

Soil Properties GEOG 3108A

[0.5 credit]

Fall 2020

Lecture: Weekly recorded slides

Labs: A01 Wed 14:35, A02 Thurs 11:35 - synchronous online tutorial

Instructor: Elyn Humphreys, <elyn.humphreys@carleton.ca>

Office hours: Please email me to make an appointment.

Teaching Assistant: Emilie Stewart-Jones

1. Course Description:

This course will introduce you to the fundamentals of soil science, with emphasis on the physical and chemical properties of the solid (mineral and organic), liquid, and gas phases of soils. These soil properties & the role soil plays in our lives will be explored through five units (see course calendar below).

2. Prerequisites: none

3. Texts:

All recorded lecture slides, reading assignments, and laboratory assignments will be made available on cuLearn.*

*Student or professor materials created for this course (including presentations and posted notes, labs, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

4. Course Calendar:

Tentative schedule:

- Sept 9:** Lecture 1. Introduction/ Degradation of Soil Physical Properties – part 1
No labs this week
- Sept 16:** Lecture 2. Degradation of Soil Physical Properties – part 2
Lab 1
- Sept 23:** Lecture 3. Degradation of Soil Physical Properties – part 3
Lab 2
- Sept 30:** Lecture 4. Degradation of Soil Physical Properties – part 4
Lab 3
- Oct 7:** Lecture 5. Quick Clay – part 1
Lab 4
- Oct 14:** Lecture 6. Quick Clay – part 2
Lab 5
- Oct 21:** Lecture 7. Organic Farming– part 1
No labs this week
- Oct 28:** **Reading Break**
- Nov 4:** Midterm test
No labs, no lecture this week.
- Nov 11:** Lecture 8. Organic Farming – part 2
Lab 6
- Nov 18:** Lecture 9. The Arctic Carbon Bomb – part 1

- Lab 7*
Nov 25: Lecture 10. The Arctic Carbon Bomb – part 2
Lab 8
Dec 2: Lecture 11. Soil Formation – part 1
Lab 9
Dec 9: Lecture 12. Soil Formation – part 2
No labs this week

5. Evaluation:

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|----------------------------|-----|-------------------------------|
| Self-study assignments | 5% | |
| Laboratory assignments (5) | 35% | |
| Lab participation | 9% | |
| Special topic presentation | 11% | |
| Mid-term exam | 20% | |
| Final exam | 20% | (held during the exam period) |

Self-study assignments: Twelve pre-recorded lectures will include a self-study assignment to complete based on the readings and lecture material. These will not be graded but must be submitted by the due date for full marks (0.5% per assignment up to a maximum of 5%)

Laboratory assignments: Five assignments will help you further develop the concepts introduced during the lectures. Each lab assignment will be given equal weight towards the final lab grade. Collaboration is encouraged while working through the assignments, but each student must hand in his or her own, individually prepared assignment. See statement on plagiarism below.

Policy on lateness: Lab assignments will be submitted through cuLearn on the due date noted on the assignment. Late assignments will be penalized by 5% of the total value of the assignment for every additional day and will not be accepted after assignments have been graded and returned. Extensions may be granted for legitimate reasons. Please contact the instructor (Elyn Humphreys) by email before the deadline if possible.

Participation marks: During each synchronous tutorial/lab session, participation will be recorded and earn marks of 1% per session towards the final grade.

Special topic presentation: You will present a special interest soil topic during the tutorial sessions starting week 4. Signup is available through cuLearn and must be completed by midnight, Sept 23 (for 1% mark). Example topics include soil & sports, environmental problems/solutions, weird/interesting soil phenomena, soils and natural disasters, food production, soil in the city (remediation, construction), soil careers, etc. I will present an example Week 3. For ideas, google “soil in the news” or visit the “web links” tabs at http://wps.prenhall.com/chet_brady_natureandp_14/. Upload your presentation slides as pdf (max 5) by midnight the day before your presentation (lateness policy applies). You have 5 min to present your topic. It must include source references and one question for the class related to soil properties that we have discussed to date (e.g. short answer or multiple choice or true or false). Students will post an answer to the TA via chat for participation marks.

