

**University of Alberta**  
**The Dynamic Earth through Time**  
**EAS 105 – Section B2**  
**Syllabus Winter 2011**

**Instructor:** Dr. Martyn Unsworth (unsworth@ualberta.ca)  
**Office:** CEB 348B  
**Office Hours:** Please e-mail for an appointment  
**Lecture Room and Time:** TB70 09:30-10:50 Tuesday + Thursday  
**Lab Coordinator:** David Chesterman (david.chesterman@ualberta.ca)

**Course Description:**

The plate tectonic framework of a dynamic Earth as it relates to the origin of major groups of minerals and rocks. Earthquakes, structural geology, and the origin of mountain belts. Surface processes and their sedimentary products. History of life and extinctions. Not available to students with credit in EAS 101, 210 or SCI 100.

**Course prerequisites** EAS 100 or 102 [Faculty of Science]

**Website**

<http://www.ualberta.ca/~unsworth/UA-classes/EAS105/EAS105index.html>

**Required Textbook:** The Changing Earth, Fifth Edition, 2009  
 James Monroe and Reed Wicander  
 Published by Brooks-Cole

**(1) CLASS SCHEDULE**

Week beginning	Topic	Chapters to read
January 10	Introduction and Overview of Plate Tectonics	1,2
January 17	Minerals	3
January 24	Igneous rocks	4,5
January 31	Sedimentary Rocks	6
February 7	Metamorphic rocks	7
February 14	Plate Tectonics and Earthquakes	8
February 21	Reading week	
February 28	Review and mid-term	
March 7	Structural geology	10, 17
March 14	Pre-Cambrian Earth	17,19
March 21	Paleozoic Earth	20,21
March 28	Mesozoic Earth	22
April 4	Cenozoic Earth	23
April 11	TBA	

This schedule is tentative and may be changed.

### Important dates for Winter Term 2010

January 10	Winter Session classes begin
February 21-25	Winter Term Reading Week- no class
April 13	Last day of classes, Winter Term
April 15-30	Final examinations Winter Term

### **(2) LABORATORY WORK**

- The labs are **mandatory** and the schedule is listed below.
- The labs are graded by the teaching assistants and each lab is graded equally.
- There is no lab midterm or final exam. Lab material may be tested on the lecture midterm and final exam.
- Students are to contact the lab coordinator if they miss a lab exercise.
- Lab Kits are available at the University of Alberta Bookstore.

Week beginning		
January 10		NO LABS
January 17		NO LABS
January 24	Lab 1	<b>Minerals and their atomic structure</b> Mineral identification
January 31	Lab 2	<b>Igneous processes and rocks</b> Geological map and air photo interpretation Rock identification
February 7	Lab 3	<b>Sedimentary rocks</b> Geological map and air photo interpretation Rock identification
February 14	Lab 4	<b>Metamorphism and metamorphic rocks</b> Mapping metamorphic zones, Rock identification
February 21		<b>No labs – Reading week</b>
February 28	Lab 5	<b>Plate tectonics</b> Mapping and geomorphic interpretation of tectonic zones Calculating plate movement rates
March 7	Lab 6	<b>Structural geology</b> Structural block diagrams Map interpretation
March 14	Lab 7	<b>Precambrian Earth and life</b> Fossils, Craton configurations, Shield rocks
March 21	Lab 8	<b>Paleozoic Earth and life</b> Fossil description and sketching
March 28	Lab 9	<b>Mesozoic Earth and life</b> Fossil description and sketching
April 4	Lab 10	<b>Cenozoic Earth and life</b> Fossil description and sketching
April 11		NO LABS

This lab schedule is tentative and may be changed.

### 3. EXAMINATIONS AND GRADING

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**Registration:** Make sure you are registered. If your name appears on the official class list, you are properly registered. If not, make sure you correct that before the deadline at the Faculty of Science office (BioSci). You will NOT get credit for the course unless you are properly registered.

