Earth Sciences 1083A (Life on Planet Earth) Course Outline

1. Course Information

PLEASE NOTE: This course is designed for **in-person classroom learning**, with a compulsory component of hands-on exercises with rocks and fossils. You are advised to consider other course options if you plan to learn remotely.

General Information:

Earth Sciences 1083F: Life on Planet Earth
Academic Term: 2025-2026 Fall Term
Lectures: In-Person; 3 hours/week (Section 3 below for detailed schedule)
Tutorial Hours: In-Person; 1 hour/week (See Section 3 below for detailed schedule)

List of Prerequisites and Antirequisites:

Prerequisites: None
Antirequisites: Earth Sciences 2265A/B, Earth Sciences 2266F/G
Restrictions: Cannot be taken by students registered in yr. 3 or 4 of an Earth Sciences module.

NOTE: Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.

2. Instructor Information (*see secure course site for details*)

Instructors	**Email**	**Office**	**Phone**	**Office Hours (In-Person or Zoom)**
Dr. Jisuo Jin (Course Instructor)				by appointment.
Teaching Assistants	**Email**			
				by appointment.
				by appointment.

Note on emailing instructors/TAs: Students must use their Western (@uwo.ca) email addresses and include the course number **Earth Sciences 1083F** in the subject line when contacting their instructors.

3. Course Syllabus, Schedule, Delivery Mode

Objectives of the Course: The fundamental objectives of this course are to provide such students a basic understanding of:

1) The history of life on Earth in the context of geological time and Earth processes.
2) Principles of biological evolution.
3) Evolutionary trends in major animal groups.

Course-Level Learning Outcomes / Expectations: Upon successful completion of this course, the student will be able to:

1) Identify and classify common minerals, rocks, and other Earth materials and describe the significance of these materials in context of: a) their distribution and abundance in the Earth system, b) their relevance to Earth processes through time; and c) their roles in fossil preservation in the geologic record.
2) Describe the history of evolutionary thought and identify major scientists who played major roles in the development of evolutionary and geologic theories.
3) Identify (and name) major groups of organisms that existed through Earth's history (in context of the geologic time scale).
4) Describe the processes of evolution and extinction as recorded the fossil record.

Background Required: This course is intended for (but not limited to) students registered in faculties other than Science.

Note on the nature of scientific material to be covered in this course: This is a *Science* course and will focus on scientific subject matter. Students enrolled in this course will be required to grasp a certain amount of scientific concepts and relevant technical terms, as well as to master problem-solving skills in areas of Earth Sciences and Biology relevant to this course). **However, material to be tested will be qualitative (not quantitative)** and will therefore not involve memorization of numbers or scientific formulas.

Delivery Format:

Lectures: In-Person (*see secure course site for details*)
The PPT lecture file will be posted online ahead each classroom lecture.

Tutorials: In-Person (*Refer to your personal **section** to which you are assigned):*
Tutorial Sec. 002: (*see secure course site for details*)
Tutorial Sec. 003: (*see secure course site for details*)

Note**: if you need to change the tutorial section you are officially registered in** (according to the Office of the Registrar), you **must** ask your instructor for approval. If approved, you must then confirm with both your instructor and TAs of both sections of your intent to attend a different section.

Weekly Quizzes: Asynchronous Online (via OWL Brightspace – Assessments); assigned each Friday at 11:30AM, based on lecture material covered in the current and/or previous week). Each quiz will be due the following Friday at 11:30AM).

Note: there are **no make-up quizzes** for two reasons: 1) you have a whole week to complete an open-book quiz; 2) there are 12 quizzes in total but, for each student, only 10 with the highest marks will be counted.

