

## EEES 3100-001 Surficial Processes CRN 51734



**Fall Semester 2015**

Office: WO1235

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**Classroom:** BO1006 Lecture 8:00 to 9:15 Monday & Wednesday

**Fisher's Office Hours:** 9:30–10:30 M&W & by appointment.

**Dziekan's Office Hours:** location: BO 3049

Description and study of the earth's surface features from the point of view of their origin including landforms created by volcanism, tectonics, and erosional/depositional processes. Field trip required. [Fall]  
Prerequisite: EEES 1010 or 2100.

### Student Learning Objectives

1. Identify and map landforms from topographic maps, aerial photographs and hillshade digital elevation models (DEM). To be assessed from lab exercises and exam questions.
2. Describe the general geologic processes associated with common surficial geology environments such as fluvial or glacial. To be assessed from lab exercises and exam questions.
3. Predict the type of sediment associated with different landforms. To be assessed from lab exercises and exam questions.
4. Communicate effectively by giving an oral presentation of a surficial geology article selected from the scientific literature. To be assessed by both peer and faculty scoring.

| WEEK | Tentative LECTURE TOPICS   | READING                                   |
|------|--|---|
| (1)  | Aug 24 Introduction and Scope of Course<br>Aug 26 Mapping introduction   | Chapter 1                                 |
| (2)  | Aug 31 <b>Labor Day, no class</b><br>Sept 2 Earth's Climate and Weather Patterns   |   |
| (3)  | Sept 7 Earth's Climate and Weather Patterns<br>Sept 9 Mass Wasting   | p. 164-172                                |
| (4)  | Sept 14 Glaciers and Glacial Processes<br>Sept 16 Glacial Processes and Deposits   | Chapter 10<br>Chapter 10                  |
| (5)  | Sept 21 Alpine & Continental Glacial Landforms<br><b>Sept 23 Glacial Exercise (paper chosen &amp; PDF emailed to TA)</b> | Chapter 10                                |
| (6)  | Sept 28 Fluvial Processes<br>Sept 30 <b>Midterm Exam</b>   | Chapter 9<br><b>the above</b> (not chp 9) |
| (7)  | Oct 5 <b>Fall Break</b><br>Oct 7 Fluvial Processes   | Chapter 9                                 |

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| (8) | Oct 12 | Fluvial Landforms | Chapter 9 |
|     | Oct 14 | Fluvial Landforms | Chapter 9 |



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| (9)  | Oct 19   | Fluvial Sediments   | Chapter 9   |
|      | Oct 21   | Fluvial Exercise  |   |
| (10) | Oct 26   | Coastal Processes and Landforms                                 | Chapter 13  |
|      | Oct 28   | Coastal Processes and Landforms <b>(talk outline handed in)</b> | Chapter 13  |
| (11) | Nov 2  | <b>Fisher away, TA led</b> Coastal Exercise                     | Chapter 13  |
|      | Nov 4  | <b>Midterm Exam 2</b>   | <b>fluvial &amp; coastal</b>  |
|      | <b>Sunday Nov 8 Field trip of local area, leave at 8 am, return 5ish</b> |   |   |
| (12) | Nov 9  | Eolian Processes  | Chapter 12  |
|      | Nov 11   | Eolian Geomorphology  | Chapter 12  |
| (13) | Nov 16   | Eolian Geomorphology Exercise                                   | Chapter 12  |
|      | Nov 18   | Karst Geomorphology   | Chapter 14  |
| (14) | Nov 23   | Karst Geomorphology   | Chapter 14  |
|      | Nov 25   | <b>Thanksgiving Break</b>                                       |   |
| (15) | Nov 30   | Karst Exercise  | Chapter 14  |
|      | Dec 2  | Student Presentations (attendance mandatory)                    |   |
| (16) | Dec 7  | Student Presentations (attendance mandatory)                    |   |
|      | Dec 9  | Student Presentations (attendance mandatory)                    |   |
| (17) | Dec 14   | <b>Final Exam 8:00 - 10:00</b>                                  | <b>Comprehensive, but with an &gt; emphasis on last third of semester</b> |

**Textbook:** Huggett, R.J. (2007, 2011) Fundamentals of Geomorphology, 2<sup>nd</sup> or 3<sup>rd</sup> Edition, Routledge, 458 pp. Information will be available sporadically on Blackboard.

**Mapping:** One goal of this class is landform recognition. Consequently, you will map landforms on digital elevation models and maps sporadically throughout the course, usually at the beginning and partway through different lecture sections.

**Exercises:** No lab manual. Exercises will be distributed in class and the exercise will replace lecture for that day. The Lab work will involve using stereoscopes, aerial photograph atlases, maps and other materials.

