ESCI 101 Dynamic Earth (4 credits)
SUMMER 2018

Contact Information
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Instructor- Jeanne Fromm
Email Address- Jeanne.Fromm@usd.edu
+ After the course has started, communicate using email within Desire 2 Learn (D2L) only.
Mailing Address- Department of Earth Sciences
University of South Dakota
Akeley-Lawrence Science Center, Room 201
Vermillion, SD 57069
Phone Number- 605/677-5649 (This is the Department phone number)
Availability- + Instructor is always online during virtual office hours on Tuesday and Thursday, 7:00-8:30 PM and will respond to email, pager, and discussion questions promptly.
+ Students may email instructor anytime for help. Expect a response within 24 hours, except between 5:00 PM Friday and 8:00 AM Monday.
+ Students may also communicate using Skype; email instructor if interested.

Course Description
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Dynamic Earth (ESCI 101) is the study of Earth's composition, landforms, geological processes, oceans, and atmosphere. The laboratory is a series of hands-on, inquiry-based activities that includes the study of minerals, rocks, topographic maps, and landforms.

The Earth is a dynamic planet and has been evolving for 4.5 billion years. The course is designed to introduce you to the physical processes that operate on and within the Earth. Emphasis will be on large-scale processes such as mountain building, plate tectonics, volcanism, and earthquakes. We will discuss surficial systems including rivers, mass wasting, groundwater, glaciers, and landscape development. Environmental geology and geologic hazards are also covered. Course objectives are:

- Understand Earth structure and internal/external processes.
- Identify common minerals, rocks, and basic geologic features.
- Recognize and understand natural hazards.
- Recognize how humans use natural resources and how human activity affects the physical environment.
- Understand that science knowledge is based on observation and the scientific method.
Course Requirements

The following textbooks and other materials are required for the class and are available through the USD Bookstore. The USD Bookstore can usually deliver course materials within one working day to South Dakota addresses. You must have the textbook and lab materials before class begins on Monday, May 14, 2018. All students registered for the course before May 15 will receive an email from the instructor about this requirement before the term begins. Failure to have your books and specimen set will not be accepted as an excuse for late labs, quizzes, and assignments.

  Note: There is a significant saving for purchasing the textbook/lab bundle and the lab manual must be new if bundle is not purchased.

+ Mineral and Rock Specimens Set, available only from USD bookstore

You will also need a calculator, colored pencils, and tracing paper. Ebook or online access for the textbook and lab manual may be purchased at the following link http://books.wwnorton.com/books/ebookinfo/ If you buy electronic access to the lab manual, you will need to print out some pages to complete the labs. If you register for the class after the term begins, purchasing ebooks is the best way to catch up and is highly recommended.

This course is offered online by using software called Desire 2 Learn (D2L) and may be accessed through the USD student portal https://my.usd.edu, or https://d2l.sdbor.edu. Students will not have access to any coursework at the D2L website until the first day of class on Monday, May 14, 2018. It is strongly recommended that if you are new to online classes you carefully review the online orientation guide available at Online Learning Guide. The guide provides an overview of online learning and lists the recommended computer hardware and software. It's up to the student to make sure their computer and internet connection are adequate before the term starts. You will also need access to Adobe Acrobat Reader, Microsoft Word, movie players, and Google Earth™ (free download). Links to the download sites for Adobe Acrobat Reader are provided in D2L. The free download for Office 365 ProPlus is available to students with Office 365. More information can also be found on the Office 365 Student Advantage Page in the myU Portal https://portal.usd.edu/technology/downloads/student/office-365.cfm

Course Information

ESCI 101 is entirely an online course which can be accessed from any computer with an internet connection at any time. However, the course pace is not so flexible! The content is covered on a set weekly schedule which means all coursework has fixed offering intervals. Quizzes and exams are also only available during fixed intervals.

