

EAS 100 Planet Earth A1

EAS 201 Earth Sciences I A1



Fall Term 2022

Lecturer:
Dr. Robert Creaser

Office hours:
Mondays, 1000-1100 AM in ESB 3-18

Laboratory Coordinator:
Darrin Molinaro

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Instructor:

Dr. Robert Creaser

Robert.creaser@ualberta.ca

- Research interests
 - Earth's crust – formation and changes through time
 - Geochronology using radioactive isotopes (age dating)
 - Formation of metallic ore deposits (Cu, Au, Zn, Pb, U)



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Laboratory Coordinator & eClass Administrator

Darrin Molinaro

- molinardo@ualberta.ca
- (780)492-8494

- Invertebrate Paleontologist
 - Brachiopods
 - Bivalves
 - Trilobites
 - Extinction & Shape Change

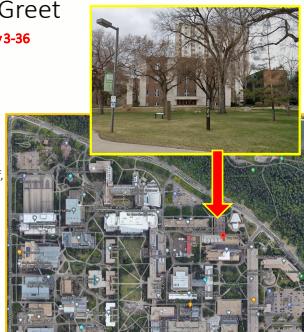


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EAS Undergraduate Meet and Greet

Thursday, September 8th, 2022; 17:00 – 18:00 (5-6 pm) in Tory 3-36

- Orientation for new and returning EAS undergraduate students
 - Geology
 - Paleontology
 - Environmental studies/sciences
 - Anyone interested in EAS programs
- Introduction to the department, programs, classes, and helpful personnel (chair & associate chairs, program advisors, office staff, etc.).
- Department mentorship program information and signup.
- Open Q & A period for students.
- Pizza and beverages will be served.



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What's the course about?

- Briefly, an introduction to the Earth and how it works
- By the end of the course you should be able to
 - Identify the main components of the Earth's atmosphere, hydrosphere, biosphere, and geosphere.
 - Describe the interactions between the atmosphere, hydrosphere, biosphere, and geosphere, and the processes that modify them over geological and human time scales.
 - Explain the ways in which humans interact and modify these components of the Earth system.



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EAS 100 versus EAS 201: What's the difference?

- EAS 100 is an introduction to Earth science that has a "hands-on" lab component that gives you experience working with Earth materials (maps, observations, rocks and minerals)
 - EAS 100 is a valid prerequisite for more advanced classes and programs in Earth and Atmospheric Science
- EAS 201 is a general interest course with no lab section. The lectures are the same as those for EAS 100
 - If you take 201 but then discover you want to take more advanced classes in EAS you can 'upgrade' it by taking EAS 200 (a labs-only course) in a later term



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Welcome to
Planet Earth!



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The Earth in the Solar System



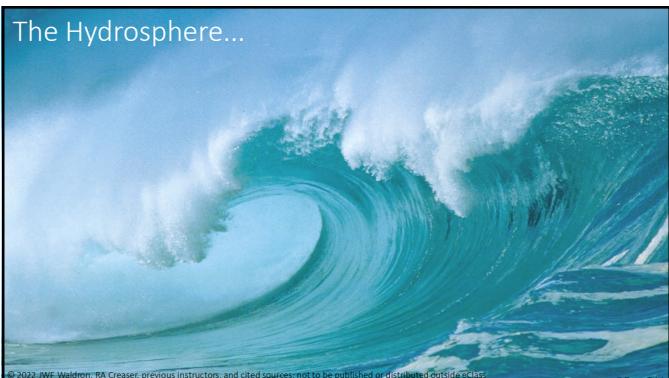
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The Atmosphere



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The Hydrosphere...



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...including the Cryosphere



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The Biosphere: living things

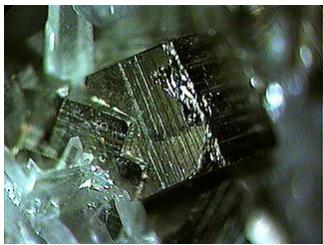
- The modern biosphere (including humans)
- The ancient biosphere



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The Geosphere: - the solid Earth

- What is the solid Earth made of?
 - Minerals



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The Geosphere: - the solid Earth

- What is the solid Earth made of?
 - Minerals
 - Rocks and the rock cycle



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The Geosphere: - the solid Earth

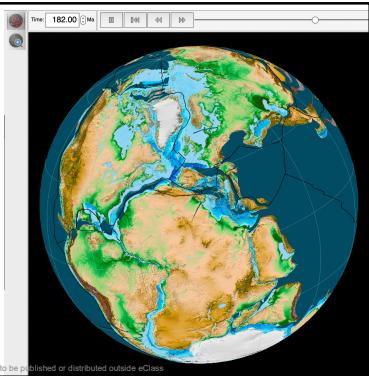
- What is the solid Earth made of?
 - Minerals
 - Rocks and the rock cycle
- Time – the history of Earth



