This course deals with the Natural Environment, and focuses on the Geological Materials, Soils, and Landforms at the Earth's surface, with emphasis on the various processes that create and modify the landscapes of continental areas.

First, we will—briefly—examine processes of rock formation, rock weathering, and soil formation. We will then concentrate on the development of landforms at various scales, starting with large-scale landforms (continents, mountain ranges, oceanic basins), and ending with smaller-scale ones (e.g., slopes, rivers, glaciers, coasts, etc.).

Lectures: Tu, Th, 11 - 12:30 p.m., Burdine 106. Lab hours vary; consult your schedule.

Office: CLA 3.708. Office Hours: Tu, 11:15 – 12:15 p.m. Please try to come see me during regular office hours. Other times are reserved for alternative academic and research activities. I am also available by e-mail practically always.

(1). REQUIRED TEXTS:


2. EXAMS, GRADES:

Your FINAL GRADE will be calculated from the following:

[a]- Three partial Lecture Exams, which will be worth 23 % (first exam), 24 % (second exam), and 23 % (third exam) of your grade, for a total of 70 %.

[b]- ...and the Laboratory grade [which is 30 % of the final grade].

Consult the General Course Outline (below) for Exam dates.

LECTURE GRADE: (a) There will be three PARTIAL (i.e., “MID-TERM”) exams. The first exam will be on Thu., February 18; the second exam will be on Thu., March 31st. We will not have a final exam during finals' week. Instead, we will have the last in-class (third) partial exam during the very last day of (lecture) classes (Thu., May 5).

LABORATORY GRADE: (b) Weekly exercises will count for 50 % of your Lab grade. A Mid-term and Final exam will count each for 25 % of the Lab grade. Your lab grade (30 % of final grade) will be averaged with your lecture grades (70 %).

(2A). GENERAL EXAM POLICIES:

1. All lecture exams are Multiple Choice; questions will usually have five (A, B, C, D, E) choices. You need not bring Scantron sheets. These will be provided for you.

2. Bring one or more # 2 pencils (already sharpened!), preferably with good erasers.

3. Exams are machine-graded. Please, remember this when you are filling in the data on the Scantron: you are supposed to "fill in the bubbles" with your name and I.D. number. Otherwise, your grade will appear next to an anonymous blank space!

4. Students will be asked to sit in every other seat. And of course, no friendly cooperation is allowed during the exam.
5. No books or papers are allowed on the desktops during the exam; only the exam itself and the answer sheet can be there.
6. Hats, baseball caps, or headgear of any type are not allowed during exams.
7. Upon completion of the exam, place both your answer sheet and the exam on the alphabetized piles at the front of the classroom, and then exit the room quietly.
8. When approaching the classroom front to hand in your exam and answer sheet, do not bunch up; please form a short line and hand exam materials to the TAs or to Dr. Pérez.
9. Please do not discuss the exam with anyone, including the TAs or Dr. Pérez, while still in the exam room. There will be time for that later.
10. Bring your student ID card and be prepared to show it to identify yourself—if asked to do so—when you turn in your exam.
11. Exam results will be ready no earlier than three working days after the exam.
12. Fortunately, the last partial exam will NOT be comprehensive; the material tested in it will include only the topics discussed in class after the second exam. Please, remember that, without exception, I will not be able to administer the last exam either late or early, so plan not to miss it. If you have plans, or trips to take somewhere, plan these accordingly.

(2B). Important notes concerning TARDY students:

Any students arriving late to an exam may be in deep, dire trouble.
1. Tardy students will be admitted to an exam only until the first student has completed the exam and has left the room. After the first student has completed the exam and leaves, no one will be admitted. Be aware that some students swiftly complete their exam in less than 15 minutes!!!
2. I will not make any exception to rule # 1. I know all about cars that break down, buses that don't arrive on time, cats that get sick in the early morning, and a myriad of similar reasons for being late. Still, no exceptions.
3. EXTREMELY IMPORTANT NOTE: (To late sleepers who miss exams). If you happen to have trouble getting up, or if you have any problems remembering important dates—such as exams—do something now to make sure you are present during exams! If you fall within the 2% or so of the students who are in this inexcusable category, my answer is: sorry... but please, don't ask for leniency!

