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|------------------------------------------------------------------------------------------------------|-----------------------------|-----------------------|--------|----------|--|
| enrollment be enforced? | | | | | |
| Crosslistings | No | Crosslisted With | | | |
| Stacked | No | Stacked with | | | |
| Semester 3 Credit Hour(s) | Contact Hour(s) (per week): | Lecture: 2 Total 4 | Lab: 2 | Other: 0 | |
| Repeatable for credit? | No | | | | |
| Three-peat? | No | | | | |
| CIP/Fund Code | 4006040002 | | | | |
| Default Grade Mode | Letter Grade (G) | | | | |
| Alternate Grade Modes | Satisfactory/Unsatisfactory | | | | |
| Method of instruction | Lecture and Laboratory | | | | |
| Will this course be taught at another branch? | No | | | | |
| Will sections of this course be taught as non-traditional? (i.e., parts of term, distance education) | No | | | | |
| Will this course be taught as a distance education course? | No | | | | |
| Is 100% of this course going to be taught in Texas? | Yes | | | | |
| Will classroom space be needed for this course? | Yes | | | | |

(rrussell):
 Approved for GE Committee
 Preparer UG
 6. 03/07/19 5:10 pm
 Christian Brannstrom
 (cbrannst):
 Approved for GE Committee Chair
 UG
 7. 03/07/19 5:14 pm
 Christian Brannstrom
 (cbrannst):
 Approved for GE College Dean UG
 8. 03/08/19 3:34 pm
 Sandra Williams
 (sandra-williams):
 Approved for UCC Preparer
 9. 04/08/19 1:51 pm
 Sandra Williams
 (sandra-williams):
 Approved for UCC Chair

This will be a required course or an elective course for the following programs:

Required (select program)

Elective (select program)

| Program(s) |
|------------------------------------------|
| (BA-GEOL) Geology - BA |
| (BS-ENGS) Environmental Geosciences - BS |
| (BS-ENST) Environmental Studies - BS |

Has/will this course be(en) submitted for core curriculum consideration?

Yes

Proposed Core Foundational Component Area

Core Life/Physical Sci (KLPS)

Approved Foundational Component Area

Has/will this course be(en) submitted for Writing or Communication consideration?

No

Has/will this course be(en) submitted for ICD or CD consideration?

No

Course Syllabus

Syllabus: Upload syllabus

Upload syllabus [GEOL_208_Life_Dynamic_Planet_April2019mod.docx](#)

Letters of support or other documentation

No

Additional information

Reviewer Comments **Terra Bissett (t.bissett) (03/01/19 4:38 pm):** Rollback: Please answer question on form if course will be a required or elective course.

Terra Bissett (t.bissett) (03/04/19 8:34 am): Update received.

Bob Knight (bob-knight) (03/27/19 9:51 am): Several of the learning outcomes are not measurable.

Sandra Williams (sandra-williams) (04/03/19 4:59 pm): Concerns addressed.

Sandra Williams (sandra-williams) (04/08/19 1:51 pm): UCC approved April 2019.

Reported to state?

Add

CS

Key: 19049



| | |
|----------------------------|-----------------------------------|
| Course title and number | GEOL 208 Life on a Dynamic Planet |
| Term | Fall XXXX |
| Meeting times and location | Lecture: M W TBD Lab: TBD |

Course Description and Prerequisites

Description: Critical events in the Earth's 4.6 billion-year history that shaped life as we know it, and the tools to investigate them; interactions between global environments, the evolution of life and the geologically recent development of human societies.

Credits: 2-1; Prerequisites: None

Learning Outcomes

Upon successful completion of this course students will be able to:

- Pose scientific hypotheses about the Earth system
- Critically evaluate scientific evidence to support and refute hypotheses
- Use data from the sedimentary record to reconstruct events in Earth's History
- Explain the interactions between life and the Earth system through time
- Apply knowledge gained from past ecosystem changes to pose hypotheses regarding future ecosystem change

Instructor

| | |
|------------------|-----------------------------|
| Name | Dr. Christina Belanger |
| Telephone number | 458-4372 |
| Email address | Christina.Belanger@tamu.edu |
| Office hours | TBD |
| Office location | Halbouty 265 |

Resource Material

Weekly readings from peer reviewed journals and popular science literature. No textbook.