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The Geosphere: - the solid Earth

- What is the solid Earth made of?
 - Minerals
 - Rocks and the rock cycle
- Time – the history of Earth
- The tectonic system – earthquakes, volcanoes and plates



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The Geosphere: - the solid Earth

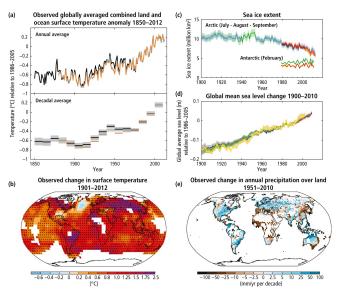
- What is the solid Earth made of?
 - Minerals
 - Rocks and the rock cycle
- Time – the history of Earth
- The tectonic system – earthquakes, volcanoes and plates
- How does the Earth affect us?



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Climate and climate change

- How do humans affect the Earth?



http://ecocomplex.rutgers.edu/photo_gallery.php?path=photo_gallery/facilities/landfill

EAS 100 lab classes



Lab Number	Topic	Dates
	No Lab	Sep 1-9
Lab 1	Maps and Topographic Profiles	Sep 12-16
Lab 2	River Valley tour and Geo-Scavenger Hunt	Sep 19-23
Lab 3	Atmosphere	Sep 26-29
Lab 4	Hydrosphere	Oct 3-7
	No Lab	Oct 10-14
Lab 5	Cryosphere	Oct 17-21
Lab 6	Biosphere	Oct 24-28
Lab 7	Earth Materials: Minerals and Igneous rocks	Oct 31 - Nov 4
	No Lab	Nov 7-11
Lab 8	Mapping Geological Histories	Nov 14-18
Lab 9	Human Resources	Nov 21-25
Lab 10	Tectonics	Nov 28 - Dec 2
	Final Assignment	Geo-Scavenger Hunt due Dec 5-8

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Evaluation

EAS 100

Assessment	Weight	Date
Midterm 1 Examination	15%	Monday, October 17, 2022
Midterm 2 Examination	15%	Monday, November 21, 2022
Laboratory Exercises	30%	Fridays, weekly
Geo-Scavenger Hunt Assignment	10%	Wednesday December 7, 2022
Final Examination**	30%	Wednesday December 14, 2022, 1400-1700

EAS 201

Assessment	Weight	Date
Midterm 1 Examination	25%	Monday, October 17, 2022
Midterm 2 Examination	25%	Monday, November 21, 2022
Geo-Scavenger Hunt Assignment	10%	Wednesday December 7, 2022
Final Examination**	40%	Wednesday December 14, 2022, 1400-1700

**Students must verify this date on BearTracks when the Final Exam Schedule is posted.

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Evaluation: things to be aware of...

- For on-line tests, you will need a private space without distractions or intrusion
- The examinations will be cumulative:
 - Because it is necessary to understand the material covered early in the course to complete later parts successfully, the examinations will be cumulative. In EAS 100, the final examination will test material in both the lecture and lab components of the course. In order to test all parts of the course with approximately equal weight, the final examination will put additional emphasis on material in the last third of the course.
- Representative evaluative materials:
 - Representative test materials, including sample questions and examination format details, will be posted on the course website at least a week prior to the midterm and final examinations.
 - Remember: the actual exam questions are different from the sample questions. Do not focus on the sample questions when choosing material to review before exams, as the exams will cover the breadth of course content.
- Your internet connection will be monitored through eClass. If it fails during a test, contact us right away.
 - Minor internet failures will be accommodated by scaling your mark
 - Major internet failure will be treated the same way as illness or domestic affliction using the provisions for missed tests.
- Method of grade assignment:
 - As EAS 100 & EAS 201 are independent classes with different weightings, grades for each class will be generated independently.
 - Your grade will reflect a combination of absolute achievement and relative standing in the class. Historically, the median letter grade for this class is in the B- to B range.

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STUDENT RESPONSIBILITIES

- Academic Integrity:

- The University of Alberta is committed to the highest standards of academic integrity and honesty. Students are expected to be familiar with these standards regarding academic honesty and to uphold the policies of the University in this respect. Students are particularly urged to familiarize themselves with the provisions of the Code of Student Behaviour (online at www.governance.ualberta.ca) and avoid any behaviour which could potentially result in suspicions of
 - cheating,
 - plagiarism,
 - misrepresentation of facts
 - assisting someone else to do any of the above.
- Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.