(2C). Important information regarding MISSED EXAMS:

1. All exams will be given ONLY during their scheduled dates.
2. No excuse other than a validated one will be accepted for missing an exam.
3. NO MAKE-UP EXAMS WILL BE GIVEN, FOR ANY REASON.
4. If you miss an exam and you do not have an acceptable, validated excuse, you will earn a grade of zero in that particular exam. Please, do NOT ask for exceptions; none will be made. If you think you will have any problems in taking any exam, change your plans now. Simply put: you are required to take the exams at the time they are administered.
5. If you miss the first or second exam, and have an acceptable, substantiated excuse, your grades from the other exams and from laboratory activities will be averaged proportionally. Particular percentages may vary for each individual case.
6. Acceptable reasons for missing an exam include illness and/or health problems, accidents, tragedies in the family, etc. In any case, I will need verification of your reason(s) for missing the exam. If you are affected by one of these unplanned, unfortunate events, you will need to provide me with the following:
   (a)- Proper notification of exam missed (or to be missed), and general reason for this. You will need to see me about this; I will not accept vague e-mails in lieu of your visit. Please come to my office, during regular office hours, with a written notification.
(b)- Photocopy of an official proof (doctor's slip, police report, Sheriff's letter, and such). A copy is fine; you may keep the original, but I will need to see the original document when you come to talk to me.

Students that participate in a University-sponsored activity (e.g., official games, ROTC exercises, and such) will also fall in this category of "acceptable excuses". If you know you will be absent during an exam, remember you will still need to provide me with both the note (a) above and with (b) the official paperwork to verify this. Please, do not leave this till the very end.

7. If you missed an exam, or you will not be able to come to class, or if some other irregularity takes place, and you need to tell me about it, it is your responsibility to let me know (or your TA, if appropriate). You are supposed to leave me the message, send me an e-mail, or come to see me at my office. Please do NOT leave vague messages in my mailbox, voice mail, or with the Department's staff, or elsewhere [such as "Dr. Pérez, please call me" or "...e-mail me". I will not, unless truly exceptional circumstances make it imperative. I simply have too many students (and duties) to go chasing after you. Remember, it is to your advantage to convey the appropriate message(s) on time.

(3). Note for STUDENTS WITH DISABILITIES, or requiring accommodations for religious holidays.

(a) Students with a documented disability (physical or cognitive) who require academic accommodations will need to contact the Services for Students with Disabilities area of the Office of the Dean of Students at 471-6259 as soon as possible to request an official letter outlining the authorized accommodations. They should file the relevant materials at least two weeks before any exams or activities requiring such special accommodations. Appropriate academic accommodations may be requested from the Division of Diversity and Community Engagement, Services for Students with Disabilities, http://www.utexas.edu/diversity/ddce/ssd/

(b) If special accommodations are needed during exams, you should provide the letter and inform us (both Dr. Pérez and your specific TA) about your condition as soon as possible. University regulations specify it is the student’s responsibility to remind faculty five business days before the exam that these arrangements will be needed. If you don't give us enough time, it may simply prove impossible to accommodate your needs.

(c) Accommodations for religious holidays: “By UT Austin policy, you must notify me of your pending absence at least fourteen days prior to the date of observance of a religious holy day. If you must miss a class, an examination, a work assignment, or a project in order to observe a religious holy day, you will be given an opportunity to complete the missed work within a reasonable time after the absence.”

(4). About MISSING LECTURES and MISSING NOTES: The Academic Policies and Procedures state the following official policy regarding Class Attendance and Absences: “Regular attendance at all meetings of the classes for which a student is registered is expected, and implementation of this policy is the responsibility of instructors.” This clearly means that it is your responsibility to attend lectures and labs regularly. However, given the size of this class, it is not practical to take attendance, although I wish I could. Nevertheless, I still recommend you come to lectures every day. Over the years, I have noticed a curious correlation between attendance and overall performance; while it’s hard to prove statistical causality, you can certainly draw your own intelligent conclusions about this relationship.

