Paleontology and Earth History
Four semester hours.
An examination of the geologic history of the Earth focusing on the fossil and rock record. Specifically, this course will consider the development and history of life as documented by the fossil record and earth's history from a stratigraphic perspective. Includes three hours of laboratory per week.
Prerequisite: BIOL 1413, GEOL 1303/1103 or EPSC 1370/1170. Lab fee: $30.00.

Course:
(check all that apply)
Add: ___X_
New course will be part of major BIOL ___ as a required ___
or elective ___X__ course New course will introduce ___X___, reinforce ___, or apply ___ concepts
Justification: This course has now been taught as a special topics course three times with students in biology. No existing course work at TAMIU goes into the detail on the history of life that this course does, and this course will compliment other advanced courses in biology. This course will be cross-listed with GEOL 3425.

If new, provide Course Prefix, Number, Title, Measurable Student Learning Outcomes, SCH Value, Description, prerequisite, and lecture/lab hours if applicable. If in current online catalog, provide change and attach text with changes in red and provide a brief justification.

Program: Add: _____ Change: _____ Attach new/changed Program of Study
description and 4-year plan. If in current catalog, copy and paste the text from the and indicate changes in red.

If in current catalog, copy and paste the text from the and indicate changes in red.

Faculty: Add: _____ Delete: _____ Change: _____ Attach new/changed faculty entry.
If in current catalog, copy and paste the text from the and indicate changes in red.

College Introductory Pages: Add information: ______ Change information: ______
Attach new/changed information. If in current catalog, copy and paste the text from the and indicate changes in red.

**Approvals:**

**Chair**
Department Curriculum Committee

**Chair**
Department

**Chair**
College Curriculum Committee

**Dean**

<table>
<thead>
<tr>
<th>Signature</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tom Vaughan</td>
<td></td>
</tr>
<tr>
<td>Dan Mott</td>
<td></td>
</tr>
<tr>
<td>James A Norris</td>
<td></td>
</tr>
<tr>
<td>Kevin Lindberg</td>
<td></td>
</tr>
</tbody>
</table>
Description:

An examination of the geologic history of the Earth focusing on the fossil and rock record. Specifically, this course and lab will consider the development and history of life as documented by the fossil record and the composition and origin of rocks from a stratigraphic perspective.

Learning Objectives:

Students will be able to define and discuss fundamental historical geology principles.
Students will be able to identify and discuss the characteristics of index fossils throughout the Earth's history.
Students will be able to integrate an understanding of how environmental conditions control the development of organisms.
Students will be able to describe and distinguish the major Eons and Epochs comprising Geologic Time.

Textbook:

Historical Geology (6th ed), Wicander and Monroe (2010)

Instruction:

Laboratory exercises, Internet assignments, lecture, class interactions, quizzes and exams.

Policies of the College of Arts and Sciences

Classroom Behavior
The College of Arts and Sciences encourages classroom discussion and academic debate as an essential intellectual activity. It is essential that students learn to express and defend their beliefs, but it is also essential that they learn to listen and respond respectfully to others whose beliefs they may not share. The College will always tolerate diverse, unorthodox, and unpopular points of view, but it will not tolerate condescending or insulting remarks. When students verbally abuse or ridicule and intimidate others whose
views they do not agree with, they subvert the free exchange of ideas that should characterize a university classroom. If their actions are deemed by the professor to be disruptive, they will be subject to appropriate disciplinary action, which may include being involuntarily withdrawn from the class.

Plagiarism and Cheating
Plagiarism is the presentation of someone else’s work as your own. 1) When you borrow someone else’s facts, ideas, or opinions and put them entirely in your own words, you must acknowledge that these thoughts are not your own by immediately citing the source in your paper. Failure to do this is plagiarism. 2) When you also borrow someone else’s words (short phrases, clauses, or sentences), you must enclose the copied words in quotation marks as well as citing the source. Failure to do this is plagiarism. 3) When you present someone else’s paper or exam (stolen, borrowed, or bought) as your own, you have committed a clearly intentional form of intellectual theft and have put your academic future in jeopardy. This is the worst form of plagiarism.

Here is another explanation from the 2010, sixth edition of the Manual of The American Psychological Association (APA):

Plagiarism: Researchers do not claim the words and ideas of another as their own; they give credit where credit is due. Quotations marks should be used to indicate the exact words of another. Each time you paraphrase another author (i.e., summarize a passage or rearrange the order of a sentence and change some of the words), you need to credit the source in the text.

The key element of this principle is that authors do not present the work of another as if it were their own words. This can extend to ideas as well as written words. If authors model a study after one done by someone else, the originating author should be given credit. If the rationale for a study was suggested in the Discussion section of someone else's article, the person should be given credit. Given the free exchange of ideas, which is very important for the health of intellectual discourse, authors may not know where an idea for a study originated. If authors do know, however, they should acknowledge the source; this includes personal communications. (pp. 15-16)

Consult the Writing Center or a recommended guide to documentation and research such as the Manual of the APA or the MLA Handbook for Writers of Research Papers for guidance on proper documentation. If you still have doubts concerning proper documentation, seek advice from your instructor prior to submitting a final draft.

