Topic: Life on Earth: The Biosphere Reading: <i>Environmental Biology</i> Chapter 3, <i>Minnesota's Natural Heritage</i> Chapter 1 Activity: Go Take a Hike field trip
3 (9/11)	Topic: Soil: It's Not Just Dirt Reading: "An Introduction to Soil Concepts and the Role of Soils in Watershed Management" Activity: Soil Profile field trip
4 (9/18)	Topic: Hidden Below: Rocks and Minerals Reading: <i>Physical Geography</i> Sections 3.3-3.5 (Internal Structure of Earth, Minerals, The Rock Cycle), <i>Minnesota's Geology</i> Chapter 1, <i>Natural History and Geology Along the Superior Hiking Trail Through Duluth, Minnesota</i> pages 3-10 Activity: Bedrock Geology field trip
5 (9/25)	Topic: Carried Away: Plate Tectonics Reading: <i>Physical Geography</i> Sections 3.6-3.7 & 4.1, "The Mid-Continent Rift Zone" Activity: Exploring Tectonic Plate Movements
6 (10/2)	Topic: Shake It Up, Blow Your Top: Earthquakes and Volcanoes Reading: <i>Physical Geography</i> Sections 4.2-4.7 Activity: Exploring Recent Earthquakes and Eruptions
7 (10/9)	Topic: Changes in the Land: Weathering, Mass Movement, and Streams Reading: <i>Physical Geography</i> Sections 5.1, 5.3-5.4, 6.1-6.2, National Park Service "River Systems and Fluvial Landforms", Fluvial Processes video Activity: Mapping Landforms I: Mass Movements and Streams

Module (Due Date)	Topic, Readings, Activities
8 (10/16)	Topic: Surf's Up: Wind, Waves, and Coasts Reading: <i>Physical Geography</i> Sections 5.5, 7.2, 7.4, and 7.6 Activity: Mapping Landforms II: Wind and Coasts
9 (10/23)	Topic: The Ice Sheets Cometh: Glaciers and Glacial Landforms Reading: <i>Physical Geography</i> Section 5.6, NSIDC "All About Glaciers" Activity: Mapping Landforms III: Glacial Geology
10 (10/30)	Topic: Round and Round: Energy and Seasons Reading: <i>Astronomy</i> Section 4.2, <i>NWS JetStream</i> "The Transfer of Heat Energy" and "The Earth-Atmosphere Energy Balance", Earth-Sun Animation Activity: Graphing Earth-Sun Relationships
11 (11/6)	Topic: Under Pressure: Heat Transfer and Circulation Reading: <i>Physical Geography</i> Section 8.3, <i>Lumen Physical Geography</i> "Atmospheric Movements and Flow", selected pages from <i>NWS JetStream</i> , Met Office YouTube Channel, and UCAR Center for Science Education <i>How Weather Works</i> Activity: Diagramming Wind and Ocean Circulation
12 (11/13)	Topic: Gales of November: Weather Systems and Storms Reading: <i>Physical Geography</i> Sections 9.1-9.5, <i>NWS JetStream</i> "How Clouds Form" Activity: Exploring Atmospheric Moisture and Weather
13 (11/20)	Topic: From the Redwood Forests to the Gulf Stream Waters: Global Climates Reading: <i>Physical Geography</i> Sections 10.1-10.3 Activity: Describing Climates
14 (12/4)	Topic: Hothouse Planet: Climate Change Reading: <i>Physical Geography</i> Sections 10.4 and 10.6, <i>NASA Global Climate Change</i> "Evidence", "Causes", and "Effects", <i>Adapting to Climate Change in Minnesota</i> Pages 2-18 Activity: Monitoring Global Climate Change
15 (12/16)	Final Project