

BASIC COURSE INFORMATION

Course Title	Course Code Number	Credit Value
EOSC 112 The Fluid Earth: Atmosphere and Ocean	EOSC 112 201	3

PREREQUISITES

None.

COREQUISITES

EOSC 111 is recommended but not required.

COURSE DESCRIPTION & LEARNING GOALS

In this course, we will explore environmental physics, chemistry, and biology to explain what we know about the complexity of the Earth system and climate change on our planet.

Upon completing of this course, students will be able to:

1. DESCRIBE how Earth’s atmosphere, hydrosphere, lithosphere, and biosphere comprise an integrated system driven by a continuous supply of energy
2. EXPLAIN the primary factors determining Earth’s climate
3. EVALUATE evidence and hypotheses explaining why Earth’s climate changes on different time scales
4. COMPARE today’s climate to the climate of the past
5. Using scientific principles and evidence, EVALUATE information about climate change

TEACHING TEAM

	How To Contact
Instructor	
Stephanie Waterman	To ask questions on course material, course structure, assessments etc. please email eoasc-112@eoas.ubc.ca . This goes to the Instructor and the TAs only, and allows us to deliver a timely and coordinated response. To contact me individually, please message me via the CANVAS inbox (preferred). My email address is swaterman@eoas.ubc.ca .
TAs	
Yayla Sezginer Connor Henderson Brandon McNabb	12 To contact TAs individually, please email ysezginer@eoas.ubc.ca , chenderson@eoas.ubc.ca , and bmcnabb@eoas.ubc.ca .

CLASS MEETINGS & COURSE STRUCTURE

Classes will be held online every Monday, Wednesday, and Friday at 11:00 a.m - 11:50 a.m. (Pacific Time). A recording of the class will be posted on the course CANVAS site after the class.

The classes will be held on Zoom. Please review the [Student Zoom Guide](#) and install Zoom before the first session. To join Zoom sessions, click on the "Classes and Office Hours (on Zoom)" button on this home page or the Zoom link from the left menu on course CANVAS site.

Classes will involve lecture, in-class “clicker” questions and in-class individual and group activities. Three in-class tests will also be administered during class time (see Assessment Schedule below).

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SCHEDULE OF TOPICS

	Date	Topic	Contact TA
M	11 Jan	Introduction	
W	13 Jan	Radiation Balance 1	Yayla
F	15 Jan	Radiation Balance 2	Yayla
M	18 Jan	Radiation Balance 3	Yayla
W	20 Jan	Atmosphere 1	Yayla
F	22 Jan	Atmosphere 2	Yayla
M	25 Jan	Atmosphere 3	Yayla
W	27 Jan	Atmosphere 4	Yayla
F	29 Jan	Hydrosphere 1	Yayla
M	1 Feb	Hydrosphere 2	Yayla
W	3 Feb	Hydrosphere 3	Yayla
F	5 Feb	Hydrosphere 4	Yayla
M	8 Feb	Lithosphere 1	Yayla
W	10 Feb	TEST 1	Yayla
F	12 Feb	Lithosphere 2	Yayla
	15-19 Feb	<i>Reading Week – no classes</i>	
M	22 Feb	Biosphere 1	Yayla
W	24 Feb	Biosphere 2	Yayla
F	26 Feb	Carbon Cycle 1	Yayla
M	1 Mar	Carbon Cycle 2	Yayla
W	3 Mar	Carbon Cycle 3	Yayla
F	5 Mar	TEST 2	Yayla
M	8 Mar	Greenhouse Effect 1	Brandon
W	10 Mar	Greenhouse Effect 2	Brandon
F	12 Mar	Natural Drivers of Climate Variability 1	Brandon
M	15 Mar	Natural Drivers of Climate Variability 2	Brandon
W	17 Mar	Long-term Climate Evolution 1	Brandon
F	19 Mar	Long-term Climate Evolution 2	Brandon
M	22 Mar	Pleistocene Ice Ages 1	Brandon
W	24 Mar	Pleistocene Ice Ages 2	Brandon
F	26 Mar	Pleistocene Ice Ages 3	Brandon
M	29 Mar	Modern Climate 1	Connor
W	31 Mar	TEST 3	Brandon
F	2 Apr	<i>Good Friday – no class</i>	
M	5 Apr	<i>Easter Monday – no class</i>	
W	7 Apr	Modern Climate 2	Connor
F	9 Apr	Modern Climate 3	Connor
M	12 Apr	Modern Climate 4	Connor
W	14 Apr	Review	

Any changes to the schedule will be announced via CANVAS announcements and dated revisions to the syllabus will be provided accordingly.