Course Schedule for Earth Sciences 1083F (2024)

Week	Day	Lecture and Tutorial Topics (and Other Items of Significance)	Quizzes (on OWL)	Tutorials Sec. 002: Sec. 003:
Week 1	F	Lecture 1: Introduction to paleontology and evolution	No Quiz	*No Tutorials*
Week 2	M	Lecture 2: Pre-Darwin concepts of fossils and evolution	Quiz 1 (Wk. 2 material) opens Fri.	*No Tutorials*
	W	Lecture 3: Charles Darwin, the Beagle, and his early thoughts on natural selection		
	F	Lecture 4: Darwin's Big Breakthrough:		
Week 3	M	Lecture 5: Mendel to Modern Synthesis	Quiz 1 due Fri.; Quiz 2 (Wk. 3 material) opens Fri.	*Tutorial 1 (Form & Function)*
	W	Lecture 6: Modern Synthesis of evolution and punctuated equilibrium		
	F	Lecture 7: Heterochrony		
Week 4	M	Lecture 8: The Earth System and introduction to minerals	Quiz 2 due Fri; Quiz 3 (Wk. 4 material) opens Fri.	*Attend Tutorial 2 (Minerals;) Submit Tutorial Assign. 1*
	W	Lecture 9: Mineral Properties		
	F	Lecture 10: Igneous Rocks		
Week 5	M	Lecture 11: Sedimentary and Metamorphic Rocks	Quiz 3 due Fri. Quiz 4 (Wk. 5 material) opens	*No tutorial*
	W	Lecture 12: Rocks as time machines: Principles of geologic time		
	F	Lecture 13: The Dancing Plates 1: The plate tectonic revolution		
Week 6	M	Lecture 14: The Dancing Plates 2: Importance of plate tectonics	Quiz 4 due Fri. Quiz 5 (Wk. 6 material) opens Fri.	*Attend Tutorial 3 (Rocks); Submit Tutorial Assign. 2.*
	W	Lecture 15: To Be or Not To Be: Fossilization processes and information loss		
	F	***Mid-term test***		
Week 7	M	***Thanksgiving holiday***	Quiz 5 due Fri. Quiz 6 (Wk. 7 material) opens Fri.	No Tutorial
	W	Lecture 16: Primordial Soup in the Kitchen of Life: Origin of Life		
	F	Lecture 17: Of Microbes….and Martians?: Earth's Earliest Life		
Week 8	M	Lecture 18: Rise of Eukaryotes	Quiz 6 due Fri.; Quiz 7 (Wk. 8 material) opens Fri.	*Attend Tutorial 4 (Geol. Time); Submit Tutorial Assign. 3*
	W	Lecture 19: Origin of skeletons in Metazoa		
	F	Lecture 20: Survey of Invertebrates		
Week 9	M	Lecture 21: Evolution of Fishes	Quiz 7 due Fri.; Quiz 8 (Wk. 10 material) opens Fri.	*Attend Tutorial 5 (Plate Tectonics); Submit Tutorial Assign. 4*
	W	Lecture 22: Evolution of Amphibians		
	F	Lecture 23: Evolution of Reptiles		
Week 10	***Reading Week***			
Week 11	M	Lecture 24: Evolution of Dinosaurs	Quiz 8 due Fri.; Quiz 9 (Wk. 11 material) opens Fri.	*Attend Last Tutorial 6 (Fossil Prervation); Submit Tutorial; Assign. 5*
	W	Lecture 25: Evolution and Diversification of Dinosaurs		
	F	Lecture 26: Marine Reptiles and Flying Reptiles		

Week 12	M	Lecture 27: Origin of Birds	Quiz 9 due Fri. ; Quiz 10 (Wk. 12 material) opens Fri.	*Submit last tutorial Assignment 6*
	W	Lecture 28: The Cretaceous-Tertiary Mass Extinction		
	F	Lecture 29: Origin and Diversification of Mammals		
Week 13	M	Lecture 30: Evolution of Large Mammals	Quiz 10 due Fri. Bonus	
	W	Lecture 31: Evolution of the Primates		
	F	Lecture 32: Rise of the Hominids		
Week 14	Review of course material and exam preparation		Optional quizzes 11 and 12 (in class)	

Key University Sessional Dates :

Classes begin: Thursday, September 4, 2025
NDTR: Tuesday, September 30, 2025.
Mid-term test: Friday: October 10, 2024.
Thanksgiving: Monday, October 13, 2025.
Fall Reading Week: November 3–9, 2025
Classes end: December 9, 2025
Exam period: December 11–22, 2025

