



COURSE OUTLINE
Hydrology



This course provides an overview of hydrological processes, measurement techniques and data analysis. The movement of water in the hydrologic cycle via precipitation, interception, evapotranspiration, surface runoff, infiltration, soil moisture, groundwater flow and streamflow generation will be examined. Applied aspects and local examples will be discussed. Lecture material is complimented by laboratory assignments and a field trip option on a Friday in March.

Class Meetings: Tuesdays and Wednesdays 4:30 to 5:50 pm
Location: CLE A211

Lab Information: B01 M 2:30 pm to 4:20 pm DTB A253
B02 R 4:30 pm to 6:20 pm DTB A253

INSTRUCTOR INFORMATION

Dr. Matthew Asplin, Department of Geography, **DTB B214**, asplin@uvic.ca or 250-853-3284

When emailing me please include 'GEOG 370 - your name - brief subject' in the subject line. This helps me sort through emails and makes it easier to respond to your message.

Office Hours: Wednesdays 12:00 to 2:00 pm or *by appointment*.

Profile: I am a Post-doctoral Fellow in the Geography Department with a background in Synoptic Climatology, and Atmospheric forcing of Dynamic and Thermodynamic Processes in Arctic Sea Ice. I am presently investigating the changing storm surge regime of the Western Canadian Arctic. I am also passionate about hydro meteorological topics, and field based learning.

LEARNING OUTCOMES

1. To understand the different hydrological processes involved in the hydrologic cycle.
2. To know how these hydrologic processes differ at a variety of scales (local, regional, global).
3. To learn about and practice basic measurement and data analysis techniques in hydrology.
4. To investigate how recent and anticipated changes in the hydrological cycle impact water quantity, quality and availability.

REQUIRED TEXT

Davie, T. (2008). Fundamentals of Hydrology (2nd Edition). Routledge.
Digital copy provided on CourseSpaces.

Hendricks, M.R. (2010) Introduction to Physical Hydrology (1st edition) Oxford University Press

EVALUATION

| | |
|---|-----|
| Midterm Exam (February 12 th in class) | 15% |
| Final Exam (During Exam period) | 30% |
| Lab Exam (April 3 rd in class period) | 15% |
| Laboratory Assignments x 4 | 36% |
| Field Trip/Sooke Watershed Assignment | 4% |

Exam Format: The questions for the midterm exam and final exam will be based on lectures, posted learning resources and class discussion. The midterm test will cover only the topics discussed immediately preceding it. The final exam is comprehensive, but will be weighted more heavily on material not previously tested on. Format includes a combination of short-answer, problem-solving and multiple-choice questions. The lab exam questions will be based on lab assignments, background material and lab discussions.

Lab assignments are not equally weighted: Lab 1 (8%), Lab 2 (7%), Lab 3 (8%), Lab 4 (13%)

GRADING SYSTEM

As per the Academic Calendar:

| Grade | Grade point value | Grade scale | Description |
|------------------------------------|-------------------|-----------------------------|--|
| A+ A A- | 9 8 7 | 90-100% 85-89% 80-84% | Exceptional, outstanding and excellent performance. Normally achieved by a minority of students. These grades indicate a student who is self-initiating, exceeds expectation and has an insightful grasp of the subject matter. |
| B+ B B- | 6 5 4 | 77-79% 73-76% 70-72% | Very good, good and solid performance. Normally achieved by the largest number of students. These grades indicate a good grasp of the subject matter or excellent grasp in one area balanced with satisfactory grasp in the other area. |
| C+ C | 3 2 | 65-69% 60-64% | Satisfactory, or minimally satisfactory. These grades indicate a satisfactory performance and knowledge of the subject matter. |
| D | 1 | 50-59% | Marginal Performance. A student receiving this grade demonstrated a superficial grasp of the subject matter. |
| F | 0 | 0-49% | Unsatisfactory performance. Wrote final examination and completed course requirements; no supplemental. |
| N | 0 | 0-49% | Did not write examination or complete course requirements by the end of term or session; no supplemental. |

