Course Change Request

New Course Proposal

Date Submitted: 02/24/26 2:49 pm

Viewing: GEOL 538 : Paleoceanography Seminar

Last edit: 03/09/26 12:42 pm

Changes proposed by: bklinger

Are you completing this form on someone else's behalf?

In Workflow

1. **AOES -Curriculum Committee**
2. **AOES Chair**
3. **SC Curriculum Committee**
4. SC Assistant Dean
5. Assoc Provost-Graduate
6. Registrar-Courses
7. Banner

Approval Path

1. 02/24/26 3:05 pm Barry Klinger (bklinger): Approved for AOES -Curriculum Committee
2. 02/24/26 3:34 pm Mark Uhen (muhen): Rollback to AOES -Curriculum Committee for AOES Chair
3. 03/05/26 2:03 pm Barry Klinger (bklinger): Approved for AOES -Curriculum Committee
4. 03/05/26 2:47 pm Mark Uhen (muhen): Approved for AOES Chair

No

Effective Term: Fall 2026

Subject Code: GEOL - Geology

Course Number: 538

Bundled Courses:

Is this course replacing another course? No

Equivalent Courses:

Catalog Title: Paleoceanography Seminar

Banner Title: GEOL 538: Paleoceanography Sem

Will section titles vary by semester? No

Credits: 2

Schedule Type: Seminar

Hours of Lecture or Seminar per week: 2

Repeatable: May be repeated within degree (RD)

Max Allowable Credits:

12

Default Grade Mode: Graduate Regular

Recommended Prerequisite(s):

Undergraduate courses in Physical Geology, Historical Geology, and Oceanography.

Recommended Corequisite(s):

None.

Required Prerequisite(s) / Corequisite(s) (Updates only):

None.

Registrar's Office Use Only - Required Prerequisite(s)/Corequisite(s):

And/Or	(	Course/Test Code	Min Grade/Score	Academic Level	)	Concurrency?

Registration Restrictions (Updates only):

Registrar's Office Use Only - Registration Restrictions:

Field(s) of Study:

Class(es):

Level(s):

Degree(s):

School(s):

Catalog Description:

Paleoceanography Seminar presents topical research in the field of paleoceanography in a structured discussion among graduate students and paleoceanography faculty. A theme for the seminar is chosen each semester the course is offered, tailored to the interests of the students. Offered by the Department of Atmospheric, Oceanic, and Earth Sciences. May be repeated within the degree for a maximum 12 credits.

Justification:

What: Creating a 500 Level Graduate Course.

Why: All students within AOES graduate programs require several credits of seminar courses. The proposed course provides important learning opportunities for AOES graduate students to develop skills in critical discussion and evaluation of scientific literature, while also supporting our large student population that is conducting their thesis/dissertation research in the field of paleoceanography.

The proposed course would provide an additional course for students in the Geology and Earth Sciences PhD and the Earth Systems Science MS programs to earn seminar credit, and an additional course for Climate Dynamics PhD and Climate Science MS to earn elective credit.

Does this course cover material which crosses into another department? No

Learning Outcomes:

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

1. Critically evaluate peer-reviewed scientific literature in the field of paleoceanography including identification of key findings, motivation for the study, implications of the study results for a given subtopic in paleoceanography, and the methods employed.
2. Communicate the details and major findings of scientific literature in presentation format.
3. Engage in in-depth discussions of scientific literature.

Will this course be scheduled as a cross-level cross listed section? No

Attach Syllabus

geol538syllabus.pdf

Additional Attachments

Staffing:

Potential instructors include Dr. Brittany Hupp, Dr. Geoffrey Gilleaudeau, Dr. Linda Hinnov, Dr. Natalie Burls, Dr. Xiaojing Du

Relationship to Existing Programs:

The proposed course would provide an additional course for students in the Geology and Earth Sciences PhD and the Earth Systems Science MS programs to earn seminar credit, and an additional course for Climate Dynamics PhD and Climate Science MS to earn elective credit.

Relationship to Existing Courses:

This course is focused upon critical evaluation and discussion of published literature in the field of paleoceanography. The proposed course will provide a follow up to the lecture-based course, GEOL 565: Paleoceanography, which introduces students to key concepts in the field.

Have you reached out to the Libraries to determine whether there are adequate resources to support your course? If not, please email Meg Meiman, Associate University Librarian for Learning, Research, and Engagement at mmeiman2@gmu.edu.

No

Additional Comments:

Reviewer Comments

Mark Uhen (muhen) (02/24/26 3:34 pm): Rollback: Need graduate grading scale in the syllabus.