At any rate, if you miss lectures for any reason, please do not ask me for copies of "the notes for last Tuesday's lecture", or if you "can come to my office to copy my notes", or ask for “ a copy of the Powerpoint for lecture # 17”. The answer to these and other similar questions is no, sorry! All that takes inordinate amounts of time and effort. I do not lend/give my notes for any reason. There are simply too many of you for me to do this in order to remedy the effects of your absences. That is certainly not my responsibility. If you want the notes for a missed lecture, I advise you to borrow them from a friend or
acquaintance in the class. I will, however, be glad to answer any specific questions you may have to clarify or expand upon the ideas presented in lectures or in the text. Just drop by my office or e-mail me.

(5). COURSE GRADES:

The scores on your exams and in the lab essentially determine numerical grades for the course. UT reports undergraduate grades as a Plus/Minus grading scale. Following UT’s official grading system, final letter grades for this course will be based on the scale below. Descriptive designations of each grade class are included below as well.

**Grading Scale:**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0 : 94 to 100</td>
</tr>
<tr>
<td>A-</td>
<td>3.67 : 90 to 93.9</td>
</tr>
<tr>
<td>B+</td>
<td>3.33 : 86.7 to 89.9</td>
</tr>
<tr>
<td>B</td>
<td>3.0 : 83.4 to 86.6</td>
</tr>
<tr>
<td>B-</td>
<td>2.67 : 80 to 83.3</td>
</tr>
<tr>
<td>C+</td>
<td>2.33 : 76.7 to 79.9</td>
</tr>
<tr>
<td>C</td>
<td>2.0 : 73.4 to 76.6</td>
</tr>
<tr>
<td>C-</td>
<td>1.67 : 70 to 73.3</td>
</tr>
<tr>
<td>D+</td>
<td>1.33 : 66.7 to 69.9</td>
</tr>
<tr>
<td>D</td>
<td>1.0 : 63.4 to 66.6</td>
</tr>
<tr>
<td>D-</td>
<td>0.67 : 60 to 63.3</td>
</tr>
<tr>
<td>F</td>
<td>0.0 : ≤ 59.0</td>
</tr>
</tbody>
</table>

A, A- = Excellent  
B+, B, B- = Above Average  
C+, C, C- = Average  
D+, D, D- = Pass  
F = < 60 = Unsatisfactory

For more information, you may consult the link to UT’s plus/minus page, with FAQ: http://www.utexas.edu/provost/planning/plus-minus/

(6). Some Important NOTES REGARDING GRADING:

1. "Curving". Please, do NOT ask me "if I am going to curve the grades". I don't know if I will need to do that, but I usually don't have to. Be aware that, in any large population such as the one this course usually has, grades tend "to curve themselves". In case you are really interested, data sets with normally distributed Gaussian curves, symmetrical about their means, with a minimum of skewness and kurtosis, and with fairly coincident means, medians, and modes are my "goal".

2. "Extra Credit". Please do not ask me for "extra credit", because in my dictionary, such concept means "unfair and undeserved advantage over the other students." I have to be equally fair to each and every one of you; this means that I will measure every single student with the same "ruler": the grades that you earn from the regular exams and laboratory activities. There simply are no other reasonable options.

3. Further ideas about grades. Please realize that grades are assigned not on the basis of perceived "need", but of merit and performance. I honestly try really hard to be fair to everyone, but... you must simply earn your grades; they will not be given away for vague social or personal reasons. If you feel you have been studying hard but are still not satisfied with your performance in the tests, you may need to work even harder, or spend more hours on the material, or review your study habits to see how they could be
improved. I will be glad to briefly discuss your study habits or approaches. The Learning Skills Center can also provide useful advice. Please, do NOT tell me that you "...desperately need a minimum grade of '...(x)...' in order to '... [y] ...". Ultimately, only you are responsible for your grades.

4. Note for graduating students. All the above rules also apply to graduating seniors. If you are planning to graduate at the end of this semester, I strongly suggest you make an extraordinary effort—if needed—to get a good grade in the class. A passing grade will not automatically be assigned to you just based on perceived personal need. Please, be aware that if your performance in this course is not satisfactory, you may get an unsatisfactory grade, and therefore you will not be able to graduate as planned.