If you are new to online courses, remember that most students report that it takes more work, more time, and better organizational skills to succeed in online courses when compared to on-campus classes. You should take this class if you're interested in Earth science, not because you hope online science is the easiest way to meet your science and science lab requirement. Please be advised that the majority of students who failed this class in the classroom setting do not pass the course in the online setting. The classroom setting is strongly recommended for students who find science courses and math applications challenging. Students should have had some experience using word processing software, sending emails, and using the internet. Students also need to be able to add, subtract, multiply, and divide. The ability to learn by reading and to follow written instructions are essential skills. Students are strongly encouraged to look at examples of typical lab exercise questions included on the last pages of the welcome letter when considering taking this course online.
If you are new to college-level science classes with labs do not underestimate the time commitment required for success. Students taking this course in the classroom setting during a 16-week term would spend 6 hours in the classroom for lecture and lab each week, and be expected to spend an additional 6 hours outside of class for a total of about 12 hours per week, minimum. Online students should expect to spend more time on this course due to the independent nature of the class. Students are expected to allow enough time to complete the reading assignments, view the topic presentations, complete the labs, lab quizzes, and topic quizzes, and prepare for exams. During summer term the same content is covered in half the time (eight weeks instead of sixteen), so expect to spend at least 24 hours per week on this course. Be realistic about existing personal and work commitments before taking this course.

The instructor is always online during office hours to help students learn course content and understand lab directions. Students will receive a prompt response to questions sent during office hours. Communicating by email or Skype (prearranged by email) is also helpful, but students should start labs well before the due date to allow time for the instructor to respond, usually within 24 hours. The University of South Dakota HelpDesk will assist students with information technology issues and problems and the instructor has no expertise in this area.

Assigned reading in the textbook and lab manual are the major sources of course content. Content is organized into seventeen (17) topics. Each topic includes an overview listing the learning objectives and learning activities. Each topic includes a presentation and presentation summary, which are optional and intended to offer students another way to learn the content besides textbook reading. Most topics include a lab exercise that allows students to apply the content. The overview, presentation, presentation summary, and lab instructions are available under Content on the D2L Course Home Page.

### Evaluations & Grades

Letter grades are assigned based upon your performance in all course work exactly as summarized in Table 1 and described below. Students MUST also have a passing grade (≥55%) in both the laboratory component and exams in order to pass this course. No extra credit opportunities are offered in this course.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>% of Total Course Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LAB</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Topic Quiz</strong></td>
<td>17 total- not proctored</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>2 per week (sometimes 3), 10 questions and 15 minutes per quiz</td>
<td></td>
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<tr>
<td><strong>Lab Exercise</strong></td>
<td>15 total- not proctored</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>2 per week, 6-11 question sets per exercise</td>
<td></td>
</tr>
<tr>
<td><strong>Lab Quiz</strong></td>
<td>15 total- not proctored</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>2 per week, 12 questions and 15 minutes per quiz</td>
<td></td>
</tr>
<tr>
<td><strong>Exam</strong></td>
<td>4 total - proctored</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>1 about every 2 weeks, 65-75 questions and 60 minutes per exam</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td>100</td>
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The grading scale is 85.0-100% = A, 75.0-84.9% = B, 65.0-74.9% = C, 55.0-64.9% = D, and below 55.0% = F = Failing. Grades and scores will be available under Assessments>Grades on the D2L Course Navigation Bar.
The table at the right summarizes the typical distribution of final course grades. The main reason for D and F grades is skipping required coursework and illustrates that time management and participation are critical to student success. Previous experience has shown that most students who completed ninety percent (≥90%) of the coursework got a C or better grade and most students who completed less than eighty five percent (≥85%) of the coursework got a D or F. The link between good grades and coursework completion is also illustrated in the following list of percent skipped coursework by grade category: A (2%), B (7%), C (11%), D (17%), and F (35%). For example- the average student who received a “D” grade did not complete 17% of the coursework.

<table>
<thead>
<tr>
<th>Letter Grade</th>
<th>Percent of Students</th>
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<tbody>
<tr>
<td>A</td>
<td>10</td>
</tr>
<tr>
<td>B</td>
<td>15</td>
</tr>
<tr>
<td>C</td>
<td>40</td>
</tr>
<tr>
<td>D</td>
<td>20</td>
</tr>
<tr>
<td>F</td>
<td>15</td>
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**Topic Quizzes:** Seventeen (17) topic quizzes are scheduled, usually two per week, covering content from the assigned reading in the textbook. Topic quizzes comprise 15% of the course grade. The topic quiz is taken online and consists of ten (10) multiple-choice, true-false, fill-in-the-blank, and diagram interpretation questions. The topic quizzes are available under Assessments>Quizzes at the D2L Course Navigation Bar. Students make take the quiz any time between Monday and 10:30 PM Sunday and have fifteen (15) minutes to complete the open book/note quiz. Topic quiz score is posted at the Grades link in D2L within two days after the quiz interval ends. See the schedule for topic quiz offering interval. Please note that Assignment 1 must be completed in order to take any topic quiz. Failure to complete Assignment 1 will not be accepted as an excuse for late topic quizzes and will result in a zero score.