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STUDENT RESPONSIBILITIES

- Academic Integrity:

- All forms of academic dishonesty are unacceptable at the University. Any suspected offence will be reported to the Faculty of Science. Anyone who is found in violation of the Code of Student Behaviour may receive a sanction. Typical sanctions include conduct probation, a mark reduction or a mark of 0 on an assessment, a grade reduction or a grade of F in a course, a remark on the transcript, and a recommendation for suspension or expulsion.

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STUDENT RESPONSIBILITIES

- Appropriate Collaboration:

- You must work independently on your laboratory assignments and submit your own work for each assignment.

- Distribution of Course Materials:

- Material distributed in lectures is for the sole use of registered students in this class
- Other types of audio or video recording, digital or otherwise, of lectures, labs, seminars or any other teaching environment by students is allowed only with the prior written consent of the instructor or as a part of an approved accommodation plan.
- Student or instructor content, digital or otherwise, created and/or used within the context of the course is to be used solely for personal study, and is not to be used or distributed for any other purpose without prior written consent from the content author(s).
- No materials related to this course are to be uploaded to third-party content providers or sites such as OneClass, Chegg, Course Hero, etc.

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Resources

- **The course outline (syllabus):** Basic rules for the course, schedules of lectures and labs (100)
- **Lectures:** Will be recorded and posted on eClass.
- **Textbook:** Blue Planet, 3rd Edition. Highly recommended as alternative source of information, but contains much more than we need. Lectures are a guide to what we consider important.
- **Labs (EAS 100):** Great way to learn "hands-on" skills. Don't skip a lab thinking you can make up the marks later – it doesn't work!



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What if I get sick?

- **Laboratory Assignments:**
 - If you cannot complete any of the laboratory exercises or assignments, contact the laboratory coordinator, Darrin Molinaro, within 48 hours to make arrangements. Failure to do so may result in a grade of 0.
- **Missed Midterm Examination:**
 - If you cannot take a Midterm Examination due to incapacitating illness, severe domestic affliction or other compelling reasons, you can apply for an excused absence.
 - Given the COVID-19 situation, even mild cold- or flu-like symptoms justify requesting an excused absence.
 - To apply for an excused absence, you must contact the instructor within two working days of missing the assessment or as soon as possible. We may request documentation of the reason for the absence.
 - Failure to do so may result in a grade of 0.
 - If an excused absence is granted, then the weight of the missed exam will be transferred to other components of the course.
 - Misrepresentation of facts to gain an excused absence is a serious breach of the Code of Student Behaviour.

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What if I get sick?

- **Missed final examination**
 - If you cannot write the final examination due to incapacitating illness, severe domestic affliction or other compelling reasons (e.g. symptoms consistent with a COVID-19 infection at the time of an in-person exam) you can **apply** for a deferred final examination.
 - Apply to your Faculty office within two working days, supported by appropriate documentation.
 - Misrepresentation to gain an excused absence is a serious breach of the Code of Student Behaviour
- Students who are granted permission to write a deferred final examination must do so on *Saturday, January 07, 2023, starting at 09:00 am.*

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While on campus



Use a mask: Face masks are not required, but are strongly recommended on U of A campuses -- especially in high-traffic and high-capacity areas.



Practice good hygiene: Wash or sanitize your hands before and after touching surfaces. Practice good cough and sneeze etiquette.



Make space whenever possible: Respectful physical distancing and smaller groups are encouraged whenever possible.



Be patient: Don't overcrowd shared or enclosed spaces like elevators, washrooms, and hallways.

Respect the personal health decisions of those around you.

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What if I need an accessibility-related accommodation?

- Accessibility-related accommodations are managed by University of Alberta Accessibility Resources
- Eligible students have both rights and responsibilities for accessibility-related accommodations.
 - Schedule exam accommodations in accordance with Accessibility Resources deadlines and procedures.
 - Contact Accessibility Resources for further information.
- <https://www.ualberta.ca/current-students/academic-success-centre/accessibility-resources/index.html>



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What if I'm having trouble keeping up with my courses?

- Academic Success Centre:**
 - The Academic Success Centre provides professional academic support to help students strengthen their academic skills and achieve their academic goals. Individual advising, appointments, and group workshops are available year-round in the areas of Accessibility, Communication, Learning, and Writing Resources. Modest fees apply for some services.
 - <https://www.ualberta.ca/current-students/academic-success-centre/index.html>
- Other supports**
 - <https://www.ualberta.ca/current-students/need-help-now.html>

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Next: Earth System Science



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