GEOGRAPHY DEPARTMENT INFORMATION

Geography Department website: <http://geog.uvic.ca>

Undergraduate Advisor: Phil Wakefield geogadvisor@uvic.ca

Department Chair: Dr. Johannes Feddema geogchair@uvic.ca

COURSE COMMUNICATION

CourseSpaces learning management systems (LMS) will serve as the main avenue of communication in this course (<http://coursespaces.uvic.ca>). This is where I will put important resources that I think will help you along including course information, topic handouts, important dates, announcements, lab materials, and TA information (email addresses and office hours). Please go here first and visit often. If you are having difficulty logging in or password problems, contact the Computer Help Desk Email: helpdesk@uvic.ca, Tel: 250-721-7687

IMPORTANT COURSE POLICIES

Students are expected to attend all lectures and labs, take notes and be punctual. A high level of student cooperation and participation, involving asking and answering questions is expected.

Students must complete all evaluation components to obtain credit. Failure to complete an any evaluation component without permission from the instructor, will result in an 'N' grade, which equals a Grade Point Value of 0. The only exception to the above statement in this course is the Sooke Watershed Assignment. If you miss the above assignments an automatic grade of '0' will be assigned.

As an Instructor, I can refuse a student admission to a lecture, laboratory, learning activity or exam because of lateness, misconduct, inattention or failure to meet the responsibilities of the course. Students who neglect their academic work may be assigned a final grade of 'N' (which equals a Grade Point Value of 0) or debarred from final examinations. Please refer to the UVic academic calendar in the section on student academic conduct for further information.

Topic handouts based on lecture presentations will be provided before the beginning of class meetings on CourseSpaces. These handouts will be removed 7 days after the posting date. Students are responsible for downloading/saving and completing notes packages. *If you miss any material, make arrangements to get handouts from a fellow student, not from the instructor.*

Late assignments will be penalized 20% per day (including weekends and holidays). Exceptions will only be granted for documented medical or compassionate reasons. Please inform the instructor of your situation promptly and present written proof within five working days. *Only the course instructor can grant exceptions.*

Students will not be permitted to write make-up tests except for documented medical or compassionate reasons. Any make-up test or examination may not follow the same format as the in-class one. Please inform the instructor of your situation promptly and present written proof within five working days. *Only the course instructor can grant exceptions.*

Cell phones must be turned off or silenced during lectures and labs and ONLY be used during field activities if pertinent to do so.

Conflicts with holidays or travel plans are not considered an acceptable reason to apply for a deferred exam or assignment extension.

Please attend only the laboratory section for which you are registered. If you must miss a lab for exceptional circumstances, please make arrangements with your TA and Instructor in advance to attend another section. In this situation, you may be asked to attend a specific lab section because of space requirements and this may result in you missing content from other classes. This however does not change the due date of your lab assignment.

Details regarding your labs and their marks are managed by the course TAs. Please discuss any issues or questions on labs with your TA first and then come to see me if you would like further clarification.

Unless otherwise stated students are expected to complete assignments independently.

Students are responsible for reviewing the current University of Victoria's academic calendar. There are a number of regulations on conduct and expectations that you are bound by. As such you should make yourself familiar with them.

PLAGIARISM

Academic dishonesty (plagiarism, cheating) is a very serious matter in any academic institution and is dealt with severely at the University of Victoria. *The responsibility of the institution:* Instructors and academic units have the responsibility to ensure that standards of academic honesty are met. By doing so, the institution recognizes students for their hard work and assures them that other students do not have an unfair advantage through cheating on essays, exams, and projects. *The responsibility of the student:* Plagiarism sometimes occurs due to a misunderstanding regarding the rules of academic integrity, but it is the responsibility of the student to know them. If you are unsure about the standards for citations, for referencing your sources, or unauthorized use of an editor, please familiarize yourself with the University policy on academic integrity found in the Undergraduate Calendar at the following website <http://web.uvic.ca/calendar/undergrad/info/regulations/academic-integrity.html>.

Please contact me if you have any questions.

Infractions will be dealt with in accordance with University policy. Commonly, the penalty for any form of cheating/plagiarism is a grade of F on the tests or laboratory assignments, or a final grade of F in the course. However, depending on the severity of the case other penalties may include a record on the student's transcript or expulsion.