(7). Note about SCHOLASTIC DISHONESTY: The University of Texas, and the professor of this course, takes a very dim view of any instance of scholastic dishonesty. UT’s Honor Code states: “The core values of the University of Texas at Austin are learning, discovery, freedom, leadership, individual opportunity, and responsibility. Each member of the University is expected to uphold these values through integrity, honesty, trust, fairness, and respect toward peers and community.” Please remember this, and act accordingly. Consult: (http://registrar.utexas.edu/catalogs/gi09-10/ch01/index.html)

(8). LABORATORY:

Everyone enrolled in the course is also enrolled in a weekly, 90-minute laboratory section. Laboratory attendance is mandatory. Lab sections begin meeting the second week of classes. Labs will continue uninterrupted through the semester, except for the week of March 14 - 18 (Spring Break). Labs meet in CLA 3.102 (College of Liberal Arts building). Please attend the Lab section you are officially enrolled in.

Your individual TA may provide you with additional information about the Laboratory sections, but these are some of the general guidelines for the Labs:

(1)- Lab exercises are due by the end of the Lab periods.
(2)- No make-ups of missed labs. No exceptions.
(3)- There should—at least—be 11 laboratory-exercise periods (weeks) during the semester, plus 2 Lab exams and 1 "free" week (first week). However, some TAs may need to attend a professional meeting. The grade for each weekly Lab session (regardless of the number of exercises in it) will be calculated as a single assignment.
(a) If there are 11 labs in your section—our goal—the lowest grade of the 11 weekly assignments will be dropped at the end of the term (or, if you missed one Lab, the zero grade for that week gets dropped!). If more than one lab is missed, the grade for those labs is zero.
(b) If there are only 10 labs in your section, no grade will be dropped. One way or another, your total "weekly assignment" grade will be the average of 10 labs.
(4)- If a Lab is to be missed by a student for an official University-sponsored function, the student (with prior permission of both lab TAs involved) may meet with another lab that week. However, these arrangements should be made prior to the lab miss and with permission of both TAs involved. If a student does not make prior arrangements or does not show up for the alternative lab period, or does not turn in the weekly assignment for grading, s/he may earn a zero for that weekly lab period.
(5)- No make-ups of missed Lab exams. Same rules as for Lecture exams.
(6)- Laboratory Exams: The specific dates for the two Lab exams will be announced by the TAs during the third class week.

(9). GENERAL RECOMMENDATIONS:
I hope you do well in this course; I sincerely do. However, it is obvious that not all the students will get excellent grades. While it may not be easy to get an A in this class, it is also quite difficult to get an F.
You will certainly increase your chances of success, and of boosting your overall grade, if you follow these
guidelines closely:

1. Attend lectures regularly. Missing lectures is the shortest route to failure.
2. Take a lot of good, clear, clean notes. It may be a good idea to bring pens of different colors to class, so
   that you can color-code concepts, sections, etc. Some students also bring the textbook to class, and are able
to identify chapters, sections, etc., with relevant information.
3. Complete the weekly reading assignments before you come to class. Then, read your class notes. Then,
   read the textbook material again. Make notes, cards, cross-sections, lists of items, summaries, maps, etc,
   while you study.
4. You should freely and frequently browse through the CD-ROM included with your text. This is an
   excellent learning resource, and should be utilized to complement the lecture and textbook materials.
5. Study your notes and the readings well before the exams. Allow plenty of time for all the new material
   and the unusual names to ‘sink in’!
6. Attend labs, and do weekly lab work on time.
7. If you have questions about the material presented, ask your TAs or me. I will be glad to answer any
   specific questions you may have about the material discussed in class. However, I advise you not to wait
   until the last minute. Most days, I have time during my office hours to clarify difficult concepts or to
   answer questions. If you postpone seeing me until the day before the exam, you will discover that 50 other
   students had the same bright idea, and you will probably not have a chance to talk to me!
8. Important rule of thumb: the University of Texas General Information Handbook 2001-2002 (p. 61)
   recommends students should devote a minimum of 2 additional hours of preparation for each hour a
   class meets. It may be wise to spend even more hours studying, as some students will need additional time
to adequately absorb all the relevant class materials. Please, plan accordingly...

