

**GEOGRAPHY 370: HYDROLOGY**  
DEPARTMENT OF GEOGRAPHY, UNIVERSITY OF VICTORIA  
Course outline – Spring 2016

**GENERAL INFORMATION**

Dr. Shannon Fargey  
Office: DTB B308  
Email: fargey@uvic.ca  
Tel: 250-721-7342

**Office hours:** Monday 10:00 am to 12:00 pm  
Wednesday 10:00 am to 12:00 pm  
or by appointment

**Lecture Information:**

Time: Tues, Wed – 4:30 pm -5:50 pm  
Location: DSB C118

**Laboratory Information** (*Section, Weekday, Time, Location*)

B01	W	10:30 am -12:20 pm	CLE A010
B02	R	4:30 - 6:20 pm	CLE A010
B03	F	8:30-10:20 am	CLE A010

*Contact information for TAs will be provided on CourseSpaces.*

**COURSE DESCRIPTION**

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 (hopefully!).

**PREREQUISITIES**

GEOG 272 or EOS 340

Note: 1.5 units of 100-level math, statistics and/or a computing course is strongly recommended. The laboratory assignments are numerically intensive at times and require familiarity with a spreadsheets or statistical graphing software such as MS Excel.

## EVALUATION CRITERIA

Lab Assignments (6) = 40%

Midterm Exam = 15% February 16<sup>th</sup> during lecture period

Lab Exam = 15% March 29<sup>th</sup> during lecture period

Final Exam = 30% - Date/Time TBA

**Exam format** will include a combination of short-answer and multiple-choice questions. The questions for the term tests and final exam will be based on lectures, assigned readings, learning resources and class discussion. The midterm test will cover only the topics discussed immediately preceding it. The final exam is comprehensive, although may be weighted more heavily on material not previously tested on.

## FINAL GRADE ALLOCATION

A+	A	A-	B+	B	B-	C+	C	D	F
90- 100%	85- 89%	80- 84%	77- 79%	73- 76%	70- 72%	65- 69%	60- 64%	50- 59%	<49%

## REQUIRED TEXTBOOK

Dingman, L. (2015). Introduction to Physical Hydrology (3<sup>rd</sup> Edition) Waveland Press (available at the University Bookstore)

*A second edition of this textbook is acceptable, however assigned readings (pages and chapters) will reference the third edition only. If you use an older edition, you are responsible for matching content between books.*

In addition, a list of supplemental readings and learning materials will be posted on CourseSpaces throughout the term.

A good alternate textbook for this course is provided below. If you use this book, you are responsible for identifying and researching any content differences between the *required textbook* and this resource.

Hendriks, M.R. (2010). Introduction to Physical Hydrology. Oxford University Press (available at the University Bookstore)

## COURSE COMMUNICATION

CourseSpaces learning management systems (LMS) will serve as the main avenue of communication in this course (<http://coursespaces.uvic.ca>). Please monitor the page on a regular basis for course announcements, readings assignments and lecture handouts. If you are having difficulty logging in or password problems, contact the Computer Help Desk Email: [helpdesk@uvic.ca](mailto:helpdesk@uvic.ca), Tel: 250-721-7687

## LECTURE HANDOUTS

Topic handouts *based* on lecture presentations will be provided. They will be posted on CourseSpaces before the next lecture. Topic 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.

## IMPORTANT COURSE POLICIES

- Students must complete all evaluation components to obtain credit.
- Failure to complete an assignment (lab) or exam (midterm or final), without permission from the instructor, will result in an ‘N’ grade, which equals a Grade Point Value of 0
- All assignments must be submitted to write the final exam.
- Unless otherwise stated students are expected to complete assignments independently.
- Conflicts with holidays or travel plans are not considered an acceptable reason to apply for a deferred examination or an assignment extension.

### Missed exams:

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

### Lab assignments:

- Late assignments will be penalized **20% per day** (including weekends and holidays). Exceptions will only be granted for documented medical or compassionate reasons. Written proof must be provided within five working days. **Only the course instructor can grant exceptions.**
- Details regarding your labs and their marks are managed by the course TA. Please discuss any issues on labs with your TA first.
- Lab assignments are due at the beginning of your lab session.