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ONLINE PLATFORMS

We will use a number of different online platforms to assist in the delivery of this course online.

1. Course site on CANVAS

Canvas is a web-based software that lets you access course materials and manage your participation in the course. We will use this CANVAS website to post important information (the Syllabus, course schedule, course announcements *etc.*), as well as Instructor's Notes (to serve as your textbook for the course), copies of the lecture slides, lecture recordings and other course files like readings and worksheets. You will use it to upload your work including from in-class activities and homework assignments. Classes and Office Hours on Zoom can be accessed from the site. Finally, you can use it to access a record of your grades and as a means for you to contact me and the TAs.

To access go to <http://canvas.ubc.ca> and log on using your campus-wide login (CWL). If you do not yet have a CWL, go to <http://www.it.ubc.ca/cwl> to request one. Please familiarize yourself with the course website and ask for help if you need it.

2. PrairieLearn

PrairieLearn is an online problem-driven learning system for creating assignments and tests. We will use it to administer the quizzes, tests and final exam in this course.

To access go to ca.prairielearn.org/pl and click on the "Enroll course" button beside the STUDENTS logo. Select "Sign in with UBC" and log on using your campus-wide login (CWL). Add the course "EOSC 112: The Fluid Earth: Atmosphere and Ocean, 2020W2 EOSC 112 201". In the first week of classes, please attempt "Quiz 0" on the PrairieLearn platform so we can troubleshoot any problems.

3. iClicker Cloud

iClicker Cloud is an online student response system that allows you to respond individually to in-class polls and questions using your own computer or mobile device. The Teaching Team receives the responses instantly. We will use it to ask "clicker questions" in class to allow you to engage actively with the material being discussed and to allow the Teaching Team to get live feedback on class understanding.

To use iClicker Cloud you will need to create an iClicker account that is associated with UBC. Instructions on how to set-up and use iClicker Cloud are available here: <https://lthub.ubc.ca/guides/iclicker-cloud-student-guide>. Please attempt to set-up your account and trial it during the first week of classes and ask for help if you need it.

4. Piazza

Piazza is an online question-and-answer application that supports written discussions between students, TAs, and instructors. We will use this platform as a tool for you to connect with your fellow students about the course material. You are encouraged to discuss and answer each other's questions. Note that this is intended as a student-run discussion board. If a question/issue arises that needs input from the teaching team, please use the class email (eosc-112@eoas.ubc.ca) to bring it to our attention and we will do our best to provide feedback.

Piazza is a web application that is integrated with CANVAS. To access, click on the link in the left-hand navigation bar in CANVAS. You will be required to create an account on Piazza if you have not already done so.

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LEARNING MATERIALS

There are a number of different materials to support your learning of course material outside of class participation. These most important include the following.

1. Instructor's Notes

Instructor's Notes for each module will be posted on CANVAS in advance of the module classes. These are based on the material that will be presented in the lectures, and include copies of (many of) the lecture slides, accompanying notes, and supplementary information. You'll do well to consult these before class. Note these "Notes" contain examinable information unless noted as "optional" regardless of whether it is covered in class.

2. Posted Lecture Slides

Copies of the slides shown in each class will also be posted on CANVAS. These are a useful reference to review exactly what was discussed in class in each day.

3. The Piazza Discussion Board

Student-led discussions of course material will be hosted on the Piazza Discussion Board linked from the course CANVAS site. Please ask one question per post, with a clear title so that other students can search for questions/answers by topic. Please also organize posts in the relevant folders that have been set-up (organized by Module) to make this resource easily navigable.

4. Module Practice Questions

A set of practice concept sketches and multiple-choice questions will be posted for each module. These questions are an excellent example of the types of questions you can expect to be asked on quizzes, tests, and the final exam. Note we DO NOT post the answers to these practice questions. The reasons for this are discussed under Study Advice For EOSC 112 in the "All About EOSC 112" module.

5. Recommended Texts

There is no required textbook for this course. The Instructor's Notes, as well as readings accessible via links from the notes and posted as supporting materials for various modules, should serve as your course text. If you would like additional references, we recommend "The Earth System", 3rd Edition, by L. R. Kump et al. and/or "Earth's Climate Past and Future", 3rd Edition, by W. F. Ruddiman (the 2nd Edition is also fine). Copies of these texts are available to buy or rent online.