**Laboratory Component:** The labs are intended to demonstrate how scientific investigation of the Earth is done and to let students apply the concepts introduced in the textbook reading. The lab component comprises 25% of the course grade. Fifteen (15) labs are scheduled, usually two per week, and generally correspond to the weekly topic(s). Labs typically include lab manual problems and “geotour” questions using Google Earth. Improve your lab score by allowing enough time to contact the instructor for help with content or directions as needed.

Directions for the lab exercises are available under Content, organized by topic, in the D2L Course Home Page. The lab exercise is auto graded by D2L by opening the lab exercise available under Quiz in the D2L Course Home Page. Students may enter the lab for auto grading any time between Monday and 10:30 PM Sunday and have seventy-five (75) minutes to transfer their answers. The lab exercise score is posted at the Grades link in D2L within two days after the submittal interval ends. Corrected labs are available for review immediately so students can check errors and correct/resubmit the lab one more time, and prepare for the associated lab quiz. See the schedule for lab exercise submittal intervals.

Students must take the associated lab quiz within 7 days after the lab exercise submittal interval and fifteen (15) lab quizzes are scheduled. The lab quiz is not proctored, taken online and consists of twelve (12) multiple-choice, true-false, fill-in-the-blank, and numerical questions that are similar to lab exercise questions. The lab quizzes are available under Assessments>Quizzes at the D2L Course Navigation Bar. Students make take the quiz any time between Monday and 10:30 PM Sunday and have fifteen (15) minutes to complete the open book/note quiz. Students may take each lab quiz twice and the best score is incorporated into their grade. The graded lab quiz score is posted at Grades within two days after the quiz interval ends.

Remember that the lab grade (Table 1) is based on the lab exercise scores (48%) and lab quiz scores (52%). Students must get 55% or more in the lab component to pass the course. Please note that Assignment 1 must be completed before any lab exercise may be submitted. Failure to complete Assignment 1 will not be accepted as an excuse for late labs or lab tests and will result in a zero score.
Exams: The course includes four (4) exams and the exam intervals are shown in the schedule (about one every two weeks). The exams comprise 60 percent of the total course grade. The proctored exams are comprehensive but not cumulative, meaning you will need to understand material from all the preceding chapters, but you will only be asked specific questions about topics covered after the last exam. Exams include 65-75 questions from the reading, lecture notes, quizzes, and labs. The testing format is similar to the weekly quizzes. The test is not “returned” to the student but general information about test performance can be requested from the instructor. Exam scores are posted at the Grades link in D2L within one week after the exam interval ends. The average exam score must be 55% or more to pass the course.

The exams are closed-book/notes and must be taken online at a testing center or supervised by a proctor approved by Continuing & Distance Education (CDE). The USD online learning guide contains information about proctors and testing centers. The exams are password-accessed at the D2L Course Home Page and must be completed in 60 minutes. The access passwords will be provided to the proctors and testing centers before each exam interval. Students who violate exam proctor policy or engage in academic dishonesty on any exam will be given an F for the course.

Assignments: The online course includes two mandatory (2) assignments early in the term which are meant to help the student decide if this course fits their expectations, life style, and other commitments before the drop/add date on May 18. Assignment 1 will acquaint the student with course policies and illustrate how the online course content is organized. In Assignment 2, the student provides science background information and specifies testing center or proctor arrangements.

Directions for the assignments are available under Content in the D2L Course Home Page. The assignments are not part of the course grade, but must be completed in order to proceed with the course. Assignment 1 is complete when students correctly answer all the questions. Assignment 1 is corrected in D2L by opening Assignment 1 under Quiz in the D2L Course Home Page. Students have unlimited attempts to achieve the 100% correct standard. Students will see their scores immediately after submission. Assignment 2 is complete when students answer all the questions and upload it to the Dropbox in D2L. Assignment 2 is not graded but it must be completed to take the exams. In summer term, the first exam is scheduled during week two.