Penalties for Plagiarism: Should a faculty member discover that a student has committed plagiarism, the student will receive a grade of 'F' in that course and the matter will be referred to the Honor Council for possible disciplinary action. The faculty member, however, has the right to give freshmen and sophomore students a “zero” for the assignment and to allow them to revise the assignment up to a grade of “F” (50%) if they believe that the student plagiarized out of ignorance or carelessness and not out of an
attempt to deceive in order to earn an unmerited grade. This option is not available to juniors, seniors, or graduate students, who cannot reasonably claim ignorance of documentation rules as an excuse.

**Penalties for Cheating:** Should a faculty member discover a student cheating on an exam or quiz or other class project, the student will receive a “zero” for the assignment and not be allowed to make the assignment up. The incident must be reported to the chair of the department and to the Honor Council. If the cheating is extensive, however, or if the assignment constitutes a major grade for the course (e.g., a final exam), or if the student has cheated in the past, the student should receive an “F” in the course, and the matter should be referred to the Honor Council. Under no circumstances should a student who deserves an “F” in the course be allowed to withdraw from the course with a “W.”

A new grade to denote academic dishonesty is now available, a “M” for “Academic Misconduct.” It has the same effect as an “F” but will indicate on the transcript that the failure was due to academic misconduct.

**Student Right of Appeal:** Faculty will notify students immediately via the student’s TAMIU e-mail account that they have submitted plagiarized work. Students have the right to appeal a faculty member’s charge of academic dishonesty by notifying the TAMIU Honor Council of their intent to appeal as long as the notification of appeal comes within 3 business days of the faculty member’s e-mail message to the student. The Student Handbook provides details.

**UConnect, TAMIU E-Mail, and Dusty Alert**
*Personal Announcements sent to students through TAMIU’s UConnect Portal and TAMIU E-mail are the official means of communicating course and university business with students and faculty – not the U.S. Mail and not other e-mail addresses. Students and faculty must check UConnect and their TAMIU e-mail accounts regularly, if not daily. Not having seen an important TAMIU e-mail or UConnect message from a faculty member, chair, or dean is not accepted as an excuse for failure to take important action. Students, faculty, and staff are encouraged to sign-up for Dusty Alert (see www.tamiu.edu). Dusty Alert is an instant cell phone text-messaging system allowing the university to communicate immediately with you if there is an on-campus emergency, something of immediate danger to you, or a campus closing.*

**Copyright Restrictions**
The Copyright Act of 1976 grants to copyright owners the exclusive right to reproduce their works and distribute copies of their work. Works that receive copyright protection include published works such as a textbook. Copying a textbook without permission from the owner of the copyright may constitute copyright infringement. Civil and criminal penalties may be assessed for copyright infringement. Civil penalties include damages up to $100,000; criminal penalties include a fine up to $250,000 and imprisonment.

**Students with Disabilities**
Texas A&M International University seeks to provide reasonable accommodations for all qualified persons with disabilities. This University will adhere to all applicable federal, state, and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal education opportunity. It is the student's responsibility to register with the Director of Student Counseling and to contact the faculty member in a timely fashion to arrange for suitable accommodations.

Incompletes
Students who are unable to complete a course should withdraw from the course before the final date for withdrawal and receive a “W.” To qualify for an “incomplete” and thus have the opportunity to complete the course at a later date, a student must meet the following criteria:

1. The student must have completed 90% of the course work assigned before the final date for withdrawing from a course with a “W”, and the student must be passing the course;
2. The student cannot complete the course because an accident, an illness, or a traumatic personal or family event occurred after the final date for withdrawal from a course;
3. The student must sign an “Incomplete Grade Contract” and secure signatures of approval from the professor and the college dean.
4. The student must agree to complete the missing course work before the end of the next long semester; failure to meet this deadline will cause the “I” to automatically be converted to a “F”; extensions to this deadline may be granted by the dean of the college.

This is the general policy regarding the circumstances under which an “incomplete” may be granted, but each college may have variations of this policy to address special circumstances in specific programs.

Independent Study Course
Independent Study (IS) courses are offered only under exceptional circumstances. Required courses intended to build academic skills may not be taken as IS (e.g., clinical supervision and internships). No student will take more than one IS course per semester. Moreover, IS courses are limited to seniors and graduate students. Summer IS course must continue through both summer sessions.

Grade Changes & Appeals
Faculty are authorized to change final grades only when they have committed a computational error, and they must receive the approval of their department chairs and the dean to change the grade. As part of that approval, they must attach a detailed explanation of the reason for the mistake. Only in rare cases would another reason be entertained as legitimate for a grade change. A student who is unhappy with his or her grade on an assignment must discuss the situation with the faculty member teaching the course. If students believe that they have been graded unfairly, they have the right to appeal the grade using a grade appeal process in the Student Handbook and the Faculty Handbook.