(10). CLOSING REMARKS

“For every complex problem, there is a simple,
   easy to understand, incorrect answer.”
   Albert Szent-Gyorgyi

Some of you might be overwhelmed in just a few weeks by the amount and diversity of material
presented in the class, by the multiplicity of names and processes, and by the sheer number of concepts. I
assure you, I am definitely not trying to make basic earth-science concepts more complicated than they
already are, but if you have no previous experience with natural sciences, and/or if you are not very adept
in science in general, I strongly suggest you carefully reconsider your class options.

Please, be aware that these are no idle recommendations.
<table>
<thead>
<tr>
<th>WEEK</th>
<th>TOPICS</th>
<th>READINGS (found in:)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 (Jan 19 – 22)</td>
<td><strong>January 18: Martin Luther King Holiday</strong>&lt;br&gt;Introduction to Earth Science and Geomorphology.&lt;br&gt;Formation and Structure of Earth. Orders of Relief. Rock Genesis and Rock Types.</td>
<td>Ch. 1, 18, 19 Ch. 13 Appendix A Ch. 3</td>
</tr>
<tr>
<td>2 (Jan 25 – 29)</td>
<td>Rock Types (conclusion). Physical and Chemical Weathering Processes</td>
<td>Ch. 3, 4, 5, 6, 7 Appendix B</td>
</tr>
<tr>
<td>3 (Feb 1st – 5)</td>
<td>Rock Weathering and Soil Formation. Continental Drift. Plate Tectonics and Large-scale Landforms</td>
<td>Ch. 5, 15, 16, 19</td>
</tr>
<tr>
<td>4 (Feb 8 – 12)</td>
<td>Mechanisms of Plate Tectonics: plate divergence and plate collision. Orogenesis and Mountain Structure. Vulcanism.</td>
<td>Ch. 4, 5, 17</td>
</tr>
<tr>
<td>5 (Feb 15 – 19)</td>
<td>Volcanic Processes and Landforms of Vulcanism. Basaltic and silicic volcanic materials and landforms. Volcanic regions. <strong>First Partial Exam: Thursday, February 18</strong></td>
<td>Ch. 3, 4, 15</td>
</tr>
<tr>
<td>6 (Feb 22 – 26)</td>
<td>Geologic Structure and Landforms. Forces of deformation. Monoclines, synclines, anticlines. Fault types.</td>
<td>Ch. 4, 17</td>
</tr>
<tr>
<td>7 (Feb 29 – Mar 4)</td>
<td>Geologic Structure (conclusion). Earthquake Activity and Earthquake After-Effects.</td>
<td>Ch. 4, 17</td>
</tr>
<tr>
<td>8 (March 7 – 11)</td>
<td>Earthquakes (conclusion) Slopes: Mass Wasting Processes. Slow, rapid mass-wasting.</td>
<td>Ch. 8, 14</td>
</tr>
<tr>
<td>9 (March 14 – 18)</td>
<td><strong>Spring Break</strong></td>
<td></td>
</tr>
<tr>
<td>10 (March 21 – 25)</td>
<td>Processes of Slope Hydrology. Drainage basins: concept, and characteristics. Fluvial Processes and Landforms.</td>
<td>Ch. 9, 10</td>
</tr>
<tr>
<td>11 (Mar 28 – Apr 1st)</td>
<td>Rivers: stream flow, load; debris transport. Fluvial&lt;br&gt;(Landform development: straight, meandering, braided channels.)</td>
<td>Ch. 9 <strong>Second Partial Exam: Thursday, March 31</strong></td>
</tr>
<tr>
<td>12 (April 4 – 8)</td>
<td>Karstic landscapes: Processes and Features.</td>
<td>Ch. 10</td>
</tr>
<tr>
<td>13 (April 11 – 15)</td>
<td>Glaciers and glaciation. Glacier Formation, and Glacial&lt;br&gt;Landforms. Erosional and depositional glacial features.</td>
<td>Ch. 11</td>
</tr>
</tbody>
</table>