The class lists distributed to the instructors contain only your University of Alberta e-mail address. Messages will be sent only to that e-mail address. Make sure to check this address, or forward messages to your other e-mail address.

#### Course Mark-Weight Distribution

Mid-term exam	20%	Thursday, March 3 2011, 9:30 am in class
Labs	40%	
Final exam	40%	April 19 Tuesday 9:00am ( <i>check Beartracks</i> )
Deferred final exam		10:00 – 13:00 May 14 Saturday, 2011 in HMT350

#### Representative Evaluative Materials

Examples of past exams will be posted on the e-class site.

**Format of Exams:** Exams may contain multiple choice, short answers, true or false, fill in the blank, and/or diagram description. Exams may contain any or all of the previously stated formats.

**Grading Evaluation:** The final grades at the end of the course will be assigned using a combination of absolute achievement and relative standing in the class, and will remain unofficial until approved by Faculty Council or its designate (i.e. Departmental Chair).

**Deferred exam policy:** A student who cannot write a **mid-term examination** because of an incapacitating illness, severe domestic affliction or other compelling reasons can apply for a deferred midterm examination. Applications are to be made in writing to the professor, with supporting documentation, within 48 hours of the missed exam. Deferred of term work is a privilege and not a right; there is no guarantee that a deferral will be granted. Any missed term examination with a valid excuse will have the weight of the exam rolled into the final, counting for 60% of the total course grade.

A student who cannot write the **final examination** because of an incapacitating illness or is suffering from severe domestic affliction or other compelling reasons can apply for a deferred final examination. Such an application must be made to the student's Faculty office within 48 hours of the missed examination and other appropriate documentation (Calendar section 23.5.6). Deferred examination are a privilege and not a right; there is no guarantee that a deferred examination will be granted. The deferred final examination is scheduled for **10 am – 1 pm on Saturday May 14 2011.**

Misrepresentation of facts to gain a deferred examination is a serious breach of the *Code of Student Behaviour*.

#### **4. STUDENT RESPONSIBILITIES**

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**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.ualberta.ca/seretariat/appeals.htm](http://www.ualberta.ca/seretariat/appeals.htm)) and avoid any behaviour which could potentially result in suspicious of cheating, plagiarism, misrepresentation of facts and/or participation in an offense. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.’*

All forms of dishonesty are unacceptable at the University. Any offense will be reported to the Senior Associate Dean of Science who will determine the disciplinary action to be taken. Cheating, plagiarism and misrepresentation of facts are serious offenses. Anyone who engages in these practices will receive at minimum a grade reduction or redistribution of course weighting. As well, in the Faculty of Science the sanction for **cheating** on any examination will include a **disciplinary failing grade** (no exceptions) and senior students should expect a period of suspension or expulsion from the University of Alberta.

**Recording lectures:** Recording lectures is permitted only with the prior written consent of the professor or if recording is part of an approved accommodation plan.

**Exams:** Student photo I.D. is required at exams to verify your identity. Students will not be allowed to begin an examination after it has been in progress for 30 minutes. Students must remain in the exam room for at least 30 minutes from the time the exam commenced. Electronic equipment is not to be brought to exams and hats should not be worn.

**Cell phones:** Cell phones are to be turned off during lectures and labs. Cell phones are not to be brought to exams. A student was recently caught cheating in a final exam in an EAS course –looking at course notes on an iPhone. The student received a F8 in the course and was suspended for a term.

**SPECIALIZED SUPPORT AND DISABILITY SERVICES:** Students who require accommodations in this course due to a disability affection mobility, vision, hearing, learning, or mental or physical health are advised to discuss their needs with Specialized Support and Disability Services, 2-800 Students’ Union Building, 492-3381 (phone) or 492-7269 (TTY). Please ensure that the required forms for exams are submitted to the instructor several days before the date for the midterms or final.

**Academic support center:** Students who require additional help in developing strategies for better time management, study skills or examination skills should contact the Academic Support Center (2-702 Students’ Union Building).

*Policy about course outlines can be found in Section 23, 4(2) of the University Calendar.*