- 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 in advance to attend another section.

### **STUDENT RESPONSIBILITIES**

- A high level of student cooperation and participation, involving asking and answering questions during the lectures.
- *Cell phones and portable music players must be turned off or silenced during lectures. Students are also required to remove earphones.*
- Students are expected to be punctual for classes.
- Students are expected to attend all lectures and take notes. Not all material provided in the lecture handouts is covered in assigned readings and learning resources. In addition, not all assigned readings and learning resources will be covered in the lectures but may be covered in the exams.

### **CLASS CLIMATE**

The University of Victoria is committed to promoting, providing and protecting a positive and safe learning and working environment for all its members. The University of Victoria has made a conscientious effort to increase diversity in the student, staff and faculty member populations. 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.

### **ACADEMIC INTEGRITY**

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 or for referencing your sources, ask your instructor.

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.

Please familiarize yourself with the University policy on academic integrity found in the Undergraduate Calendar at the following website. Please contact me if you have any questions. (<http://web.uvic.ca/calendar2011/FACS/UnIn/UARe/PoAcI.html>)

### **STUDENTS WITH DIVERSE LEARNING STYLES AND NEEDS**

If you have any type of disability/health consideration, there are support systems, resources, and accommodation actions available to you. If you wish to access any of these supports, resources or accommodations, I encourage you to contact the Resource Centre for Students with a Disability (<http://www.uvic.ca/services/rcsd/>) to ensure your success in this course. Please note that you are under no obligation to disclose your disability/health consideration.

### **COURSE EXPERIENCE SURVEY**

I value your feedback on this course. Towards the end of term, as in 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 the department improve the overall program for students in the future. The survey is accessed via MyPage and can be done on your laptop, table, 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.

## TENTATIVE LECTURE SCHEDULE\*

*(Week, Topic, Subject)*

Jan. 4-8	Topic 1: <b>Introductory Concepts of Physical Hydrology</b>
Jan. 11-15	Topic 2: <b>Atmospheric Water</b>
Jan. 18-22	Topic 2: continued
Jan. 25-29	Topic 3: <b>Soil Water</b>
Feb. 1-5	Topic 3: continued
<i>Feb. 8-13</i>	<i>Reading Break – No classes</i>
Feb. 15-19	<i>Midterm exam</i> and Topic 4: <b>Groundwater</b>
Feb. 22-26	Topic 4: continued
Feb. 29-Mar. 4	Topic 5: <b>Surface Water</b>
Mar. 7-11	Topic 5: continued
Mar. 14-18	Topic 6: <b>Snow Hydrology</b>
Mar. 21-25	Topic 7: <b>Special Topics and Connections</b>
Mar. 28-Apr. 1	<i>Lab Exam and Review</i>

\* *dates and topic/subject schedule may change*

## LAB ASSIGNMENT SCHEDULE

Jan. 4-8	No Lab
Jan. 11-15	Lab 1: The Hydrological Cycle
Jan. 18-22	Lab 1 Due, Lab 2: Watersheds and Areal Precipitation Estimates
Jan. 25-29	Lab 2 continued
Feb. 1-5	Lab 2: Due, Lab 3: Water Vapour and Evapotranspiration
<i>Feb. 9-13</i>	<i>Reading Break – No classes</i>
Feb. 15-19	Lab 3 continued
Feb. 22-26	Lab 3 Due, Lab 4: The Water Balance Model
Feb. 29-Mar. 4	Lab 4 continued
Mar. 7-11	Lab 4 Due, Lab 5: Groundwater
Mar. 14-18	Lab 5 continued, Lab 6: River Discharge
Mar. 21-25	Lab 5 Due, Lab 6 continued
Mar. 28-Apr. 1	Lab 6 Due, and <i>Lab Exam</i>

Lab Weights: Lab 1,6 (4% each), Labs 2,3,4,5 (8% each)

Lab Exam – March 29<sup>th</sup> 4:30-5:50 (in lecture period) – 15%