UNIVERSITY OF ALBERTA
DEPARTMENT OF EARTH AND ATMOSPHERIC SCIENCES
EAS 201A1: EARTH SCIENCES I
https://www.ualberta.ca/earth-atmospheric-sciences/courses/EAS%20201

Syllabus / Course Outline Fall 2017

INSTRUCTOR
Hans G. MACHEL
ESB 4-15, phone: 780-492-5659
hans.machel@ualberta.ca

OFFICE HOURS
Wednesdays, 8 - 9:30 a.m.
But for courses with prerequisites: students who do not have the required prerequisites at the time of taking the course should not expect supplementary professorial tutoring.

LECTURE LOCATION
TL 12

LECTURE TIMES
M-W-F 10:00-10:50 a.m.

RECOMMENDED TEXTBOOK
“The Changing Earth”
Cengage Learning (Thomson-Nelson)

FOR KEENERS

eClass
To be posted on eClass: this course outline; excerpts of the Instructor’s lectures (after each lecture); supplementary course material; marks for midterm and final exam.

OneClass:
If OneClass offers a study guide to this course, do NOT buy it. It is not authorized by this instructor.
CALENDAR COURSE DESCRIPTION

EAS 201 Earth Sciences I  
*3 (fi 6) (either term, 3_0_0).
Prerequisites: Not available to students with credit in EAS 100, 101, 102, 210 or SCI 100. (Note: EAS 201 and EAS 200 are considered to be equivalent to EAS 100 for prerequisite purposes).

[Faculty of Science]

COURSE OBJECTIVES

The main course objective is to cover all the topics listed in the CALENDAR COURSE DESCRIPTION, which includes the arguably most politicized geoscientific topics of these times: (1) Global Warming / Global Climate Change, and (2) the role of fossil fuels driving economies and as environmental hazards. A supplementary but no less important objective is to acquire a working knowledge of “The Scientific Method”, which is at the base of not only this course but of many other courses, especially in the Faculty of Science. Every citizen should have a working knowledge of The Scientific Method. The penultimate objective of this course thus is to help becoming a conscientious member of society.

READING ASSIGNMENTS

There will be no designated reading assignments. You are expected to read the chapters of the textbook that embody the material that was covered in the lectures. Throughout the term, browse through the textbook and read those passages carefully that have been covered in the lectures.

ATTENDANCE

The presence at lectures is an important component of this course. Students will serve their interests best by regular attendance. Those who choose not to attend must assume whatever risks are involved. See http://www.registrar.ualberta.ca/calendar/Regulations-and-Information/Academic-Regulation/23.3.html

NO RECORDING

Recording of lectures is not permitted. Recording of anyone's conversations or lectures without that person's permission is illegal. This instructor does NOT permit recording in the class room.

CELL PHONES / PAGERS/ iPods etc.:

Any equipment that could cause an acoustic disturbance must be turned off.
# TENTATIVE LECTURE SCHEDULE

