EN370 Lecture:  
MWF 9:20 to 10:30 am  
BERG 103

EN370 Lab:  
W 1:20 to 4:10 pm  
RK 107

Instructor:  
Kelly LaBlanc, PhD  
Office: 302 Rankin Hall  
Phone: (262) 524-7147  
Email: klablanc@carrollu.edu  
Office Hours: MF 1:30-3 pm, Th 9:30-11:30 am, or by appointment.

Course Pre-requisite:  ENV 105: Earth Science

Required Textbook:  

Course Description:  
The processes, landforms, and sediments found on the Earth’s surface play a fundamental role in resource management, reclamation, and many other environmental issues.  This course explores the relationships between surface landforms and the underlying geologic structures; processes of wind, water, ice, and gravity that shape the Earth’s surface; and the history of environmental and geologic change recorded in surface environments.  Coursework focuses on qualitative and quantitative description of processes, landforms, and sediments through fieldwork and interpretation of aerial photographs, remote sensing images, and topographic and geologic maps.

Learning Outcomes:  
Following this course, students will be able to…
   1.  Explain the physical and chemical processes of wind, water, ice, and gravity that shape the Earth’s surface.
   2.  Apply quantitative methods to describe and analyze processes, landforms, and sediments.
   3.  Identify and describe landforms both in the field and on maps/images.
   4.  Identify and describe surface sediments and soils.
   5.  Interpret past and present surface environments from observations.
   6.  Interpret underlying geologic structures using surface landforms.

Grading:  
Grades in this course are assigned based on points earned.  Points are then weighted by category to determine the overall grade as follows:
ENV 370: Earth Surface Processes

<table>
<thead>
<tr>
<th></th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Exams</td>
<td>45%</td>
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<tr>
<td>Labs</td>
<td>30%</td>
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<tr>
<td>Participation</td>
<td>15%</td>
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<tr>
<td>Discussion Leadership</td>
<td>10%</td>
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<td><strong>Total:</strong></td>
<td><strong>100%</strong></td>
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Grading Scale for Course:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>≥ 93%</td>
<td>A</td>
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<tr>
<td>88–92%</td>
<td>A/B</td>
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<tr>
<td>83-87%</td>
<td>B</td>
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<tr>
<td>78-82%</td>
<td>B/C</td>
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<tr>
<td>69-77%</td>
<td>C</td>
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<tr>
<td>60-68%</td>
<td>D</td>
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<tr>
<td>≤ 59%</td>
<td>F</td>
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Other Grading Policies:

- There are **no extra credit** opportunities. There are plenty of opportunities to earn points through normal class activities.
- Students whose attendance drops below 65% for lecture will automatically fail this course as they have not been adequately participating in the class and do not deserve academic credit for it.
- Students found to be in violation of the academic honesty policy will receive a 0 on the work in question, an overall grade level drop, and will be reported to the Student Faculty Ethics Committee. Repeat offenses will result in an automatic failure.
- The grades displayed on Canvas are provided as a courtesy to students. The online grade book is **NOT** the official grade book for the course and only represents an approximate grade.
- It is the student’s responsibility to monitor their own grade and attendance. Please keep all graded work until the end of the semester and final grades have been submitted.

Canvas (New Learning Management System):

Effective fall 2017 Carroll is changing the learning management systems from eLearning to Canvas. You can access Canvas through my.carrollu.edu just like you accessed eLearning. The Canvas link is located on the left side of the screen under Quick Links. A Canvas tab will also replace the current eLearning tab.

Canvas App

The Canvas by Instructure app is the mobile version of Canvas that helps you stay current with your courses anywhere you go. Available for iOS and Android devices.

Canvas Help
There are several ways that you can get help using Canvas:

1. Click the Canvas Help button on the home page of any course.
2. Call the Canvas Support Hotline (available 24/7) (844) 358-6885
3. Click the Help button on the Canvas Menu bar and click Chat with Canvas Support. (Also available 24/7.)

Click Search the Canvas Guides in the Help Menu

**Assessment:**

**Lab Exercises (Learning Outcomes 2-6):**
Geology is best learned in the field, and we will be going out to do field work during several labs. Labs will focus on observing, interpreting, and measuring surficial processes, landforms, and sediments. You will be required to maintain a notebook for field and lab work. Appropriate clothing for fieldwork includes sturdy boots or shoes and weather appropriate clothing that you don’t mind getting dirty.

When we are not in the field, we will be working on maps and other analysis in the lab room. All lab work should be typed (for reports) or written neatly in pencil for worksheets. Labs are due 1 week after assigned unless otherwise stated. Late work is not accepted beyond one week of the due date and will be penalized -5% per day.