ASSESSMENTS OF LEARNING

Research on how people learn shows that humans must engage with material on a regular, ongoing basis in order to incorporate new knowledge. Evidence from past EOAS courses shows that students who participate continuously during the term statistically perform far better on high-stakes exams. The structure of assessment in this course is thus designed to provide several different ways for you to engage with the course material throughout the term. Information on the various assessment activities, the assessment schedule, and their contribution to your final grade are detailed below.

ASSESSMENT ACTIVITIES

1. **"Clicker" question participation** (in-class; 3% of final grade (IF it improves your final grade); 20% "grace space") During every class, we will ask questions that you will answer electronically, using the iClicker polling system. The purpose of these questions is for you to focus on a particular aspect of the material, right then and there, in class, and for you to make a decision about what you think. This is low-stakes practice with the material, and it's OK to

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get the answers wrong. Some of the most useful learning comes from getting something wrong.

Evaluation of clicker question participation and how to do well:

- You may earn between 0 and 3% total for participating in clicker questions throughout the term.
- You are allowed 20% “grace space”, which means you are free to miss participating in 20% of the classes with no penalty. If you fully participate in 80% of the classes during the term, you’ll earn the full 3%. For full participation in less than 80% of the classes, we’ll scale your score between 0 and 3%. You do not need to tell us about the times you’ve missed or the reasons: that’s what the “grace space” is for!
- Owing to the unusual and often unequal challenges faced by students during this pandemic, your clicker question participation grade will only be used in the calculation of your final grade *if it improves your final grade* (see the two options for the Final Grade Breakdown below). Despite this, we encourage you to participate as fully as possible as clicker question participation can be very beneficial to students and an easily-accessible way to improve your final grade.
- To maximize the benefit of the clicker questions, the best thing you can do is focus your attention when they arise and participate. Often it will be helpful to skim the module’s Instructor’s Notes ahead of time for the upcoming class to be prepared for the clicker questions.
- ***There are plenty of ways to cheat with clicker questions. All of them are academically dishonest. The most obvious way to cheat is to answer clicker questions on behalf of someone else. This, and anything else you can think of, violate UBC’s standards for academic honesty. Cheating with clickers is identical in spirit to writing an exam for someone else, or asking someone to write an exam for you. It is your responsibility to inform yourself about UBC’s policies on academic honesty.***

2. Concept sketches & worksheets (in-class; 5% of final grade; 20% “grace space”)

During some classes, we will assign homework asking you to create and turn-in **concept sketches** (you will turn-in your concept sketch via taking a photograph of your sketch and uploading it to the CANVAS site). A concept sketch is a simplified sketch illustrating the main aspects of a concept or system, annotated with concise but complete labels that (1) identify the features, (2) depict the processes that are occurring, and (3) characterize the relationships among features and processes. How to create a concept sketch will be explained in class and instructions are posted on CANVAS. Concept sketches are a useful study tool and **you will be asked to create them on tests and the final exam.**

Additionally, in some classes, you will participate in in-class activities either individually or in small groups via Zoom break-out rooms. You will report on your activities via worksheets that you will download from CANVAS as .doc or .pdf files, complete, and then upload to the CANVAS site.

Evaluation of concept sketches & worksheets and how to do well:

- You may earn between 0 and 5% total for participating in concept sketches & worksheets throughout the term.
- You are allowed 20% “grace space”, which means that if you complete 80% of the concept sketches & worksheets during the course, you’ll earn the full 5%. For participation less than 80%, we’ll scale your score between 0 and 5%. You do not need to tell us about the times you’ve missed or the reasons – that’s what the “grace space” is for.
- Concept sketches and worksheets will be marked for participation only. An honest effort is required to receive the participation credit.
- Important concepts covered by these activities will be discussed in class.
- To maximize the benefit of the concept sketches and worksheets, the best thing you can do is focus your attention when they arise and participate.
- ***There are plenty of ways to cheat on assignments like concept sketches and worksheets. All of them are academically dishonest. The most obvious ways to cheat are to turn in a concept sketch or worksheet on behalf of someone else, or to include the name of someone not present on a group worksheet. All of these, and anything else you can think of, violate UBC’s standards for academic honesty. Cheating on concept sketches or worksheets is identical in spirit to writing an exam for someone else, or asking someone to write an exam for you. It is your responsibility to inform yourself about UBC’s policies on academic honesty.***

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3. Quiz 0 (online in PrairieLearn; 1%)

To prepare for this quiz you will need to review all the material in this Syllabus and posted in the “All about EOSC 112” Module on CANVAS. Then, set up your access to PrairieLearn and take Quiz 0. The purpose of this quiz is to ensure that you are familiar with how this course will work, as well as to familiarize yourself with taking quizzes, tests and exams on the PrairieLearn system. Quiz 0 will be open during the first two weeks of class (see the Assessment Schedule below for the quiz closing time). Please complete it any time before this closing time.

