Course Overview:
The Earth, and the organisms that live on it, are a very complex and dynamic system that has dramatically changed and evolved over time. Geology 221, The Earth Through Time, is designed to provide students with an understanding of the geologic and biological history of the Earth.

The course is broken into two parts. The first part of the course describes basic geologic principles and processes, including the nature of rocks and minerals, sediments and sedimentary environments, tectonics and mountain building, and principles of evolution. The purpose of this material is to equip students with an understanding of how geologists investigate the Earth and how we infer from observation and measurement information about the history of the Earth and the organisms that have inhabited it over time.

The second part of the course is devoted to a step-by-step review of the history of the Earth from its formation about 4.6 billion years ago, up to the present. At each stage of the history of the Earth, we will review the major geological events occurring, the nature of the environment(s) present, and, of course, the fossil record of the plants and animals that existed during that period. This section of the course will provide students with a broad knowledge of the history of the Earth over all of geologic time.

Important note: Those of you that are taking Geology 221 to satisfy a laboratory science requirement for your degree MUST also take the lab associated with this course. The class number for the lab is Geol 224.
Schedule:

Geol 221 is a 3 credit hour/3 contact hour course. Lectures will be held in Parkinson 202, Monday, Wednesday and Friday at 11:00 – 11:50 am.

Key Dates to be aware of:

First in-class quiz
Second in-class quiz
Spring break
Third in-class quiz
Fourth in-class quiz
Term papers due
Final Exam

February 5th
March 2nd
March 14-18th
April 4th
April 20th
April 27th (Wednesday)
To be announced

Text:

The text for this course is *Earth System History*, Fourth Edition, by Steven M. Stanley and John Luczaj. You **will** need this text.

*Note, this is a new edition. Do not purchase an older second or Third editions as a considerable amount of material has changed.*

Hard copies can be purchased from the bookstore, or from a variety of vendors online.

Grading:

Assessment for the course will be based on a combination of grades from quizzes taken during the semester, a short term paper, homework assignments, attendance and, of course, the final exam. The weighting of each of these components will be as follows:

- Five quizzes 50%
  - Score for lowest quiz drops
- Final Exam 20%
- Term Paper 20%
- Homework Assignments 10%
- Attendance* 5%

You will notice that the total number of points available in this class adds up to 105%. This is not a mistake: 5% of "extra credit" is built into the course structure for you to take advantage of.
* Attendance.

It should not need to be stated that attendance in class is required. Attendance will be recorded and is an element of your final grade in the class. You may accrue up to three unexcused absences during the semester without penalty. Thereafter, one point will be deducted from your course aggregate score for each unexcused absence, up to a maximum of 5 points deducted.

Your letter grade for the semester will be based on your weighted aggregate score for all of the components listed above. The actual grade assigned will be based on the following scale:

<table>
<thead>
<tr>
<th>Grade Scale</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>90+</td>
<td>A</td>
</tr>
<tr>
<td>80-89.99</td>
<td>B</td>
</tr>
<tr>
<td>70-79.99</td>
<td>C</td>
</tr>
<tr>
<td>60-69.99</td>
<td>D</td>
</tr>
<tr>
<td>&lt;60</td>
<td>F</td>
</tr>
</tbody>
</table>

Field Trip:

This year we will be offering an optional field trip, probably on Saturday March 26th, to look at some local geology that illustrates some of the topics we will discuss in class, and collect fossils of marine organisms from rocks that were deposited more than 325 million years ago, when this area was a warm shallow sea.
University Honors Program

Students participating in the University Honors program and who wish to take this course to receive credit for that program, should register for Geology 221H. In addition to all regular course work, Honors students must complete a unique research project, the nature of which will be mutually agreed to by the student and the instructor. The project requirements will be tailored to (i) demonstrate advanced comprehension of some aspect of the material outlined in the course syllabus and (ii) align with the student's individual interests and aspirations. Examples of previous honors projects include written assignments dealing with some aspect of Earth History or the development of our understanding of it; preparation of materials for use with middle school Earth Science students (for a Science Ed major); preparation of poster materials detailing the nature and significance of fossils for display as teaching/outreach and others. Students taking 221H must also participate in the Field Trip described above (for non-Honors students that field trip is optional).

