

GEOG 272 The Natural Environment: Air and Water (3 credits)

General Information

Term: *Fall, 2020*
Prerequisites: *None*
Credits: *3*
Class time: *Tuesday & Thursday, 14:45-16:00*
Class room: *Online*

Instructor Information

Name: *Ricardo Duenez, P/T Faculty, GPE*
E-mail: *ricardo.duenez@concordia.ca*
Phone: *N/A*
Office hours: *Online hours to be determined*
Office: *Online meetings only*

TA Information

Name: *TBA*
E-mail: *TBA*

IMPORTANT DATES	
Last day to register:	Monday, September 21st 2020
Last day to withdraw (refund):	Monday, September 21st 2020
Last day to discontinue (no refund):	Monday, November 9th 2020
Last day of in-class testing:	Monday, November 30th 2020
Final exams:	December 9th – 23rd 2020
Travel arrangements should not be made prior to the posting of the final Exam Schedule.	



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Department of Geography, Planning and Environment

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Course Overview

Course Description: GEOG 272 The Natural Environment: Air and Water

“This course introduces the Earth’s atmosphere and hydrosphere through an examination of their structural components, processes, and variability through space and time. Topics include the global energy system, air temperature cycles, weather systems, urban climate, the water cycle, oceans, lakes, and rivers.”

Instructor Message Regarding Remote Delivery

The remote learning context presents new challenges for all involved, and student engagement is of particular concern. Foster student engagement by acknowledging the challenges that students may be experiencing due to the pandemic and committing to do your best to provide a supportive learning environment. Consult CTL’s guidelines for [fostering student engagement](#). Point students to resources to support their academic success: post links on Moodle to [student-specific guidelines for remote teaching](#) and [Remote Learning Resources](#).

The University strongly encourages instructors to record all fixed (synchronous) sessions to accommodate students who are unable to participate in those sessions for reasons such as time zones, inadequate Internet bandwidth, and caregiver responsibilities. Instructors will make recordings available to students from Moodle, which limits access to students registered in the course.

Students must consent to being recorded if they are attending a lecture or participating in a component of a course that is being recorded. If they are not comfortable being in a class that is recorded, students may decide to not take part by logging off Zoom. Instructors will make class video recordings available in Moodle so that students who log off will be able to later watch the recording. Note that you may wish to pause the recording during student discussions if you are concerned that the recording may inhibit participation.

Learning Outcomes

By the end of the course students should have a good understanding of how the planet’s basic hydrological and atmospheric cycles and processes function, and how they interact to give us the local weather and global climates we experience today. In addition, assignments will give students insight into the research and experiments taking place within various governmental scientific departments to create predictive models of climate change, and how that change is influenced by anthropogenic activities over time.

Instructional Method

This class will consist of online lectures, discussions, and individual participation. Numerous videos from various organizations (and YouTube) will certainly be included. If I have posted a reading before class, I expect it to provide some type of platform for discussion. For the most part, the protocol will be for students to have muted microphones during lectures (with optional muted video), and unmuted mics during any general discussions or question periods. More exact details regarding expected online behaviour will be discussed during the first weeks of class, and/or mentioned in Moodle postings. Please review any readings and/or slides prior to the associated lecture. For the most part, all power point lectures and assignments will be posted on Moodle; the Yuja platform within Moodle may also be utilized for pre-recorded lectures and Zoom meetings/discussions. Exams will take place during official class/university-scheduled times, assignments all

have due dates (normally by midnight of the due date), and I plan to have at least one office hour during a weekday evening (TBD) as well as at least one during daytime hours (also TBD).

Expectations for Student Participation

Students are expected to view synchronous, online lectures and discussions, and to access instructor office hours on an 'as needed' basis. Most 'live' lectures/discussions will be recorded and eventually downloaded to Yuja. Modified (often summarized) power point presentations will usually accompany live, online lectures/discussions; full power point presentations (with content, but without audio/narration) will be accessible via the class Moodle. Students are further expected to follow up all instructor-suggested online links to outside resources. In terms of class conduct, while online via Zoom, students are expected to generally keep their audio muted; visual participation is encouraged, but not mandatory. In the event that the instructor deems that rules of conduct have been violated (e.g. disruption of the lecture via audio or visual means), the instructor reserves the right to terminate the session, and any subsequent sessions that are felt to be 'at risk'. The 'chat' component of zoom will generally be directed at the instructor, and will not be available to be used among students during the lecture/discussion (unless otherwise stated by the instructor). There will generally be an open question period at the end of each live lecture, and students are encouraged to send in particular questions/observations/etc. via e-mail or during office hours. Students should check Moodle on a regular basis to keep up with any/all downloaded materials and messages sent by the instructor.

BEHAVIOUR

All individuals participating in courses are expected to be professional and constructive throughout the course, including in their communications. Concordia students are subject to the Code of Rights and Responsibilities which applies both when students are physically and virtually engaged in any University activity, including classes, seminars, meetings, etc. Students engaged in University activities must respect this Code when engaging with any members of the Concordia community, including faculty, staff, and students, whether such interactions are verbal or in writing, face to face or online/virtual. Failing to comply with the Code may result in charges and sanctions, as outlined in the Code.