4. Pre-Class Quiz for Carbon Cycle Module (online in PrairieLearn; 1%)

For the Carbon Cycle Module, we’re going to be doing something a little different. First, you’ll read some material on the topic that we’ll make available on CANVAS, and then you’ll take a quiz on this material *before* you come to the classes on the Carbon Cycle module (see the Assessment Schedule below for the dates when the quiz will be available). This way, you’ll already have some experience with this topic before you come to the relevant classes.

5. Regular Quizzes (online in PrairieLearn; 20% of total grade; we’ll count the best 4 of 5)

There will be five online quizzes throughout the term administered in PrairieLearn. The purpose of these quizzes is to encourage you to keep up with the coursework throughout the term, and to give you practice with the types of questions that will be on the higher-stakes exams. Quizzes will contain several multiple-choice questions, and you’ll have 2-3 minutes per question to complete them (which is more time per question than you’ll have on the tests and final exams. The material covered for each, as well as their respective opening and closing times are listed in the Assessment Schedule below. **You need to complete the quizzes within the time window designated. There are no extensions. Also note that Quizzes are intended to be INDIVIDUAL work.**

Evaluation of quizzes and how to do well:

- We will average your top 4 quiz scores to assign your final quiz mark. This means we’re throwing out your lowest quiz score.
- Because of this, you have one opportunity to have internet problems, skip a quiz because of scheduling problems, or whatever, with no penalty. You do not need to tell us when or why you’ve skipped a quiz, just be aware you have 1 freebie (not more). **There are no make-up quizzes.**
- To do well on the quizzes, prepare beforehand. Study the notes, “do” the learning goals, read and clarify your understanding by using the discussion board, practice with the review questions. Ask yourself, “What kinds of questions would I ask, if I were creating these questions?”
- Learn from your mistakes. You can review your answers to the quizzes after the quiz period has closed. Use this opportunity to practice for the higher-stakes exams.

6. In-class Tests (online in PrairieLearn; 40% of total grade; we’ll count the best 2 of 3)

You’ll have the opportunity to write 3 tests during class time in this course. Tests will have two types of questions: (1) multiple choice, with questions similar in style and format to the questions you’ve encountered on the quizzes, and (2) concept sketches, similar to the work you will have practiced as homework and in your own independent studying. Typically, the multiple choice questions are worth 85% of your individual test score and the concept sketch is worth 15% of your individual test score.

Tests and exams in this course typically occur in two stages. In the first stage, you will answer the test/exam questions individually. In the second stage, you will re-take the test/exam as part of a small group. The purpose of this structure is so that you get very timely feedback on your own thinking about the test/exam questions. Typically, your individual test/exam mark will count for 85% of your total test/exam score, and your group test/exam mark will count for 15% (assuming it is higher than your individual mark, which it usually is). Note that if your individual mark happens to be higher than your group mark, you will receive your individual mark i.e. your group mark can never lower your total test/exam score.

This year, the test and exam-taking setting is very different than “typical”. I am keen to try the group test format anyway, via break-out rooms in Zoom. We will try this for Test 1 and revisit the class policy for group tests/exams after this trial.

Evaluation of tests and how to do well:

- To do well, follow the “How to Study” document posted in CANVAS in the “All About EOSC 112” module.

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- Of the 3 tests, we will average your best 2 scores, i.e. we'll toss out your lowest test score.
- Since we are tossing one of your test scores, there are no make-up tests. If you miss a test, that's the one we'll toss.
- We strongly encourage you NOT to miss the first test!
- Our own data show that students who participate in in-class and out-of-class activities score on average about 10% higher on high-stakes tests and exams than students who don't. So, it is to your advantage to participate in the clicker questions, concept sketches, class activities, and quizzes to maximize both your learning and your test scores.

7. Final Exam (online in PrairieLearn; date and time TBA; 30-33%)

The final exam will cover all material in the course. It will contain multiple choice questions and concept sketches similar in format to those on the quizzes and tests. Ideally, it will have two stages, like the tests (TBD). If you miss the final exam for whatever reason, it is your responsibility to visit your Advising office and apply for deferred standing.