Syllabus and Calendar:

The following is an outline of the material we will cover during the semester. Please note:

1. This syllabus is approximate and may change as the semester progresses.
2. The sections listed below are not necessarily equal in size. Some may be covered in a single lecture; others may be covered over the course of several lectures.
   3. Chapter references refer to "Earth System History" by Steven M. Stanley and John A. Luczaj, 4th Ed.
3. In the first part of the class we will be covering material in a different order than it is covered in the text.
4. Quizzes will be held approximately every three weeks, but will follow natural breaks in the material being presented. The schedule for the quizzes is given on the course calendar and will also be discussed in class.
### Course Outline

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Week</th>
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</thead>
<tbody>
<tr>
<td>Course Introduction &amp; expectations</td>
<td></td>
</tr>
<tr>
<td>Guiding principles &amp; Intro to Rocks</td>
<td>1</td>
</tr>
<tr>
<td>Intro to Minerals</td>
<td>2</td>
</tr>
<tr>
<td>Sedimentary Rocks</td>
<td>1,5</td>
</tr>
<tr>
<td>Sedimentary environments</td>
<td>5</td>
</tr>
<tr>
<td>Tectonics and Mountain building</td>
<td>8-9</td>
</tr>
<tr>
<td><strong>Quiz</strong></td>
<td></td>
</tr>
<tr>
<td>Diversity of life</td>
<td>3</td>
</tr>
<tr>
<td>Environments and Life</td>
<td>4</td>
</tr>
<tr>
<td>Evolution</td>
<td>7</td>
</tr>
<tr>
<td>Stratigraphy and geologic time</td>
<td>6</td>
</tr>
<tr>
<td>Global chemical cycles</td>
<td>10</td>
</tr>
<tr>
<td><strong>Quiz</strong></td>
<td></td>
</tr>
<tr>
<td>Hadean and Achaean geology</td>
<td>11</td>
</tr>
</tbody>
</table>

#### Spring Break

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Achean Life</td>
<td>11</td>
</tr>
<tr>
<td>The Proterozoic</td>
<td>12</td>
</tr>
<tr>
<td>Early Paleozoic</td>
<td>13</td>
</tr>
</tbody>
</table>

**Optional field trip March 26th**

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Middle Paleozoic</td>
<td>14</td>
</tr>
<tr>
<td>Late Paleozoic</td>
<td>15</td>
</tr>
<tr>
<td><strong>Quiz</strong></td>
<td></td>
</tr>
<tr>
<td>Build up and breakup of Pangea</td>
<td>13-16</td>
</tr>
<tr>
<td>Early Mesozoic</td>
<td>16</td>
</tr>
<tr>
<td>Cretaceous</td>
<td>17</td>
</tr>
<tr>
<td><strong>Quiz</strong></td>
<td></td>
</tr>
<tr>
<td>Paleogene</td>
<td>18</td>
</tr>
<tr>
<td>Neogene</td>
<td>19</td>
</tr>
</tbody>
</table>

**Term Papers are Due April 27th**

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holocene</td>
<td>20</td>
</tr>
<tr>
<td>Course review</td>
<td>1-20</td>
</tr>
</tbody>
</table>

- As we work through each section, a short homework assignment will be posted on D2L. Due dates for these will be posted with the assignments and will be announced in class.

- A preparatory assignment for our discussion of Evolution will also be given. This must be completed before our discussions take place (obviously), and must be turned in for class on Feb 20th.
IMPORTANT DATES *

Semester Class Begins ......................................................... 01/19/2016
Last day to add a class (without instructor permission) ............... 01/24/2016
Last day to withdraw completely and receive a 100% refund .......... 01/31/2016
Last day to drop a course using SalukiNet ............................ 02/03/2016
Last day to file diploma application (for name to appear in Commencement program) ............................................. 02/12/2016
Final exams ........................................................................ 05/09–05/13/2016

Note: For outreach, intern, and short course drop add dates, visit Registrar’s Academic webpage: http://registrar.siu.edu/

SPRING SEMESTER HOLIDAYS
Martin Luther King, Jr’s Birthday Holiday 01/18/2016
Spring Break 03/12–03/20/2016

