University of Toronto Scarborough
Department of Physical and Environmental Sciences
EESB02H3 S – Principles of Geomorphology
2019 Outline

Instructor: Mandy Meriano
Office: EV362  Telephone: 416-208-2775
Office hours: Tuesdays following lecture: 11:30 am - 2 pm
Email: mmeriano@utsc.utoronto.ca

Lecture time: Tuesday 9 am to 11 am
Location: HW214

Practical times: Thursday 09:00 – 11:00; 11:00 –13:00; 13:00 – 15:00; 15:00 – 17:00
Location: EV224 (Chem and Env Sci Building) and computer lab (location TBA)
Field component of the practicals will be carried out in Highland Creek
Emphasis is placed on practical work in this course, which will involve some time
commitment. However, this is reflected positively in your final grade.

Teaching Assistants: Sahlla Abbasi, Mailing Man and Andrew Zajch
Office and office hours: TBA on Quercus
Lab coordinators: Chai Chen and Tom Meulendyk, EV304 and EV225

INDEX OF OUTLINE TOPICS
Course Textbook
Course Description
Learning objectives
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TEXTBOOK: Bierman, P.R. and Montgomery, D.R. 2014. Key Concepts in

The course textbook is available from the UTSC Bookstore.

DESCRIPTION: The earth’s surface form and its dynamic behavior at range of spatial
and temporal scales is an integral part of the physical, biological and human
environment. It is strongly influenced by human activity, while at the same time
imposing severe constraints upon that activity. The study of the earth’s surface forms
and their morphodynamic behavior, both naturally and under the impact of human
habitation, is the field of Geomorphology. It is the human interaction with the surface of
the earth that gives rise to a number of environmental concerns: e.g., surface erosion,
catastrophic floods, sea-level rise, landslides, water resources and water extraction, etc.
This introductory course combines aspects of geology, climatology, hydrology, and soil
science to present a coherent introduction to the surface of the Earth, with emphasis on
both fundamental concepts and practical applications, as a basis for understanding and intelligent management of the Earth's physical and chemical environment.

**LEARNING OBJECTIVES:** By the end of the course students will have developed a coherent understanding of the various aspects of geology, climatology, hydrology, and soil science that shape the surface of the Earth, with emphasis on both fundamental concepts and practical applications, as a basis for understanding and intelligent management of the Earth's physical and chemical environment.

**MARKING SCHEME (tentative):** Four practicals; value 40% (4 x 10%); a midterm exam: value 25%; and a final exam: value 35%.

<table>
<thead>
<tr>
<th>Evaluation Components</th>
<th>% Grade</th>
<th>Key Dates and Deadlines</th>
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<tbody>
<tr>
<td>Practical 1</td>
<td>10</td>
<td>Jan 17; Due Feb 07</td>
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<tr>
<td>Practical 2</td>
<td>10</td>
<td>Feb 07; Due Feb 28</td>
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<td>Practical 3</td>
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<td>Feb 28; Due Mar 21</td>
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<td>Practical 4</td>
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<td>Mar 14; Due Apr 04</td>
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<tr>
<td>Midterm Exam</td>
<td>25</td>
<td>Feb 12, In-class</td>
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<tr>
<td>Final Exam</td>
<td>35</td>
<td>TBA</td>
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<td>Total Grade Possible</td>
<td>100</td>
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The *midterm* is based on material covered in lectures and readings up to and including the class before the midterm exam. Readings will be from your course textbook: Bierman and Montgomery (2014). The format is multiple choice and short answer questions.

The *final exam* will be based on all term material (including readings and lectures). Readings will be from your course textbook: Bierman and Montgomery (2014). The format is multiple choice and short answer questions.