4. Course Materials

A. Required e-textbook (student to purchase): This is a digital collection from four geology and biology textbooks, custom-designed for ES1083F:

- Digital collection title: *Life on Planet Earth (Parts A & B)*
  Earth Sciences 1083F
  Jisuo Jin

- The materials for this course are delivered online by Pearson (publisher). Due to US copyright issues, the e-Text is split into two parts, **with separate links**:

  Part A: US portion (~$20 CAD)

  Student link: https://console.pearson.com/enrollment/crnvb9

  Part B: Canadian Portion (~$42 CAD)

  Student link: https://console.pearson.com/enrollment/hhxvwc

B. PowerPoint lectures (free): each lecture will be posted on OWL well ahead of the lecture time.

PowerPoint lecture files are posted in the Brightspace course site. Students are responsible for checking the course site regularly for lecture updates.

5. Methods of Evaluation

As you will see below, we have allocated parts of your course grade to **multiple types of assessments** distributed over the term. **This is deliberate.** This design allows students to work for marks in a larger number of smaller installments over time rather than fewer, larger assessments. This means that students have a reasonable opportunity to compensate for a poor grade in one or two of these assessments (e.g. midterm exam). We regard this as preferable over fewer, higher-stakes, assessments.

Your final course grade will be calculated as follows:

Weekly online (via Brightspace) quizzes (best 10 marks):	15%
Tutorial Assignments (*see secure course site for details*):	20%
Midterm Exam (in person: (*see secure course site for details*):	25%
Final exam (in person, scheduled by Registrar):	40%

Tutorials
The tutorials in this course are designed to give you practical experience with some of the more fundamental concepts in the course, including mineral, rock and fossil identification, geologic time, plate tectonics and fossil preservation. These are sort of "mini labs" that are scheduled roughly once a week according to the schedule above. Tutorial assignments will be submitted to the appropriate slot (labelled according to tutorial section) in the assignment drop box (white box inside B&GS 1015) by the beginning of your next regularly scheduled tutorial session. You should be able to complete each tutorial within the tutorial session time, but you are given a week to hand them in. Assignments handed in late will be deducted 10% of the assignment grade for each day late.
If you miss, or anticipate missing, a tutorial due to medical (or other legitimate reasons), report your absence to the head (instructional) TA of the relevant tutorial to arrange an alternate date to complete and submit the assignment(s).

Format for Midterm and Final Exams: Both exams will be administered in person and will consist of a combination of multiple choice/fill in the blanks, definitions & short written answer questions. The Midterm Exam will be 50 minutes long and the Final (Lecture) Exam will be 2 hours long.

Policy on Late Submission of Weekly Quizzes or Tutorial Assignments: Quizzes and tutorial assignments completed and submitted after the deadlines specified in the course schedule above will be deducted 10% for each day late unless recommended otherwise by academic counselling or accounted for by a self-reported absence (as per Western policy).

Accommodated Evaluations
For exams, if approval is granted for accommodation by both Academic Counselling and the Instructor, a student will be permitted to write a make-up test/exam as deemed appropriate by the instructor (and, if necessary, in consultation with the student's academic counsellor). If the make-up evaluation (test/exam) is missed for a valid reason (proven with documentation provided to academic counselling), arrangements can be made to re-schedule the evaluation.

6. Additional Statements

6.1 Religious Accommodation

When conflicts arise with a religious holiday that requires an absence from the University or prohibits certain activities, students should request an accommodation for their absence in writing to the course instructor and/or the Academic Advising office of their Faculty of Registration. This notice should be made as early as possible, but not later than two weeks prior to the writing of the examination (or one week prior to the writing of the test).
Please visit the Diversity Calendars posted on our university's EDID website for the recognized religious holidays - https://www.edi.uwo.ca

6.2 Academic Accommodation Policies
Students with disabilities are encouraged to contact Accessible Education, which provides recommendations for accommodation based on medical documentation or psychological and cognitive testing. The policy on Academic Accommodation for Students with Disabilities can be found at: https://www.uwo.ca/univsec/pdf/academic_policies/appeals/Academic Accommodation_disabilities.pdf.