Final Examination
Final Examination must be comprehensive and must contain a written component. The written component should comprise 20% of the final exam grade. Exceptions to this policy must receive the approval of the department chair and the dean at the beginning of the semester.
*Schedule: *Friday, April 11th is the last day to drop a class or withdraw from the University

**Schedule - Lecture Topics**

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Chapter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tues Jan 19</td>
<td>Course Introduction - Syllabus</td>
<td></td>
</tr>
<tr>
<td>Thur Jan 21</td>
<td>“Deep” Time - Relative and Absolute</td>
<td>Chapter 4</td>
</tr>
<tr>
<td>Tues Jan 26</td>
<td>Pre-Hadean - Formation of the Solar System</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>Thur Jan 28</td>
<td>Hadean Eon - the Earth - Moon System</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>Tues Feb 2</td>
<td>Sedimentary Rocks and Environments</td>
<td>Chapter 5</td>
</tr>
<tr>
<td>Thur Feb 4</td>
<td>Physical History of the Archean Eon</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>Tues Feb 9</td>
<td>Archean Life - The First Organisms</td>
<td>Chapter 8</td>
</tr>
<tr>
<td>Thur Feb 11</td>
<td>Fossils and Fossilization</td>
<td></td>
</tr>
<tr>
<td>Tues Feb 16</td>
<td><strong>ILECTURE EXAM ONE</strong>*</td>
<td></td>
</tr>
<tr>
<td>Thur Feb 18</td>
<td><em>Proterozoic Life</em></td>
<td>Chapter 9</td>
</tr>
<tr>
<td>Tues Feb 23</td>
<td>Physical History of the Proterozoic Eon</td>
<td>Chapter 9</td>
</tr>
<tr>
<td>Thur Feb 25</td>
<td>The Cambrian Explosion of Life</td>
<td>Chapter 12</td>
</tr>
<tr>
<td>Tues Mar 2</td>
<td>Paleozoic Invertebrates</td>
<td>Chapter 12</td>
</tr>
<tr>
<td>Thur Mar 4</td>
<td>Physical History of the Early Paleozoic</td>
<td>Chapter 10</td>
</tr>
<tr>
<td>Tues Mar 9</td>
<td>Physical History of the Late Paleozoic</td>
<td>Chapter 11</td>
</tr>
<tr>
<td>Thur Mar 11</td>
<td><strong>LECTURE EXAM TWO</strong>*</td>
<td></td>
</tr>
<tr>
<td>Tues Mar 16</td>
<td><strong>SPRING BREAK</strong></td>
<td></td>
</tr>
<tr>
<td>Thur Mar 18</td>
<td><strong>SPRING BREAK</strong></td>
<td></td>
</tr>
<tr>
<td>Tues Mar 23</td>
<td>Origin and Evolution of Plants</td>
<td>parts of Chps. 13, 14, 18</td>
</tr>
<tr>
<td>Thur Mar 25</td>
<td>Paleozoic Vertebrates</td>
<td>Chapter 13</td>
</tr>
<tr>
<td>Tues Mar 30</td>
<td>The Physical History of the Mesozoic</td>
<td>Chapter 14</td>
</tr>
<tr>
<td>Thur Apr 1</td>
<td>Marine Life in the Mesozoic</td>
<td>Chapter 15</td>
</tr>
<tr>
<td>Tues Apr 6</td>
<td>Terrestrial Life in the Mesozoic</td>
<td>Chapter 15</td>
</tr>
<tr>
<td>Thur Apr 8</td>
<td><strong>LECTURE EXAM THREE</strong>*</td>
<td></td>
</tr>
<tr>
<td>Tues Apr 13</td>
<td>Physical History of the Cenozoic</td>
<td>Chapter 16</td>
</tr>
<tr>
<td>Thur Apr 15</td>
<td>Life in the Cenozoic</td>
<td>Chapter 18</td>
</tr>
<tr>
<td>Tues Apr 20</td>
<td>The Pleistocene Ice Ages</td>
<td>Chapter 17</td>
</tr>
<tr>
<td>Thur Apr 22</td>
<td>Pleistocene Megafauna</td>
<td>Chapter 18</td>
</tr>
</tbody>
</table>
Tues Apr 27  Primate and Human Evolution   Chapter 19
Thur Apr 30  The Holocene and Mass Extinctions  TBA

Tues May 3   Preparation for Lab Project
Thur May 5  Final Review

Tues May 12  LECTURE FINAL  @ 5:00 pm

Schedule - Lab Topics
Fri Jan 22  Lab Introduction
Fri Jan 29  Geologic Time
Fri Feb 5  A Review of Minerals/Rocks
Fri Feb 12  Fossil Preservation
Fri Feb 19  The Earliest Fossils - Planetarium
Fri Feb 26  The Cambrian Explosion
Fri Mar 5  Paleozoic Marine Fossils
Fri Mar 12  Paleoeoclogy
Fri Mar 19  *SPRING BREAK*
Fri Mar 26  Paleogeography and Tectonic Cycles
Fri Apr 2  Paleoclimatology
Fri Apr 9  Mesozoic Marine Life
Fri Apr 16  Cenozoic Marine Life
Fri Apr 23  Preparation for Lab Project
Fri Apr 30  Final Lab Project

Evaluation:
4 Lecture tests, double the highest (15% each)  75%
Graded Lab Assignments  20 %
Final Lab Project  5 %
TOTAL  100 %