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Office hours: T,W 14:30– 15:30 (my office: David Turpin Bldg. B120)

Lectures: T, W 12:30– 13:20 (CRN:11789) David Turpin Building A102

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Labs:

W	8:30– 10:20	(B01)– SSM/David Turpin Bldg. B307(CRN:11790)
W	16:30– 18:20	(B02)– SSM/David Turpin Bldg. B307(CRN:11791)
Th	12:30– 14:20	(B03)– SSM/David Turpin Bldg. B307(CRN:11792)
F	12:30– 14:20	(B04)– SSM/David Turpin Bldg. B307(CRN:11793)

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Lab instructors: Chris Krasowski(Th,F), Pei Ling Wang(W1), Matt Fuller(W2)

### Introduction:

Weather, climate, and the movement of water have important impacts on our lives and activities. The weather is an ever-present factor in Canadian lives, and extreme events can have catastrophic consequences the effects of which are felt for years after the disaster. Periodic severe flooding of the Prairies, powerful storms of the North Pacific, the Gulf of Mexico hurricanes in 2005 and 2017, and the climate anomalies associated with El Niño and the PDO are prime examples of these impacts. The climate of a region determines, in part, the types of vegetation present, the nature of the soils and landforms, potential agricultural activity, the form of our cities, and simply how we live our lives. As well as being influenced by it, human activities can influence the atmosphere – not that we are all aware of climate change at some level. The flow of the atmosphere and over the earth's surface means that events in one part of the globe can have consequences far from the source; think of coastal emissions from the Fukushima Daiichi Power Station crossing the Pacific after the 2011 earthquake – why would emissions from a site in Japan worry us?

This course is a general introduction to climatology and hydrology, with an emphasis on the essential controls of weather and climate, local patterns and dynamics of the global climate, basic hydrology with a focus on its expression in weather, elements of meteorology including an overview of online weather services, a detailed consideration of atmospheric structure, and an introduction to groundwater and fluvial hydrology. There is a mandatory text. Readings from the text will be regularly assigned. The course will generally follow these readings, and you should keep up with them. In class we will emphasize certain topics.

### Course Mission:

This course seeks to equip you with understanding of climate, weather, and the flow of water necessary to:

- improve your day-to-day lives, including learning how to more fully utilize the products made available from the forecast centers of Environment Canada and the US National Weather Service, and
- allow you to be a more effective citizen by fully engaging in and appreciating the global environmental change debate.

Specific Objectives:

1. Describe the vertical structure, composition, and broad patterns of the earth's atmosphere and climate system and account for these patterns in terms of thermodynamics and geographic controls.

I strongly urge you to read the text for supplemental material. Lectures are designed to follow the layout of the text. We will cover a lot of the material in the book and some lab material will be drawn from the question sections in the text. On the Courses page I will list all upcoming sections to read. I have also suggested chapter review questions to look at. Again, these are not taken up.

**\*\*Note\*\*** I will draw upon these questions when it comes time to preparing the mid-term and the final exams, so make use of them.

**Computer use** In the laboratories, we will be doing a number of exercises using the computer. You should be familiar with basic computer skills such as file maintenance, printing and word processing.

**Laboratories:** The labs are an essential part of the course and attendance is required. There will be reports due: see below for detailed schedule. Lab reports must be neatly typed and figures must be clearly and correctly presented. Your lab instructor is your first point of contact for the labs. The labs will give you practice in using standard software for the analysis of climatic data and in making observations to build and support ideas about how things work. Preparing synthesis reports is a job skill needed in today's job market. Analysis and presentation of data is a necessary skill in all fields. Labs are not designed to march in step with lecture material – they are their own course component.

**Coursespaces:** This course is hosted on the UVic Coursespaces system (<http://coursespaces.uvic.ca/>) and will post various course-related materials and news items here from time to time. Please make sure you keep a regular eye on the site. Readings will be posted here ahead of classes in which they are required.

In addition, there are many sites on the Internet with satellite images, current maps and other data and information. I will post some links on the webpage that you can explore. You may want to find these and study the weather during this semester. You will notice your appreciation and understanding of the maps will greatly increase over the course of the semester.

**Evaluation:** The course grade will be based on the following:

		Date (or date due)	Weight	Subject
1	Quizzes	Listed below	15 %	Up previous quiz (~1-2 wks)
2	Mid-Term Test	Listed below	15 %	First term, lecture only

**Tentative course outline**

Undergraduate Grading\*\*

GEOG 272

Fall 2017

Course Experience Survey (CES)

I 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.