It is critical that students understand course policies, grading, and organization of course learning materials during the first few days of the term. Therefore, students cannot proceed with any other coursework until Assignment 1 is completed; this means that no topic quizzes, lab exercises, lab quizzes, lab tests, or exams can be taken until all of the questions in Assignment 1 are answered correctly. Failure to complete Assignment 1 on time will not be accepted as an excuse for missing other coursework deadlines and zeros will be given for that coursework. No exceptions will be made because previous experience has shown that 85 percent of students who did not complete the early coursework on time did not succeed in the course. Most of these students dropped the course later, were dropped by the instructor later, or ended up with final course grade of D/F.

Submittal Intervals for Topic Quizzes, Lab Exercises, Lab Tests, and Exams: There will be no extensions of the offering intervals because all coursework and evaluations may be completed any time during a 6-7 day period. Students are expected to contact the instructor and arrange for early submittal or evaluation intervals to manage anticipated schedule conflicts. Preadjusting early quizzes and lab exercises requires a minimum of 48 hours’ notice to the instructor. Do not wait until the last minute, e.g. 10:29 PM Central Time, to submit a lab or take a test/exam/quiz and then blame D2L or the internet or the clock when deadlines are missed. Get in the habit of completing all coursework and evaluations early in the seven-day offering interval as a buffer for technical difficulties and to leave time to ask the instructor for help. Please notice that all times are in Central Time and make adjustments if you live in a different time zone like Mountain Time.
If you have legitimate technical difficulties or other major unanticipated circumstances that prevent you from submitting the lab exercises, taking the topic or lab quizzes, or taking the exams on time email the instructor immediately and describe the problem. One accommodation may be provided at the discretion of the instructor and the following penalties will apply: 1 day late- 15%; 2 days late- 30%; 3 days late- 45%, 4 days late- 60%, 5 days late- 75%, and 6 days late- 90%. Please note that it is up to the student to contact the testing center or proctor well in advance (7 - 14 days) of the exam interval and make arrangements to take the exam within the offering interval. Failure to do so will not be accepted as an excuse for missing the exam.

Late Registration Caution: Previous experience has shown that 80% of students who register late (after the term begins) subsequently dropped the course or ended up with a D or F. This is especially true during the short summer term and one reason this occurs is that students must wait for books and D2L access in order to begin coursework and they struggle to catch up. Students registering late are strongly advised to order the textbook and lab manual as ebooks so they can begin coursework immediately. The following accommodation will be provided to students who register after the term begins:

Missed labs and quizzes must be completed within three days after students have D2L access.

Class Policies

Course Participation: Students who have not taken all the scheduled exams and completed at least 60 percent of the scheduled topic quizzes and lab exercises by June 20 will be dropped by the instructor for non-participation in the course. Completed means the quiz or exam has been taken and the lab exercise submitted for auto correction.

Academic Dishonesty: The University of South Dakota considers plagiarism, cheating, and other forms of academic dishonesty inimical to the objectives of higher education. The University supports the imposition of penalties on students who have been adjudicated to have engaged in academic dishonesty, as defined in the "Conduct" section of the University of South Dakota Student Handbook, and South Dakota Board of Regents policy 2-33 [www.sdbor.edu/policy/Documents/2-33.pdf](http://www.sdbor.edu/policy/Documents/2-33.pdf).

No credit can be given for a dishonest assignment. A student found to have engaged in any form of academic dishonesty may, at the discretion of the instructor, be:

a. Given a zero for that assignment.
b. Allowed to rewrite and resubmit the assignment for credit.
c. Assigned a reduced grade for the course.
d. Dropped from the course.
e. Failed in the course.

Students caught engaging in academic dishonesty on any exam will fail the course. Working together on labs can be a good way to learn the material, but it’s essential each student understands the lab exercise in order to do well on the lab quizzes. Working together on the labs means helping each other solve the problems but not sharing answers. All quizzes are an individual effort intended to help students prepare for the exams, so do your own work.