**Field Trip (Mandatory):** A one-day field trip in the Toledo region November 8<sup>th</sup> is designed to acquaint you with real world examples of the material we study in class. You will be required to take field notes during this exercise for which you will be graded. You will be prepped on how to take field notes

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### Grading Policy:

- 25% Mid-Term exam (12.5% each)
- 20% Final Lecture exam



- 30% Exercises
- 15% Presentation
- 10% Field Trip report

*Lab exercises and exams are usually returned by 1 week after they are taken.*

Make-up exams & labs are not normally given except with excused absences (See University of Toledo Missed Class Policy [http://www.utoledo.edu/facsenate/missed\\_class\\_policy.html](http://www.utoledo.edu/facsenate/missed_class_policy.html) ). The reason(s) for taking the make-up exam or lab must be in writing from the student (email is acceptable), and the exam will normally be ready approximately one week after the regular exam is given. If a student does not make up an exam prior to taking the next exam, a grade of F will be given for the former exam. In some cases, due to the time to make another exam, the make-up exam may be essay style. If any exam(s) is not taken by the end of the day before the final exam, an F will be given and calculated into the final grade. All make-up exams will be taken in the department or if necessary, in the Test Center in the Memorial Field House.

**Student Responsibility:** All students assume the responsibility of knowing drop procedures and dates, dates on the syllabus, the UT Student Handbook and following through with the administrative details (i.e., forms in the registrar's office). <http://www.utoledo.edu/offices/registrar/registration.html>

### Student Conduct:

Cell phones and pagers are to be turned off during class. The University of Toledo has published guidelines for student conduct and they will be followed in this class (UT Student Handbook). Keeping others from listening to lectures, taking notes, etc. is a form of theft (as you know tuition is costly). There should be no visiting or other possible disruptive behavior during class. Surfing the web on your laptop, tablet, or cell phone, along with text messaging is considered a distraction to other students and the instructor. If such activity is more important than lecture, don't come to lecture, or wait until after lecture. If you have any problems please let me know and I will assist you in any way that I can in solving the problem or if necessary, filing a complaint to the proper authorities on campus.

**UNIVERSITY POLICIES:** Policy Statement on Non-Discrimination on the basis of Disability (ADA) The University is an equal opportunity educational institution. Please read The University's Policy Statement on Nondiscrimination on the Basis of Disability Americans with Disability Act Compliance.

[http://www.utoledo.edu/policies/administration/diversity/pdfs/3364\\_50\\_03\\_Nondiscrimination\\_o.pdf](http://www.utoledo.edu/policies/administration/diversity/pdfs/3364_50_03_Nondiscrimination_o.pdf)

**Academic Accommodations:** The University of Toledo is committed to providing equal access to education for all students. If you have a documented disability or you believe you have a disability and would

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like information regarding academic accommodations/adjustments in this course please contact the Student Disability Services Office.

### ACADEMIC POLICIES

The student is expected to follow the guidelines of student conduct as outlined in the COGS Student Handbook: <http://www.utoledo.edu/graduate/files/Graduate%20Student%20Handbook%202014-2015.pdf>

#### Student Presentation:

Students are to choose a paper from the recent scientific literature and give a short (~12 min) presentation of it. The paper must focus on surficial geology. **Start Early**

#### General DEADLINES & Suggestions (which *should not* be ignored!)

- **September 23**, The paper must be chosen and a PDF of the paper must be emailed to the TA. Once the PDF is received, you may sign up for a presentation date. First come, first served. A paper will be assigned if one is not chosen at this time. (*Note my interests in papers may not parallel yours!*)
- **October 28** An outline of your talk must be submitted to the TA that includes:
  1. Your name
  2. Paper authors(s) and their affiliation(s) dept, university
  3. General introduction (summarize the paper)
  4. Why the research was done (what led to the work)
  5. Hypothesis being tested (may not always be applicable)
  6. Methods and what the data consists of
  7. Data analysis performed to support interpretations
  8. Summary/Implications of the interpretations and conclusions.

To generate this outline properly will require you to understand the paper. Therefore, it is important to spend time with the paper studying it (not just reading it). This will likely involve looking up other papers to understand concepts. Be sure to ask questions if you are uncertain about how to proceed. During your presentation, statements to the effect: "I didn't understand this part" are unacceptable.

- The presentation will be graded on the following:
  - Preparation • Organization • Clarity of presentation & Understanding • Content
- These oral presentations are not only for your personal enjoyment but are an attempt to provide you with a more detailed background on a wide variety of topics only briefly (if at all) discussed in the lecture. Therefore, it is to your advantage (and common courtesy) that you attend all the presentations because you will be tested on this material during the final exam.
- Do not read your report from large blocks of text on the screen – use previously prepared notes.
- Use PowerPoint.
- For visual material use color and large font sizes so the data is clearly visible. Additional suggestions will be made during lecture.
- **Practice, practice, practice** and **practice** your presentation. Better yet, find an audience to present your talk to. If your mom, dad, boyfriend, girlfriend, wife, husband, fiancé etc. can understand it, then chances

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are we can! Worse case scenario – practice in front of your pet. Although unpopular, videotaping yourself and then reviewing it in the privacy of your own room can be very useful, if not unnerving!