WITHDRAWAL POLICY ~ Undergraduate only

Students who officially register for a session may not withdraw merely by the stopping of attendance. An official withdrawal form needs to be initiated by the student and processed by the University. For the proper procedures to follow when dropping courses and when withdrawing from the University, please visit http://registrar.siu.edu/catalog/undergraduatecatalog.html

INCOMPLETE POLICY ~ Undergraduate only

An INC is assigned when, for reasons beyond their control, students engaged in passing work are unable to complete all class assignments. An INC must be changed to a completed grade within one semester following the term in which the course was taken, or graduation, whichever occurs first. Should the student fail to complete the course within the time period designated, that is, by no later than the end of the semester following the term in which the course was taken, or graduation, whichever occurs first, the incomplete will be converted to a grade of F and the grade will be computed in the student’s grade point average. For more information please visit: http://registrar.siu.edu/grades/incomplete.html

REPEAT POLICY

An undergraduate student may, for the purpose of raising a grade, enroll in a course for credit no more than two times (two total enrollments) unless otherwise noted in the course description. For students receiving a letter grade of A, B, C, D, or F, the course repetition must occur at Southern Illinois University Carbondale. Only the most recent (last) grade will be calculated in the overall GPA and count toward hours earned. See full policy at http://registrar.siu.edu/catalog/undergraduatecatalog.html

GRADUATE POLICIES

Graduate policies often vary from Undergraduate policies. To view the applicable policies for graduate students, please visit http://gradschool.siu.edu/about-us/grad-catalog/index.html

DISABILITY POLICY

Disability Support Services provides the required academic and programmatic support services to students with permanent and temporary disabilities. DSS provides centralized coordination and referral services. To utilize DSS services, students must come to the DSS to open cases. The process involves interviews, reviews of student-supplied documentation, and completion of Disability Accommodation Agreements. http://disabilityservices.siu.edu/

PLAGIARISM

Student Conduct Code: http://srp.siu.edu/student_conduct_code/

MORRIS LIBRARY HOURS
http://www.library.siu.edu/about

SAFETY AWARENESS FACTS AND EDUCATION

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here: http://safe.siu.edu

SALUKI CARES

The purpose of Saluki Cares is to develop, facilitate and coordinate a university-wide program of care and support for students in any type of distress—physical, emotional, financial, or personal. By working closely with faculty, staff, students and their families, SIU will continue to display a culture of care and demonstrate to our students and their families that they are an important part of the community. For more information on Saluki Cares: (618) 453-5714, or siucares@siu.edu, http://salukicares.siu.edu/index.html

EMERGENCY PROCEDURES

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. We ask that you become familiar with the SIU Emergency Response Plan and Building Emergency Response Team (BERT) programs. Emergency response information is available on posters in buildings on campus, available on BERT’s website at www.bert.siu.edu. Department of Safety’s website at www.dps.siu.edu (disaster drop down) and the Emergency Response Guideline pamphlet. Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency.

INCLUSIVE EXCELLENCE

SIU contains people from all walks of life; from many different cultures and subcultures, and representing all strata of society, nationalities, ethnicities, lifestyles, and affiliations. Learning from and working with people who differ is an important part of education as well as an essential preparation for any career. For more information please visit: http://www.inclusiveexcellence.siu.edu/

LEARNING AND SUPPORT SERVICES

Help is within reach. Learning support services offers free tutoring on campus and math labs. To find more information please visit the Center for Learning and Support Services website:

Tutoring: http://tutorial.siu.edu/
Math Labs: http://math.siu.edu/courses/course-help.php

WRITING CENTER

The Writing Center offers free tutoring services to all SIU students and faculty. To find a Center or Schedule an appointment please visit: http://write.siu.edu/

AFFIRMATIVE ACTION & EQUAL OPPORTUNITY

Our office's main focus is to ensure that the university complies with federal and state equity policies and handles reporting and investigating of discrimination cases. For more information visit: http://diversity.siu.edu/

Additional Resources Available:

SALUKINET: https://salukinet.siu.edu/ep/home/displaylogin
ADVICEMENT: http://advisement.siu.edu/
PROVOST & VICE CHANCELLOR: http://pvcaa.siu.edu/
SIU ONLINE: http://online.siu.edu/

Spring 2016 R O’Rourke