Fair Evaluation: Each student is entitled to a fair grade in each course in which he or she is enrolled. It is the right and the responsibility of an instructor to establish criteria for evaluation for each course which he or she teaches, and to determine the degree to which an individual student has fulfilled the standards set for the course. Students are notified that extraneous factors, such as eligibility for sorority or fraternity membership, scholarship or financial aid awards, athletics, timely graduation, or admission to graduate or professional schools, have no bearing on the determination of the grade in this course. The quality of the student’s overall performance with respect to standards for evaluation given in this syllabus will be the only basis for judgment.
**Students Rights to Assistance or Accommodations:** Any student who feels s/he may need academic accommodations or access accommodations based on the impact of a documented disability should contact and register with Disability Services during the first week of class. Disability Services is the official office to assist students through the process of disability verification and coordination of appropriate and reasonable accommodations. Students currently registered with Disability Services must obtain a new accommodation memo each semester.

Ernetta L. Fox, Director  
Disability Services, Room 119 Service Center  
(605)677-6389  
Web Site: www.usd.edu/ds  
E-mail: dservices@usd.edu

**Freedom in Learning Statement:** Under Board of Regents and University policy student academic performance may be evaluated solely on an academic basis, not on opinions or conduct in matters unrelated to academic standards. Students should be free to take reasoned exception to the data or views offered in any course of study and to reserve judgment about matters of opinion, but they are responsible for learning the content of any course of study for which they are enrolled. Students who believe that an academic evaluation reflects prejudiced or capricious consideration of student opinions or conduct unrelated to academic standards should contact Associate Dean John Dudley to initiate a review of the evaluation.

**Diversity and Inclusive Excellence:** The University of South Dakota strives to foster a globally inclusive learning environment where opportunities are provided for diversity to be recognized and respected. To learn more about USD’s diversity and inclusiveness initiatives, please visit the website for the Office of Diversity.

**Communication and Equipment:** Communication between student and instructor in this course is limited to internet email in D2L. Unsubmitted quizzes disable D2L email so be sure you leave no quizzes “in progress.” Correct spelling, proper punctuation, and a courteous, professional tone must be used in all electronic communications. Students who lose the ability to communicate through D2L due to technical problems with internet access or computers, must inform the instructor by leaving a phone message with Continuing & Distance Education (605/677-6240 or 800/233-7937) that describes the problem and estimates when course activity will resume. Students are also reminded that course work may be done on any computer with internet access, so if your computer crashes find an alternative while it’s repaired or replaced. If students experience extended problems, more than three days, with a home internet connection or personal computer they are required to find alternatives and keep up with the course schedule.

**Required Information For Courses Meeting Graduation Requirements:** This class, in conjunction with the laboratory, fulfills the following Goal of the South Dakota System of General Education Requirements: Goal #6: Students will understand the fundamental principles of the natural sciences and apply scientific methods of inquiry to investigate the natural world.

As a result of taking courses meeting this goal, students will:

1. Demonstrate the scientific method in Earth Science in a laboratory experience.
   **Assessment:** Identify a variety of common minerals and rocks and identify and interpret basic geological features using topographic maps and aerial photographs through completion of laboratory assignments, quizzes, and exams.

2. Gather and critically evaluate data using the scientific method.
   **Assessment:** Positively identify common minerals and rocks though observation of physical properties such as crystal structure, hardness, color, streak, cleavage, specific gravity, texture, and chemical composition on laboratory tests.
3. Identify and explain the basic concepts, terminology and theories of the selected natural sciences.
   Assessment: Demonstrate an understanding of basic geological processes and concepts on exams and quizzes.

4. Apply selected natural science concepts and theories to contemporary issues.
   Assessments:
   a. Demonstrate an understanding of basic geological hazards, such as earthquakes, volcanic eruptions, mass wasting, coastal hazards, and river flooding on exams, labs, and quizzes.
   b. Demonstrate an understanding of how human activity has affected the environment, such as surface and groundwater contamination, acid rain, global warming, waste disposal, and urbanization on exams, labs, and quizzes.
   c. Demonstrate an understanding of earth resources (fuels, minerals, metals, etc.), their origin, extraction, and conservation on exams, labs, and quizzes.

Course Syllabus, Schedule, and Policy Changes: May occur at the instructor's discretion and students will be notified.