Key: 19084

GEOL 538: PALEOCEANOGRAPHY SEMINAR
FALL 20XX

Course Information:

Class Hours: Tuesdays, 1:30 - 3:20 pm
Class Location: Research Hall 281
Instructors: Dr. Brittany Hupp (bhupp@gmu.edu) & Dr. Geoffrey Gilleaudeau (ggilleau@gmu.edu)
Office Hours: Tuesdays, 11 am to 12 pm or by appointment, Exploratory Hall 3408/3410

Course Description

Paleoceanography Seminar presents topical research in the field of paleoceanography in a structured discussion among graduate students and paleoceanography faculty. A theme for the seminar is chosen each semester the course is offered, tailored to the interests of the students. May be repeated within the degree for a maximum 12 credits.

Class Text: None. Required weekly readings will be provided.

Prerequisites

Required: None.
Recommended: undergraduate courses in Physical Geology, Historical Geology, and Oceanography.

Student Learning Objectives

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

1. Critically evaluate peer-reviewed scientific literature in the field of paleoceanography including identification of key findings, motivation for the study, implications of the study results for a given subtopic in paleoceanography, and the methods employed.
2. Communicate the details and major findings of scientific literature in presentation format.
3. Engage in in-depth discussions of scientific literature.

Course Structure

Paleoceanography is the study of Earth's ocean throughout geological time, including (but not limited to) the reconstruction of past ocean conditions (e.g., temperature, salinity, redox), chemistry, circulation, and ecosystems, as well as how past ocean changes have impacted Earth's climate and the evolution/extinction of life. In this course we will read and critically discuss peer-reviewed literature in the field of paleoceanography centered around a specific theme, to be determined by the course community (students and faculty) on the first day of class. Examples of potential topics could include:

- Major Transitions in Ocean Circulation
- Oceanic Anoxic Events (OAEs)
- Meridional Overturning Circulation (MOC)
- Hyperthermal Events

- Sea Level
- Proxy Development
- The Paleogene Period
- The Biological Pump Through Time
- Ocean Chemistry and the Early Evolution of Life on Earth
- Mass Extinction Events in the Oceans

Assignments and Grading

The course grade is dependent on the following assignment types:

1. Paper Annotations and Discussion Questions (40%): Two scientific papers will be assigned each week related to the seminar course topic. Students will be required to highlight key information and annotate each paper prior to discussion of the paper. Annotated papers are due at the start of each class discussion. Students must also identify two questions they had from their paper reading. These questions are due at the start of class and will be used to help facilitate each discussion.

2. Discussion Participation (40%): Students will be required to actively participate in all paper discussions with active participation accounting for 40% of the total course grade.

3. Discussion Lead (10%): Each student will lead the weekly discussion twice throughout the course period (5% of your grade for each presentation/discussion lead).

4. Final Presentation (10%): Students will give a thorough presentation on one paper of their choice related to the semester topic to be presented during the final exam period.

Assignment Type	**%**
Paper Annotations & Discussion Questions	40
Discussion Participation	40
Discussion Lead	10
Final Presentation	10

Final Grade Scale

A+ = 97 – 100%	B+ = 87 – 89%	
A = 93 – 96%	B = 83 – 86%	C = 70 – 79%
A- = 90 – 92%	B- = 80 – 82%	F = 0 – 69%

Course Policies

Attendance: Attendance at all scheduled course meetings is required to earn the participation credit required to pass this course.

Expectations for time spent outside of class: Time outside of class should be used to read and annotate papers, identify discussion questions, prepare to lead discussions, and prepare the final presentation. These tasks should take ~4 hours outside of class per week.

Use of technology: Access to a working computer to access posted readings on Canvas is required. During class, please be respectful of our time together and do not engage in activities that are unrelated to class. Cell phones should be muted and used for emergencies only.

Names and Pronouns: We will gladly honor your request to address you by your preferred name or gender pronoun. Please advise us of this preference early in the semester so that we may make appropriate changes.

Late Policy: In general, each student is allowed one "freebie" extension of 3 days for a single assignment per semester. Beyond the freebie extension, late work will not be accepted. If there are circumstances that prevent you from turning in an assignment on time, please contact us before an assignment is late so that we may establish an alternative timeline.

Communication Plan: Email is the best way to get in touch. If you send me an email, at least one instructor will respond within 2 business days. Please make sure to include both Drs. Hupp and Gilleaudeau on all email correspondence. We are also reachable in-person before/after class and during office hours. If you would like to meet at an alternative time in person or via zoom, feel free to reach out and we can work together to find a different time to meet.

Policy on Chat GPT or other AI tools:

Chat GPT or other AI tools can be used to get started on researching a topic or gathering information used in the assignments for this class. However, you **CANNOT turn in text for any assignment in this class that was written directly by Chat GPT or another AI tool**. Any text handed in written by an AI tool will be given an automatic zero and be reported to the university academic integrity office. Handing in AI-written work is cheating. Also, there is no substitute for reading the papers and building your understanding of the topics through your own reading comprehension. Do not use Chat GPT or another AI tool to summarize the papers for you.

Mason Course Policies

These university policies common to all Mason courses are also important to review and understand: https://stearnscenter.gmu.edu/home/gmu-common-course-policies/

***** *Note: We reserve the right to make changes to this syllabus as needed.*