ACCESSIBILITY

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a documented disability/health consideration that may require accommodations, please feel free to approach me and/or the Centre for Accessible Learning (CAL) as soon as possible. The CAL staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations <http://www.uvic.ca/services/cal/>. The sooner you let us know your needs the quicker we can assist you in achieving your learning goals in this course.

POSITIVITY AND SAFETY

The University of Victoria is committed to promoting, providing and protecting a positive and safe learning and working environment for all its members. To ensure that all class members feel welcomed and equally able to contribute to class discussions, we will all endeavour to be respectful in our language, our examples, and the manner in which we conduct our discussions and group work. If you have any concerns about the climate of the class, please contact me.

Sexualized Violence Prevention and Response at UVic

UVic takes sexualized violence seriously, and has raised the bar for what is considered acceptable behaviour. We encourage students to learn more about how the university defines sexualized violence and its overall approach by visiting www.uvic.ca/svp. If you or someone you know has been impacted by sexualized violence and needs information, advice, and/or support please contact the sexualized Violence resource office in Equity and Human Rights (EQHR). Whether or not you have been directly impacted, if you want to take part in the important prevention work taking place on campus, you can also reach out:

Where: Sexualized violence resource office in EQHR, Sedgewick C119

Phone: 250.721.8021

Email: svpcoordinator@uvic.ca

Web: www.uvic.ca/svp

Course Experience Survey (CES)

We value your feedback on this course. Towards the end of term, as in all other courses at UVic, you will have the opportunity to complete an anonymous survey regarding your learning experience (CES). The survey is vital to providing feedback to me regarding the course and my teaching, as well as to help the department improve the overall program for students in the future. The survey is accessed via MyPage and can be done on your laptop, tablet, or mobile device. I will remind you and provide you with more detailed information nearer the time but please be thinking about this important activity during the course.

COURSE INFORMATION AND ANTICIPATED SCHEDULE

| Week | Dates | Tentative Lecture Schedule | Lab Schedule |
|------|-----------------|--|---|
| 1 | Jan 1 to 5 | NO CLASSES | No Lab |
| 2 | Jan 7 to 11 | Topic 1: Introductory Concepts | No Lab |
| 3 | Jan 14 to 18 | Topic 2: Atmospheric Water | Lab 1: GIS and Hydrology |
| 4 | Jan 21 to 25 | Topic 2: cont. | Lab 1 cont. |
| 5 | Jan 28 to Feb 1 | Topic 3: Soil Water | Lab 2: Water Balance Model Lab 1 Due |
| 6 | Feb 4 to 8 | Topic 3: cont. | Lab 2 cont. |
| 7 | Feb 11 to 15 | Midterm and Topic 4: Groundwater | Lab 3: Evaporation, Soil Moisture and Groundwater Lab 2 Due |
| 8 | Feb 18 to 22 | Reading Week | No Labs |
| 9 | Feb 25 to Mar 1 | Topic 4 cont. | Lab 3 cont. |
| 10 | Mar 4 to 8 | Topic 5: Surface Water | Lab 4: River Discharge Lab 3 Due |
| 11 | Mar 11 to 15 | Topic 5 cont. | Lab 4 cont. |
| 12 | Mar 18 to 22 | Topic 6: Snow Hydrology | Lab 4 cont. |
| 13 | Mar 25 to 29 | Topic 6 cont. Topic 7: Special Topics | Lab 4 Due – Due at the start of lab period (lab evaluation to be completed) |
| 14 | April 1 to 5 | Catch up if required and Review, Lab Exam (April 3 rd in class period) | |

Due Date for the Field Trip/Sooke Watershed Assignment (4%) will be assigned once the dates for these activities have been confirmed. *You will be informed and consulted no less than 3-weeks prior to the date assigned. The Sooke Watershed field trip is tentatively scheduled for Friday, March 8th, 2019.*

University of Victoria Important Dates

Jan 23rd - Last day for adding courses that begin in the second term.

Feb 28th – Last day for withdrawing from the first term courses without penalty of failure.

Additional important dates can be accessed through the link below.

<http://web.uvic.ca/calendar/general/dates.html>