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
</table>
| 1    | SEPT 04 | 06: _201A1_Lec-01_HANDOUT ONLY
08: _201A1_Lec-02_Course Outline - Syllabus |
| 2    |     | 11: _201A1_Lec-03_Scientific Literacy
15: _201A1_Lec-05_Global Tectonics |
| 3    |     | 18: _201A1_Lec-06_Minerals-1
22: _201A1_Lec-08_Minerals-3 |
| 4    |     | 25: _201A1_Lec-09_Igneous-1_Intrusive
27: _201A1_Lec-10_Igneous-2_Extrusive-1
29: _201A1_Lec-11_Igneous-3_Extrusive-2 |
|      | OCT 02 | 02: _201A1_Lec-12_Weathering, Soils |
| 5    |     | 04: _201A1_Lec-13_Sedimentary-1_Erosion, Elastic Sediments and Rocks
06: _201A1_Lec-14_Sedimentary-2_Carbonate Sediments and Rocks |
| 6    |     | 09: _201A1_Lec-15_--- (THANKSGIVING) |
11: _201A1_Lec-16_Metamorphics
13: _201A1_Lec-17_MIDTERM EXAM |
| 7    |     | 16: _201A1_Lec-18_Exam Review + Earth's Interior-1
18: _201A1_Lec-19_Earth's Interior-2 and Deformation
20: _201A1_Lec-20_Earthquakes |
| 8    |     | 23: _201A1_Lec-21_Resources-1_Gold, Diamonds
25: _201A1_Lec-22_Resources-2_Oil+Gas
27: _201A1_Lec-23_Resources-3_Evaporites, Coal |
| 9    | NOV 03 | 30: _201A1_Lec-24_Groundwater |
|      |     | 01: _201A1_Lec-25_Karst+Caves-1
03: _201A1_Lec-26_Karst+Caves-2 |
| 10   |     | 06: _201A1_Lec-27_Geologic Time-1
08: _201A1_Lec-28_Geologic Time-2
10: _201A1_Lec-29_Life Through Time |
| 11   |     | 13: _201A1_Lec-30_---(READING WEEK) |
15: _201A1_Lec-31_---(READING WEEK)
17: _201A1_Lec-32_---(READING WEEK) |
| 12   |     | 20: _201A1_Lec-33_Origin and Evolution of Life
22: _201A1_Lec-34_Global Climate-1_Glaciers and Glaciation
24: _201A1_Lec-35_Global Climate-2_Primary Controls |
| 13   | DEC 01 | 27: _201A1_Lec-36_Global Climate-3_Secondary Controls
29: _201A1_Lec-37_Global Climate-4_Bad Dream
01: _201A1_Lec-38_Global Climate-5_Who is Responsible-1 |
| 14   |     | 04: _201A1_Lec-39_Global Climate-6_Who is Responsible-2
06: _201A1_Lec-40_Global Climate-7_Go Green
08: _201A1_Lec-41_Finale |
MIDTERM AND FINAL EXAMINATIONS

The performance of students in this course will be evaluated by means of two standard multiple choice exams (1 of 4 alternatives correct): a midterm and a final exam.

<table>
<thead>
<tr>
<th>EXAMS</th>
<th>weight</th>
<th>dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>midterm examination (multiple choice)</td>
<td>40%</td>
<td>Oct-13-2017</td>
</tr>
<tr>
<td>final examination (multiple choice)</td>
<td>60%</td>
<td>TBA (check Bear Tracks)</td>
</tr>
</tbody>
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Deferred final exam (tentative): January 13, 2018 at 1000-1200 hours in CCIS L1-275.

The lecture final exam will be cumulative, i.e., will cover the full term, but it will emphasize material covered in second half of the term.

All examinations in this course will be given a numerical score in %. A cumulative course mark will be calculated from those scores, weighted as tabulated above. A final letter grade will be assigned based upon the cumulative mark and the instructor’s analysis of the cumulative mark distribution of the class. Where possible, natural breaks in the cumulative mark distribution will be used in assigning grades, but no pre-determined distribution of grades will be imposed on the class. Each student’s final letter grade will reflect a combination of his/her absolute achievement and relative standing in the class. In past years, the class average in this course has been in the B-range. The mean grade in this year will be based on the instructor’s judgment of the overall caliber of this class relative to past years. Be aware that a total score of 50% or more in the course as a whole will not ensure a passing grade. Even if the final score is >50%, a student may fail the course in certain circumstances (such as in case of plagiarism or other forms of cheating). Such sanctions are determined by the office of the Dean of Science.

EXAM RULES AND DEFERRED EXAM POLICY

http://calendar.ualberta.ca/content.php?catoid=6&navoid=806&hl=%22deferred%22&returnto=search

During each exam students must produce a valid photo-ID. 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 until at least 30 minutes have elapsed. No electronic equipment of any kind may be brought into examination rooms and/or must be turned off. Any use of any electronic equipment will be considered an attempt at cheating. Hats are not to be worn.