Exams: These will be limited time, open book and include multiple choice and short paragraph answers.

Standing in a course is determined by the course instructor subject to the approval of the Faculty Dean. This means that grades submitted by the instructor may be subject to revision. No grades are final until they have been approved by the Dean.

6. Statement on Plagiarism:

Plagiarism will not be tolerated. Students should consult the [Academic Integrity Policy](#).

Plagiarism: The University Senate defines plagiarism as “*presenting, whether intentionally or not, the ideas, expression of ideas or work of others as one’s own.*” This can include:

- reproducing or paraphrasing portions of someone else’s published or unpublished material, regardless of the source, and presenting these as one’s own without proper citation or reference to the original source;
- submitting a take-home examination, essay, laboratory report or other assignment written, in whole or in part, by someone else;
- using ideas or direct, verbatim quotations, or paraphrased material, concepts, or ideas without appropriate acknowledgment in any academic assignment;
- using another’s data or research findings;
- failing to acknowledge sources through the use of proper citations when using another’s works and/or failing to use quotation marks;
- handing in "substantially the same piece of work for academic credit more than once without prior written permission of the course instructor in which the submission occurs."

Plagiarism is a serious offence, which cannot be resolved directly with the course’s instructor. The Associate Deans of the Faculty conduct a rigorous investigation, including an interview with the student, when an instructor suspects a piece of work has been plagiarized. Penalties are not trivial. They can include a final grade of "F" for the course.

7. Requests for Academic Accommodations:

Carleton provides [academic accommodation to students](#) for reasons of disability, religious observance, pregnancy and/or parental leave, sexual violence, and student activities.

Providing accommodations simply means providing alternatives to students who cannot perform the essential requirements of their academic programs due to the reasons mentioned above. At no time does academic accommodation undermine or compromise the learning objectives that are established by the academic authorities of the university.

This section provides only a brief overview of the accommodations policy and process. Please contact [Equity and Inclusive Communities](#) for a full explanation.

Religious Observation: A request should be made in the first two weeks of the academic term, or as soon as possible where the scheduling of an event or activity conflicting with a religious obligation does not appear in the course outline or calendar. A list of multi-faith holy days is accessible through the [Equity Services website](#). Instructors can also contact Equity Services to confirm the eligibility of a religious event or practice.

Pregnancy and/or Parental Leave: Requests for parental leave must be made in writing to the Registrar’s Office, or in the case of graduate students, to the Office of the Dean of Graduate and Postdoctoral Affairs.

A student who is pregnant may request a temporary modification to her program (e.g., laboratory or field work). The student should meet with the instructor(s). The department chair/director and the faculty dean can assist in the discussion. An Equity Services advisor can also be consulted if a student has questions about pregnancy and/or parental leave.

Students with Disabilities: Carleton is strongly committed to providing access and accommodation for all individuals with identified and duly assessed disabilities. The university has a [Senate-approved policy on academic accommodation](#) that forms part of its human rights policy. The policy promotes efforts to accommodate students with disabilities so that they will have the opportunity to meet learning outcomes and be fairly evaluated in their performance. In no case, however, does academic accommodation negotiate away, lower, or remove the academic standards and learning outcomes of any course or program, rule, regulation, or policy at the university.

Some students with disabilities may require special accommodations for tests and exams. In these cases, students must present you with a signed accommodation form from the Paul Menton Centre detailing their accommodation needs well in advance of the date of an exam. A copy of the [Paul Menton Centre accommodations policy can be found here](#).

Survivors of Sexual Violence: As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and where survivors are supported through academic accommodations as per Carleton’s Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit carleton.ca/sexual-violence-support.

Accommodation for Student Activities: Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, see [the policy](#).

Contacts

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| Equity Services 503 Robertson Hall 613-520-5622 equity@carleton.ca carleton.ca/equity | Paul Menton Centre 501 University Centre 613-520-6608 pmc@carleton.ca carleton.ca/pmc |
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