Required Course Materials

Online access to Concordia's library and relevant websites will be required.

Optional Course Materials

RECOMMENDED TEXTBOOK / READINGS

Christopherson, R.W., G.H. Birkland, M., M-L. Byrne & P.T. Giles, 2019. *Geosystems*. (Updated 4th Canadian edition). Pearson Canada, Ontario. The textbook is *highly* recommended, but purchase is not absolutely required. This is for several reasons. Assignments and exams are based primarily upon lecture or in-class materials, with approximately half of the *Geosystems* text used as primary material in this course (the other half is used in GEOG 274). If you already have a physical geography textbook (or equivalent), it may be sufficient. Please note that there are e-versions of *Geosystems* available from the publisher. Lecture materials will come from a variety of other, outside, sources as well.

Course Content

GEOG 272/2: The Natural Environment: Air & Water - Tentative Course Schedule

Fall 2020

Tues/Thur	General Topics	Selections from <i>Geosystems</i>
1 Sept 8, 10	<ul style="list-style-type: none"> Geography & the environmental spheres The Earth in Perspective Insolation, net radiation, Sun-Earth relationships 	Chap 1: Essentials of Geography Chap 2: Solar Energy to Earth and the Seasons
2 Sept 15, 17	<ul style="list-style-type: none"> Atmospheric composition, structure, function Pressure, temperature, lapse rates 	Chap 3: Earth's Modern Atmosphere
3 Sept 22, 24	<ul style="list-style-type: none"> Air Quality, Anthropogenic air pollution Stratospheric vs. ground ozone Acid deposition Urban environments 	Chap 3: Earth's Modern Atmosphere, cont'd
4 Sept 29, Oct 1	<ul style="list-style-type: none"> Energy pathways, role of albedo Energy balance: troposphere, surface 	Chap 4: Atmosphere and Surface Energy Balances <i>Assignment 1 due Oct 1</i>
5 Oct 6, 8	<ul style="list-style-type: none"> Temp. controls, greenhouse effect, patterns 	Chap 5: Global Temperatures
6 Oct 13, 15	<ul style="list-style-type: none"> Atmospheric circulation Winds, Patterns of Motions Oceanic currents; Global circulation 	Chap 6: Atmospheric and Oceanic Circulations
7 Oct 20, 22	<ul style="list-style-type: none"> Humidity Atmospheric stability Clouds and fog; Precipitation 	Chap 7: Water and Atmospheric Moisture
8 Oct 27, 29	<ul style="list-style-type: none"> Weather & Climate 	Chap 8: Weather <i>Assignment 2 due (10%)</i>
9 Nov 3, 5	<ul style="list-style-type: none"> Air masses, Cyclonic systems Forecasting 	<i>Exam 1 on Nov 5</i>
10 Nov 10, 12	<ul style="list-style-type: none"> Hydrologic cycle Water budgets, resource analysis Surface/groundwater resources 	Chap 9: Water Resources
11 Nov 17, 19	<ul style="list-style-type: none"> Storage and transfers in the hydro cycle Global water supply Today's oceans and fresh water systems 	Chap 9: Water Resources, cont'd <i>Assignment 3 due on Nov 19</i>
12 Nov 24, 26	<ul style="list-style-type: none"> Classifying Earth's climates, past & present Feedbacks and the Carbon budget Evidence for present climate change 	Chap 10: Global Climate Systems
13 Dec 1, 3	<ul style="list-style-type: none"> The social and physical effects of a changing climate 	Chap 11: Climate Change <i>Assign 4 due on Dec. 3</i>
14 Dec 8	<ul style="list-style-type: none"> Causes of present change Models and forecasts; "The Path Ahead" Wed: Last day of regular class! 	Chap 11: Climate Change, cont'd <i>Final exam during exam period (Cumulative)</i>

Please note: schedule and topics subject to change (with as much notice as possible).

Evaluation

Name of Assignment	Due Date	% of final grade
Assignment 1: Air Quality	Oct 1	15
Assignment 2: World Weather	Oct 29	15
Assignment 3: Footprint & Index	Nov 19	15
Assignment 4: Weekly Weather Log	Dec. 3	15
Exam 1 (Midterm exam)	Nov 5	20
Exam 2 (Final exam)	Exam period (TBD)	20

Late items: Late assignments must be in by the next available classtime, less 15%, and will not be accepted after that point. Exams must be submitted by the date/times set by the instructor.

More information on university regulations concerning evaluation can be found [here](#). The grading system is described in [section 16.1.11](#) of the Undergraduate Calendar.

Please note that for 200-level courses, instructors in the Department of Geography, Planning and Environment reserve the right to adjust the final reported grades so that under normal circumstances no more than 25% of students registered in a course receive an outstanding grade (A-, A, A+).