6.3 General Academic Policies
The website for Registrar Services is https://www.registrar.uwo.ca/.
Use of @uwo.ca email: In accordance with policy, https://www.uwo.ca/univsec/pdf/policies_procedures/section1/mapp113.pdf, the centrally administered e-mail account provided to students will be considered the individual's official university email address. It is the responsibility of the account holder to ensure that emails received from the University at their official university address are attended to in a timely manner.
Requests for Relief (formally known as "appeals")
Policy on Request for Relief from Academic Decision:
https://uwo.ca/univsec//pdf/academic_policies/appeals/requests_for_relief_from_academic_decisions.pdf
Procedures on Request for Relief from Academic Decision (Undergraduate):
https://uwo.ca/univsec//pdf/academic_policies/appeals/undergrad_requests_for_relief_procedure.pdf

6.4 Scholastic Offences
Policy on Scholastic Offences:
https://uwo.ca/univsec//pdf/academic_policies/appeals/scholastic_offences.pdf
Procedures on Scholastic Offences (Undergraduate):
https://uwo.ca/univsec//pdf/academic_policies/appeals/undergrad_scholastic_offence_procedure.pdf

Use of Electronic Devices During Assessments
In courses offered by the Faculty of Science, the possession of unauthorized electronic devices during any in-person assessment (such as tests, midterms, and final examinations) is strictly prohibited. This includes, but is not limited to: mobile phones, smart watches, smart glasses, and wireless earbuds or headphones.
Unless explicitly stated otherwise in advance by the instructor, the presence of any such device at your desk, on your person, or within reach during an assessment will be treated as a *scholastic offence*, even if the device is not in use.
Only devices expressly permitted by the instructor (e.g., non-programmable calculators) may be brought into the assessment room. It is your responsibility to review and comply with these expectations.

Use of Generative AI Tools
Unless otherwise stated, the use of generative AI tools (e.g., ChatGPT, Microsoft Copilot, Google Gemini, or similar platforms) is **not permitted** in the completion of any course assessments, including but not limited to: assignments, lab reports, presentations, tests, and final examinations.
Using such tools for content generation, code writing, problem solving, translation, or summarization—when not explicitly allowed—will be treated as a **scholastic offence**.

If the use of generative AI is permitted for a particular assessment, the conditions of use will be specified by the instructor in advance. If no such permission is granted, students must assume that use is prohibited. It is your responsibility to seek clarification before using any AI tools in academic work.

All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (http://www.turnitin.com).

6.5 Support Services

Please visit the Science & Basic Medical Sciences Academic Advising webpage for information on adding/dropping courses, academic considerations for absences, requests for relief, exam conflicts, and many other academic-related matters: https://www.uwo.ca/sci/counselling/.

Students who are in emotional/mental distress should refer to Mental Health@Western (https://uwo.ca/health/) for a complete list of options about how to obtain help.

Western is committed to reducing incidents of gender-based and sexual violence (GBSV) and providing compassionate support to anyone who has gone through these traumatic events. If you have experienced GBSV (either recently or in the past), you will find information about support services for survivors, including emergency contacts at:
https://www.uwo.ca/health/student_support/survivor_support/get-help.html.
To connect with a case manager or set up an appointment, please contact support@uwo.ca.

Please contact the course instructor if you require lecture or printed material in an alternate format or if any other arrangements can make this course more accessible to you. If you have any questions regarding accommodations, you may also wish to contact Accessible Education at http://academicsupport.uwo.ca/accessible_education/index.html

Learning-skills counsellors at Learning Development and Success (https://learning.uwo.ca) are ready to help you improve your learning skills. They offer presentations on strategies for improving time management, multiple-choice exam preparation/writing, textbook reading, and more. Individual support is offered throughout the Fall/Winter terms in the drop-in Learning Help Centre, and year-round through individual counselling.

Additional student-run support services are offered by the USC, https://westernusc.ca/services/.