8. Extra-credit surveys (online in CANVAS; bonus 1%)

Your feedback helps improve the course this year and in future offerings. Further, the Department of Earth, Ocean and Atmospheric Sciences is conducting research to improve science teaching and learning. You can earn 1% extra credit by filling out various surveys (2-4 surveys through the term online in CANVAS). Your answers will help make EOSC 112 and UBC Science better. Thanks! See Announcements on CANVAS throughout the term for details about online surveys available.

FINAL GRADE BREAK-DOWN

Your final grade will be amassed from these assessment activities with this break-down as follows. Note, owing to the unusual circumstances associated with the pandemic, we will calculate your final grade using both options as listed and assign the highest score.

	Option 1 (w/ clicker participation)	Option 2 (w/o clicker participation)
Clicker Question Participation	3%	0%
Concept Sketches & Worksheets	5%	5%
Quiz 0	1%	1%
Pre-Class Worksheet for Carbon Cycle	1%	1%
Regular Quizzes	20%	20%
Tests	40%	40%
Final Exam	30%	33%
TOTAL	100%	100%
Extra-Credit Surveys	+1%	+1%

ASSESSMENT SCHEDULE

The **Assessment Schedule** is as follows:

What	Opens	Closes	Notes	Contact TA
Quiz 0	M Jan 11 12p	F Jan 22 4:59p	on "All about EOSC 112";	
Quiz 1	T Jan 26 12p	Th Jan 28 11:59a	on Radiation Balance	Yayla

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Quiz 2	T Feb 2 12p	Th Feb 4 11:59a	on Atmosphere	Yayla
Test 1	W Feb 10 in class		covers all material through Hydrosphere	Yayla
Carbon Cycle Pre-Module Quiz	M Feb 12 12p	F Feb 26 10:59a	on Carbon Cycle module materials and pre-module worksheet	Yayla
Quiz 3	T Feb 23 12p	Th Feb 25 11:59a	on Lithosphere & Biosphere	Yayla
Test 2	F Mar 5 in class		on Lithosphere, Biosphere & Carbon Cycle plus up to 20% of questions on earlier material	Yayla
Quiz 4	T Mar 23 12p	Th Mar 25 11:59a	on Greenhouse Effect, Natural Drivers of Climate Variability & Long-term Climate Evolution	Brandon
Test 3	W Mar 31 in class		on Greenhouse Effect, Natural Drivers of Climate Variability, Long-term Climate Evolution & Pleistocene Ice Ages plus up to 30% of questions on earlier material	Brandon
Quiz 5	M Apr 12 12p	W Apr 14 11:59a	on Modern Climate	Connor
Final Exam	TBD			

Any changes to the schedule will be discussed and a rationale will be announced via a CANVAS announcement. An updated revision to the syllabus will be provided via CANVAS.

OFFICE HOURS

Throughout the term, the TAs will hold office hours to provide dedicated time for giving individual help with the course material. The schedule outlined below will be structured around the quiz and test schedule, as typically students' demands for help peak in advance of these assessments. TAs will also hold office hours after tests to allow you to discuss any outstanding questions you have about the relevant material. The exact days and hours of Office Hours will be posted by the TAs on the CANVAS site one week in advance. They will be held on ZOOM accessed via the CANVAS site.

For What?	When?	Days of week	# of hours	Who?
Quiz 1 preparation	During week of Jan 25	M, T	2	Yayla
Quiz 2 preparation	During week of Feb 1	M, T	2	Yayla
Test 1 preparation	During week of Feb 8	M, T	4	Yayla
Test 1 viewing	During week of Feb 22		2	Yayla
Quiz 3 preparation	During week of Feb 22	M, T	2	Yayla
Test 2 preparation	During week of Mar 2	W, Th	4	Yayla
Test 2 viewing	During week of Mar 9		2	Yayla
Quiz 4 preparation	During week of Mar 22	M, T	2	Brandon
Test 3 preparation	During week of Mar 29	M, T	4	Brandon
Test 3 viewing	During week of Apr 5		2	Brandon
Quiz 5 preparation	During week of Apr 12	M, T	2	Connor
Final exam preparation	TBD	TBD	10	ALL

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STUDY ADVICE FOR EOSC 112:

Students who take EOSC 112 come from a wide variety of backgrounds and have a wide variety of motivations for taking this course. Everyone CAN do well in this course. Three tips to help you succeed are as follows:

1. Focus your studying around the LEARNING GOALS.

This course is structured around aiming to meet a number of very specific learning goals for each topic we cover. These learning goals are published on Canvas and each class we'll list exactly which learning goals we will aim to cover in that day's lecture. Quizzes and exams will be written to directly assess these goals. Thus, your primary study guide should be the learning goals, and you should use them to focus your studying.