Grading Policies

The final course grade will be based upon:

| | |
|------------------------|-----|
| Thought Experiments | 12% |
| Laboratory Assignments | 28% |
| Take Home Midterm #1 | 15% |
| Take Home Midterm #2 | 15% |
| Final Exam | 30% |

Students are expected to attend all classes with exceptions provided by the University's policy for excused absences. For more information, visit <http://student-rules.tamu.edu>.

Grading Scale

Standard Letter Grading Scale: A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = <60

Course Calendar

| Topic | Required Reading & Activity / Lab Topics |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Week 1: Historical Hypotheses | Monday: Introduction; Geologic Time Wednesday: Cleland, 2001 Lab 1: Clocks in Rocks |
| Week 2: Life Against All Odds | Monday: Arndt and Nisbet, 2012 Wednesday: Thought Experiment #1 Lab 2: Testing Historical Hypotheses |
| Week 3: Snowball Earth | Monday: Hoffman and Schrag, 2000 (SA) Wednesday: Thought Experiment #2 Lab 3: Climate Controls |
| Week 4: Explosion of Diversity | Monday: Marshall, 2006 Wednesday: Thought Experiment #3 Lab 4: Ways of Being an Animal |
| Week 5: Take Home Exam 1 Due on eCampus Friday 5 pm | Monday: Complete Part 1 Exam, Collaborative Wednesday: Complete Part 2 Exam, Collaborative Lab 5: The Three Evolutionary Faunas |
| Week 6: The Rise and Fall of Seas | Monday: Sheehan, 2001 Wednesday: Thought Experiment #4 Lab 6: Sedimentary Rocks |
| Week 7: Riding the Continents | Monday: Zaffos et al., 2017; Dalziel 2005 (SA) Wednesday: Thought Experiment #5 Lab 7: Plate Tectonics |
| Week 8: CO ₂ , Heat, and Acid | Monday: Benton and Twitchet, 2003 Wednesday: Thought Experiment #6 Lab 8: Analyzing Extinctions |
| Week 9: Extraterrestrial Impacts | Monday: Schulte et al., 2010; Betz 2017 (DM) Wednesday: Thought Experiment #7 Lab 9: Stratigraphic Records |
| Week 10: Opportunity from Extinction | Monday: Brusatte and Lou, 2016 (SA); Brusatte 2016 Wednesday: Thought Experiment #9 Lab 10: Analyzing Radiations |
| Week 11: Take Home Exam 2 Due on eCampus Friday 5 pm | Monday: Complete Part 1 Exam, Collaborative Wednesday: Complete Part 2 Exam, Collaborative Lab 11: Environmental Reconstruction |
| Week 12: Megafaunal Engineers | Monday: Bakker et al., 2016; Switek 2017 (SA) Wednesday: Thought Experiment #10 Lab 12: Pollen Records of Change |
| Week 13: Holocene Stability (or Not) | Monday: Mayewski et al., 2004; Douglas et al., 2016 Wednesday: Thought Experiment #11 Lab 13: Holocene Climate Records |
| Week 14: The Anthropocene and Beyond | Monday: Kidwell, 2015, Barnosky et al., 2017 Wednesday: Thought Experiment #12 Lab 14: Conservation Paleobiology |

Assignments

Thought Experiments are short prompts requiring an approximately 1 paragraph response to be turned in via eCampus **before the start of classes on Wednesdays**. Students are expected to discuss their thoughts with classmates at the start of class before a whole group discussion on the topic. Typically, these will ask students to evaluate how an event affected life or how the evolution of new organisms affected earth environments. Students may miss no more than ONE Thought Experiment assignment without penalty, except as allowed in accordance with <http://student-rules.tamu.edu/rule07>.

Lab Assignments are guided learning projects that will begin during the lab period but often can be completed outside of the lab period if needed. Labs assigned in one week are due at the beginning of the next week's lab period.

Late Policy and Attendance

Attendance is mandatory with allowances for excused absences with proper documentation in accordance with <http://student-rules.tamu.edu/rule07>. Reading Assignments, Thought Experiments, and Laboratory Assignments will not be accepted late, except as in accordance with rule 07.

Americans with Disabilities Act (ADA)

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring an accommodation, please contact Disability Services, currently located in the Disability Services building at the Student Services at White Creek complex on west campus or call 979-845-1637. For additional information, visit <http://disability.tamu.edu>.

Academic Integrity

For additional information please visit: <http://aggiehonor.tamu.edu>

"An Aggie does not lie, cheat, or steal, or tolerate those who do."