**Fieldtrip (Learning Outcomes 3-5):**
We will have a weekend fieldtrip scheduled outside of regular class periods and labs on October 21-22. During this trip, we will tour glacial features of the Kettle Moraine, camp overnight, and tour coastal features of Lake Michigan.

Attendance to the field trip is mandatory and graded as part of your participation. If you miss the field trip with the instructor’s approval, you can make-up the participation points through writing a paper on a topic assigned by the instructor.

**Journal Article Discussion (Learning Outcomes 1, 5, & 6):**
Working individually or jointly, you will chose an appropriate peer-reviewed article for the class to read that is related to a topic covered in class. Readings must be pre-approved by the instructor before being made available to the class. After a brief presentation summarizing the article (hypothesis or central thesis, methods, and conclusions), students will lead discussion on the journal topic (30 minutes).
Joint discussion leaders should demonstrate equal participation and understanding of the journal article. If a leader is absent on the day of presentation, she or he will receive a zero. Switching of discussion days is only allowed under extreme circumstances and at my discretion.

On discussion days, student participation is critical to the success of the seminar. Each student must come to class prepared to share ideas and engage in discussion. However, students who dominate discussion so that other students are unable to contribute will lose points.

On weeks you are not presenting, you must prepare one of the following to contribute to the discussion of each article:

- A question that thoughtfully explores the hypothesis, methods, or conclusions of the article’s author(s).
- A finding from another appropriate source that can help students to better understand the article’s topic (with citation).
- A past/present environmental issue or site that demonstrates the importance of the article topic (with citation).

Bring a hard copy of your discussion contributions to turn in at the beginning of class.

Students who are absent will receive a zero for participation on that day. You may also lose some or all of your participation points for a day by being tardy, not contributing to discussion as described above, or engaging in distracting or disrespectful behavior.

**Exams (Learning Outcomes 1 and 3-6):**
We will have three written exams scheduled during the semester on October 6th, November 3rd, and during our final exam time on Friday, December 15th, from 8-10 am.

Make-up exams will only be given if the student has contacted the instructor and made arrangements prior to the exam date. Make-up exams must be completed within one week of the exam date. Students needing accommodations for exams should contact/schedule with the Walter Young Center according to their timeline.

**Participation (Learning Outcomes 1-6):**
You are expected to actively engage in and contribute to a positive learning environment for the class. Your participation grade will be penalized for the following behaviors:

- Unexcused absence.
- Tardiness.
- Violation of the technology policy.
- Disrespectful behavior towards other classmates or instructor.
- Not contributing equally to lab exercises and journal discussions.
- Talking while the instructor is speaking.
- Vandalism of classroom facilities or equipment.
- Inattentive behavior.
Course Policies:

Attendance:
Attendance to all scheduled class and lab meetings is required. All absences are considered unexcused without appropriate documentation and approval of the instructor. Appropriate documentation includes a written document from an appropriate professional source (doctor, other professor, coach, newspaper obituary, law enforcement official, etc.) clearly stating that you were unable to attend on the date and time in question. Non-emergency appointments are NOT considered excused absences. If you are a student athlete or part of another university sanctioned group that requires you miss class for events, then excused absences will be given with appropriate documentation from a coach or advisor. Extended absences due to extreme circumstances (death in family or serious illness) should be handled through the Student Affairs [(262)-524-7100] and the Dean of Students [(262)-524-7334].

It is your responsibility to make up for missed class content including in-class activities, labs, and exams. You must get notes from another person in the class. I do not allow students to copy my notes.

Attendance will be considered in the class participation portion of your grade (see below). If your lecture attendance drops below 65%, you will not be considered a participant in the class and will not be given academic credit for the course (fail due to failure to attend).

Technology Policy:
The use of laptop or tablet computer is not allowed while class is in session unless it is for the express purpose of taking notes or viewing a digital textbook. Smart phones and other electronic devices with the exception of calculators should be silenced and put away unless otherwise directed by the instructor. If the instructor observes you using technology in a way that is distracting to her or other students, then you will lose participation points.

Academic Honesty:
The value of your degree from Carroll University is dependent on the academic integrity standards of you and your classmates. Instances of cheating or plagiarism will not be tolerated. If a student is found in violation of the Carroll University Academic integrity policy, the instructor reserves the right to give a 0 for the work in question and a 1 letter grade drop. Your actions will be reported to the university's Student/Faculty Ethics Committee where further sanctions may be applied. If you are aware of academic misconduct occurring in the course, you should contact the instructor.