What to do:

Check out each learning goal. Try to "do", in your own words, what that learning goal asks. For example, the first goal in Radiation Balance is: "*COMPARE infrared, ultraviolet, and visible electromagnetic radiation in terms of energy per photon, frequency, and wavelength*". To "do" this *comparison* requires you to be fluent in some of the characteristics of electromagnetic radiation and how those characteristics change along the spectrum. We will thus discuss these characteristics and their variation across the electromagnetic spectrum in the lecture. We will also do a few clicker questions in class that target this goal. Some review questions will also directly test your ability to "do" this goal. When you study, see if you can match up the clicker questions to the goal. See if you can match up any review questions to this goal. See if you can match up any quiz questions to this goal. What are these questions asking you to do? Then, imagine **ALTERNATIVE** questions, variations that could be asked, or different questions that target the same goal. What are the answers to your own alternative questions? You'll likely need to consult the notes in order to answer some of these questions. This **TARGETED consultation of the notes** is far more productive than simply re-reading the notes from start to finish.

2. Make the most of all practice multiple choice questions.

For every practice multiple choice question (either a clicker question, a review question, or a question on a quiz), try to explain not only why the correct answer is correct, but also why all the other answers are incorrect. If you do this, you'll be prepared to answer many more alternative questions than just the one available for practice.

3. Study actively not passively.

Students who re-write their own notes in their own words and practice explaining concepts to others learn more and do better on exams. Students who re-read and merely highlight passages, or, only re-read their own highlighted passages, do not do as well. There's important brain activity that comes with attempting to produce or create one's own explanations, in the context of what's already in your brain. If you find you are bored, or your mind is wandering, or that studying seems too easy, what you're doing is probably a waste of your time!

UNIVERSITY POLICIES

UBC provides resources to support student learning and to maintain healthy lifestyles but recognizes that sometimes crises arise and so there are additional resources to access including those for survivors of sexual violence. UBC values respect for the person and ideas of all members of the academic community. Harassment and discrimination are not tolerated nor is suppression of academic freedom. UBC provides appropriate accommodation for students with disabilities and for religious observances. UBC values academic honesty and students are expected to acknowledge the ideas generated by others and to uphold the highest academic standards in all of their actions.

Details of the policies and how to access support are available on [the UBC Senate website](#).

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IF ISSUES ARISE

University students often encounter setbacks from time to time that can impact academic performance. Discuss your situation with your Instructors or an academic advisor. Learn about how you can plan for success at www.students.ubc.ca. For help addressing mental or physical health concerns, including seeing a UBC counselor or doctor, visit: <https://students.ubc.ca/health-wellness>.

ACADEMIC CONDUCT

Academic honesty is essential to the continued functioning of the University of British Columbia as an institution of higher learning and research. All UBC students are expected to behave as honest and responsible members of an academic community. At the most basic level, this means submitting only original work done by you and acknowledging all sources of information or ideas and attributing them to others as required. This also means you should not cheat, copy, or mislead others about what is your work. Violations of academic integrity (i.e., misconduct) lead to the breakdown of the academic enterprise, and therefore serious consequences arise and harsh sanctions are imposed. For example, incidences of plagiarism or cheating may result in a mark of zero on the assignment or exam and more serious consequences may apply if the matter is referred to the President's Advisory Committee on Student Discipline. Careful records are kept in order to monitor and prevent recurrences. A more detailed description of academic integrity, including the University's policies and procedures, may be found in the Academic Calendar at <http://calendar.ubc.ca/vancouver/index.cfm?tree=3,54,111,0>.

We are teaching and learning this year under unusual and challenging circumstances. We are all in this together. With the move to on-line instruction, you may be aware that there has been a significant increase in the occurrence of apparent academic misconduct. The Department of Earth, Ocean & Atmospheric Sciences (EOAS) remains committed to identifying all cases of academic misconduct and applying disciplinary actions, as appropriate, as is important that course assessments remain fair to all students, and that no student has an unfair advantage. Issues related to academic integrity in this pandemic year are addressed in a letter to all students enrolled in EOAS courses from the Department Head that is included in the course materials in the "All about EOSC 112" module. This letter should be read by all students.

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