University Regulations

Students should be aware of the following university regulations (see [Undergraduate Calendar](#) for complete details).

- Late Completion of courses with “INC” notations – Procedures and Regulations ([Undergraduate Calendar 16.3.5](#))
- Academic Re-evaluation ([Undergraduate Calendar 16.3.9](#))
- Degree Requirements for BA, BSc, BEd – 24 credit rule and general education requirements for students in degree programs offered by Faculty of Arts & Science ([Undergraduate Calendar 31.003](#))

Class Cancellation

Should the instructor experience a problem with the internet, or with setting up a Zoom session, students may log off and expect an update regarding makeup or other ways of dealing with course material to be announced via Moodle and/or email. As this is both an asynchronous and synchronous class, most, if not all, course material will eventually be made available on Moodle.

Intellectual Property

Content belonging to instructors shared in online courses, including, but not limited to, online lectures, course notes, and video recordings of classes remain the intellectual property of the faculty member. It may not be distributed, published or broadcast, in whole or in part, without the express permission of the faculty member. Students are also forbidden to use their own means of recording any elements of an online class or lecture without express permission of the instructor. Any unauthorized sharing of course content may constitute a breach of the Academic Code of Conduct and/or the Code of Rights and Responsibilities. As specified in the Policy on Intellectual Property, the University does not claim any ownership of or interest in any student IP. All university members retain copyright over their work.

Extraordinary Circumstances

In the event of extraordinary circumstances and pursuant to the Academic Regulations, the University may modify the delivery, content, structure, forum, location and/or evaluation scheme. In the event of such extraordinary circumstances, students will be informed of the changes.

Academic Integrity

Academic integrity means that every student must be honest and accurate in their work. The Academic Code of Conduct includes rules and regulations students must follow. Unacceptable practices include the following

- Copy from ANYWHERE without saying from where it came.
- Omit quotation marks for direct quotations.
- Let another student copy your work and then submit it as his/her own.
- Hand in the same assignment in more than one class without permission.
- Have unauthorized material in an exam, such as cheat sheets, or crib notes. **YOU DON'T HAVE TO BE CAUGHT USING THEM - JUST HAVING THEM WILL GET YOU INTO TROUBLE!**
- Copy from someone else's exam.
- Communicate with another student during an exam by talking or using some form of signals.
- Add or remove pages from an examination booklet or take the booklet out of an exam room.
- Get hold of or steal an exam or assignment answers or questions.
- Write a test or exam for someone else or have someone write it for you.
- Hand in false documents such as medical notes, transcript or record.
- Falsify data or research results.

PLAGIARISM: The most common offense under the Academic Code of Conduct (see link below) is plagiarism, which the Code defines as "**the presentation of the work of another person as one's own or without proper acknowledgement.**"

This could be material copied word for word from books, journals, internet sites, professor's course notes, etc. It could be material that is paraphrased but closely resembles the original

source. It could be the work of a fellow student, such as an answer on a quiz, data for a lab report, or a paper or assignment completed by another student. It could be a paper purchased through one of the many available sources. Plagiarism does not refer to words alone. It can also refer to copying images, graphs, tables, and ideas. Plagiarism is not limited to written work. It also applies to oral presentations, computer assignments and artistic works. Finally, if you translate the work of another person into French or English and do not cite the source, this is also plagiarism. In simple words: DO NOT COPY, PARAPHRASE OR TRANSLATE ANYTHING FROM ANYWHERE WITHOUT SAYING FROM WHERE YOU OBTAINED IT!

Take care to inform yourself of the rules, regulations and expectations for academic integrity.

List of Student Services	
Academic Code of Conduct	http://www.concordia.ca/academics/undergraduate/calendar/current/17-10.html
Academic Integrity	http://www.concordia.ca/students/academic-integrity
Access Centre for Students with Disabilities (ACSD)	https://www.concordia.ca/offices/acsd
Advocacy and Support Services	http://www.concordia.ca/offices/advocacy
Campus Services	http://www.concordia.ca/students/campus-services
Conduct on Campus	http://www.concordia.ca/students/campus-services/conduct
Counselling and Psychological Services	http://www.concordia.ca/offices/counselling-psychological-services
Dean of Students' Office	http://www.concordia.ca/offices/dean-students
Financial Aid & Awards Office	http://www.concordia.ca/offices/faao
Student Health Services	http://www.concordia.ca/students/health
HOJO (Off Campus Housing and Job Bank)	https://www.concordia.ca/students/housing/off-campus.html
International Students' Office	http://www.concordia.ca/offices/iso
Library Services	http://library.concordia.ca/
Library Citation and Style Guides	http://library.concordia.ca/help/citing/
Safety and Security	http://www.concordia.ca/students/campus-services/safety-emergency
Sexual Assault Resource Centre	http://www.concordia.ca/students/sexual-assault
Student Hub	http://concordia.ca/students
Student Success Center	http://www.concordia.ca/students/success
Aboriginal Students Resource Centre	https://www.concordia.ca/students/aboriginal/resources-services.html