Carroll University Academic Integrity Policy is located in the student handbook (https://my.carrollu.edu/ICS/Departments/Student_Affairs/Default_Page.jnz). Please familiarize yourself with it. Carroll University emphasizes that students have an obligation to conduct their academic work with honesty and integrity. All acts of academic misconduct are serious. If you have any questions about appropriate citations, please ask.

Students with Disabilities:
Students with disabilities who may need accommodations or any student considering obtaining documents should make an appointment with the Walter Young Center (262-524-7621) no later than the first week of class.
### ENV 370: Earth Surface Processes

#### Disclaimer:
The instructor and the University reserve the right to modify, amend or change the syllabus (course requirements, grading policy, etc.) as the curriculum and/or program require(s).

#### Tentative Schedule: (Subject to change without notice)

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Associated Reading</th>
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<tbody>
<tr>
<td>9/8</td>
<td>Introduction basics of geomorphology</td>
<td>Chapter 1</td>
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<tr>
<td><strong>Week 1</strong></td>
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<tr>
<td>9/11 to 9/15</td>
<td>Climate geomorphology</td>
<td>Chapter 2 (p.38-45)</td>
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<td>Chemical weathering</td>
<td>Chapter 3</td>
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<td>Soils</td>
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<td>Lab: Map review</td>
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<td><strong>Week 2</strong></td>
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<tr>
<td>9/18 to 9/22</td>
<td>Physical weathering</td>
<td>Chapter 4</td>
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<td>Mass Movements</td>
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<td></td>
<td>Lab: Measurements of chemical weathering</td>
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<td><strong>Week 3</strong></td>
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<tr>
<td>9/25 to 9/29</td>
<td>Waves, current, and tides</td>
<td>Chapter 13</td>
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<td>Coastal Landscapes</td>
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<td><strong>Week 4</strong></td>
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<tr>
<td>10/2 to 10/6</td>
<td>Glaciers</td>
<td>Chapter 9</td>
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<td>Lab: Coasts</td>
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<td></td>
<td><strong>Exam 1</strong></td>
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<td><strong>Week 5</strong></td>
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<tr>
<td>10/9 to 10/13</td>
<td>Glacial erosion and deposition</td>
<td>Chapter 10</td>
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<td></td>
<td>Glacial Landscapes</td>
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<td>Lab: Aerial photograph study of glaciers</td>
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<td><strong>Week 6</strong></td>
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<tr>
<td>10/16 to 10/20</td>
<td>Fall Break</td>
<td>Assigned Journal Articles</td>
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<td>Journal Article Discussions</td>
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<td></td>
<td>Lab: Glacial Landscapes</td>
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<tr>
<td><strong>10/21 and 10/22</strong></td>
<td><strong>Kettle Moraine and Lake Michigan Shoreline Fieldtrip</strong></td>
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<td><strong>Week 7</strong></td>
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<tr>
<td>10/23 to 10/27</td>
<td>Permafrost</td>
<td>Chapter 11</td>
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<td>Periglacial Landscapes</td>
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<td>Lab: GIS landscape analysis</td>
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<td><strong>Week 8</strong></td>
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<tr>
<td>10/30 to 11/3</td>
<td>Hydrology</td>
<td>Chapter 5</td>
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<td>Lab: Stream gaging</td>
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<td><strong>Exam 2</strong></td>
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<td><strong>Week 9</strong></td>
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<tr>
<td>11/6 to 11/10</td>
<td>Fluvial Processes</td>
<td>Chapter 6</td>
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<td>Lab: Sediment analysis</td>
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<td><strong>Week 10</strong></td>
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<tr>
<td>11/13 to 11/17</td>
<td>Fluvial Landscapes</td>
<td>Chapter 7</td>
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<td>Lab: Dating landscapes</td>
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<td><strong>Week 11</strong></td>
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<tr>
<td>11/20 to 11/24</td>
<td>Journal Article Discussions</td>
<td>Assigned Articles</td>
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<td>NO LAB</td>
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<td></td>
<td>Thanksgiving Break</td>
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<tr>
<td><strong>Week 12</strong></td>
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<tr>
<td>11/27 to 12/1</td>
<td>Groundwater processes</td>
<td>Chapter 12</td>
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<td>Karst Landscapes</td>
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<td></td>
<td>Lab: Fluvial landscapes</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Associated Reading</td>
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| **Week 13**  
12/4 to 12/8 | Aeolian Processes  
Aeolian landscapes  
Lab: Karst       | Chapter 8           |
| **Week 14**  
12/11 to 12/13 | Tectonic Landscapes  
Lab: Wrap-up and Review | Chapter 2 (21-38) |
| 12/15  
8 to 10AM | **EXAM 3**            |                    |