Midterm Exams:

There will not be a deferred lecture midterm exam. If the Instructor accepts the reason for the excused absence, the final exam will count for the sum of the weights of the lecture midterm + final exams, i.e., 40+60% = 100%.
A student who cannot write a midterm examination due to incapacitating illness, severe domestic affliction, or other compelling reasons (which exclude simple inconveniences) can apply in writing to the Instructor for an excused absence. Such an application must be made “to the instructor within two working days following the scheduled date of the term work or term exam missed, or as soon as the student is able, having regard to the circumstances underlying the absence” and must be supported by a Statutory Declaration (in lieu of a medical statement form) or other appropriate documentation.

Final Exams:
A student who cannot write a final examination due to incapacitating illness, severe domestic affliction, or other compelling reasons (which exclude simple inconveniences) can apply in writing to take a deferred exam. Such an application must be made to the student’s Faculty office “within two working days following the scheduled date of the exam missed, or as soon as the student is able, having regard to the circumstances underlying the absence” and must be supported by a Statutory Declaration (in lieu of a medical statement form) or other appropriate documentation.

Deferral of final exams is a privilege and not a right. There is no guarantee that a deferral will be granted. Misrepresentation of facts to gain a deferral is a serious breach of the Code of Student Behaviour (see below).

PAST REPRESENTATIVE EVALUATIVE MATERIAL

Examples of previous lecture exam questions will be posted on eClass.

ACADEMIC STANDARDS AND INTEGRITY,
CODE OF STUDENT BEHAVIOUR

“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 in:
http://www.registrarsoffice.ualberta.ca/Calendar/Previous-Calendar/~/media/registrar/pdf/cal/17-18calendar/pdf/UniversityRegs.pdf
and avoid any behaviour which could potentially result in suspicions of cheating, plagiarism, misrepresentation of facts and/or participation in an offence. Academic dishonesty is a serious offence and can result in suspension or expulsion from the University.”

It is the student’s responsibility to be aware of the contents of the Code of Student Behaviour. Check also posted document “Don’t Do it”. If in doubt, ask the Instructor or Lab Coordinator about acceptable collaborations in the labs and any form of cheating or plagiarism.

Cheating, plagiarism and misrepresentation of facts are serious offences. Anyone who engages in these practices will be reported to the Senior Associate Dean of Science who will determine the disciplinary action to be taken. In the Faculty of Science the sanction for cheating on any
examination includes a **disciplinary failing grade**, and senior students should expect a period of suspension or expulsion from the University. For past examples see the posted document “Science Lab Course Hall of Shame”.

**e-mail**

The class list provided to the instructors contain only UofA e-mail accounts. Memos will be sent only to ualberta e-mail addresses. Students are advised to link their “other” e-mail account(s) [yahoo, gmail, hotmail etc.] to their ualberta account. Also, memos that they send to the instructor from an account other than an ualberta account will be classified as SPAM and likely will not reach him.

**SAS: Student Accessibility Services**

http://www.ssds.ualberta.ca/

**LITERACY (READING+WRITING SKILLS)**

http://c4w.ualberta.ca/

**EARTH SCIENCE LITERACY** (how Earth Science matters to humanity)

http://www.earthscienceliteracy.org/es_literacy_6may10_.pdf

**A FIELD GUIDE TO CRITICAL THINKING** (--- posted)

**CAREERS IN THE GEOSCIENCES** (--- posted)

**DEPT. OF EARTH AND ATMOSPHERIC SCIENCES** (--- posted)

**COLLECTIONS**

**ACADEMIC FREEDOM**

**DISCLAIMERS**

Nothing in any course outline, syllabus or course web-site may override or contravene any Calendar regulation or GFC policy. In resolving any discrepancy, GFC policy and Calendar regulations will take precedence.

Any typographical errors in this Course Outline are subject to change and will be discussed in class. The date of the final examination is set by the Registrar and takes precedence over the final examination date reported in this syllabus, if the dates listed in these sources do not coincide.