**TENTATIVE LECTURES**

**Week 1: January 08**  
Earth’s Dynamic Surface  
*Textbook readings: Ch 1*

**Week 2: January 15**  
Earth’s Solid Materials and Weathering  
*Textbook readings: Ch 2, 3*

**Week 3: January 22**  
Topography: Channels and Drainage Basins  
*Textbook readings: Ch 7*

**Week 4: January 29**  
Geomorphic Hydrology  
*Textbook readings: Ch 4, 6*
Week 5: February 05  Groundwater  
*Textbook readings: Ch 4*

Week 6: February 12  Mid-term exam held during class time

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Week 7: February 26  Tectonic Geomorphology  
*Textbook readings: Ch 1, 11*

Week 8: March 05  Glaciers  
*Textbook readings: Ch 9*

Week 9: March 12  Deserts: Wind as a Geomorphic Agent  
*Textbook readings: Ch 10*

Week 10: March 19  Coastal Geomorphology  
*Textbook readings: Ch 8, 12, 14*

Week 11: March 26  Landscape Evolution  
*Textbook readings: Ch 8, 12, 14*

Week 12: April 02  TBA (generally some lectures run into a 2nd week – this lecture time will allow us to fully complete all the above noted lecture topics)

**PLAGIARISM:** Assignments are checked for plagiarism. Please consult the University Calendar for a discussion and outline of the policy on plagiarism and academic integrity (also see proceeding section below). The sanctions can be severe. If, after reviewing the University policy, you are uncertain about what constitutes plagiarism, talk to your course instructor.

**ACADEMIC INTEGRITY:** Academic integrity is essential to the pursuit of learning and scholarship in a university, and to ensuring that a degree from the University of Toronto is a strong signal of each student’s individual academic achievement. As a result, the University treats cases of cheating and plagiarism very seriously. The University of Toronto’s Code of Behaviour on Academic Matters ([http://www.governingcouncil.utoronto.ca/policies/behaveac.htm](http://www.governingcouncil.utoronto.ca/policies/behaveac.htm)) outlines the behaviours that constitute academic dishonesty and the processes for addressing academic offences. Potential offences include, but are not limited to:

In papers and assignments:

- Using someone else's ideas or words without appropriate acknowledgement.
- Submitting your own work in more than one course without the permission of the instructor.
- Making up sources or facts.
- Obtaining or providing unauthorized assistance on any assignment.

On tests and exams:
• Using or possessing unauthorized aids.
• Looking at someone else’s answers during an exam or test.
• Misrepresenting your identity.

In academic work:

• Falsifying institutional documents or grades.
• Falsifying or altering any documentation required by the University, including (but not limited to) doctor’s notes.

All suspected cases of academic dishonesty will be investigated following procedures outlined in the Code of Behaviour on Academic Matters. If you have questions or concerns about what constitutes appropriate academic behaviour or appropriate research and citation methods, you are expected to seek out additional information on academic integrity from your instructor or from other institutional resources (see http://www.utoronto.ca/academicintegrity/).

Please consult the University Calendar for information about grade distribution and academic conduct.

**ABSENCES:** If you need to miss a practical or term test for any legitimate reason, you must submit appropriate documentation within **three** business days of your absence. If the reason for your absence is medical, an official UTSC medical note must completed by a doctor who examined you while you were ill/injured (i.e. not after the fact). The medical note can be downloaded at: http://www.utsc.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf. Note that conditions ranked as mild or negligible will not be considered a valid excuse.

**MISSED TERM WORK:** If a legitimate reason prevents you from submitting a piece of term work by its posted deadline, you must submit appropriate documentation within **three** business days of your absence. If the reason is medical, an official UTSC medical note must completed by a doctor who examined you while you were ill/injured (i.e. not after the fact). The medical note can be downloaded at: http://www.utsc.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf. Note that conditions ranked as mild or negligible will not be considered a valid excuse.

**HANDING IN ASSIGNMENT:** You are responsible for making sure that your TA receives your work. Students who mail assignments in, place work on the floor outside an office, or slip assignments under a door, do so at their own risk.

**LOST OR MISPLACED ASSIGNMENT:** It is your responsibility to keep a photocopy of your work, and to make more than one copy of your work. Excuses are not accepted in the case of lost or misplaced work.

**ACCESSABILITY:** Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodation, please feel free to approach me and/or the AccessAbility Services Office as soon as possible. I will work with you and AccessAbility Services to ensure
you can achieve your learning goals in this course. Enquiries are confidential. The UTSC AccessAbility Services staff (located in S302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations (416) 287-7560 or ability@utsc.utoronto.ca.

Students are encouraged to review the Calendar for information regarding all services available on campus.

**List of references for concepts, information, data, figures, and text used in the course:**


Google Earth™ (http://www.google.com/earth/)


Meriano, M., Published and unpublished research work

MIT OpenCourseWare (http://ocw.mit.edu; http://ocw.mit.edu/terms/#cc)


