

Course Change Request

New Course Proposal

Date Submitted: 11/09/20 1:45 pm

Viewing: **GEOL 512 : Invertebrate Paleontology**

Last edit: 11/09/20 1:45 pm

Changes proposed by: muhen

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

No

Effective Term: Fall 2021

Subject Code: GEOL - Geology

Course Number: 512

Bundled Courses:

Is this course replacing another course? No

Equivalent Courses:

Catalog Title: Invertebrate Paleontology

Banner Title: Invertebrate Paleontology

Will section titles vary by semester? No

Credits: 4

Schedule Type: Lecture w/Lab

Hours of Lecture or Seminar per week: 3

Hours of Lab or Studio per week: 3

In Workflow

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

Approval Path

1. 12/14/20 5:14 pm
Jim Kinter (ikinter):
Approved for AOES Chair

Repeatable: May only be taken once for credit, limited to 2 attempts (N2) **Max Allowable Credits:**
4

Default Grade Mode: Graduate Regular

Recommended Prerequisite(s):

Recommended Corequisite(s):

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

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:

Classification, evolutionary trends, and distribution of common invertebrate fossils.

Justification:

The Geology Program offers a parallel course for undergraduates currently, but we have seen an increase in the number of graduate students who want to study paleontology. This course will round out the graduate curriculum in paleontology, which currently includes classes in vertebrate paleontology and paleoclimatology.

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

Learning Outcomes:

- Understand the importance of evolutionary history
- Recognize the morphology of major fossil invertebrate groups.
- Recognize the mode of life and taphonomy, and relationship with sedimentary rocks
- Use fossils as an indicator of the depositional environment

Attach Syllabus

[GEOL 512 Invertebrate Paleontology.pdf](#)

Additional Attachments

Staffing:

Dr. Stacey Verardo already teaches GEOL 312 Invertebrate Paleontology, and these two courses will be cross listed, and thus will have minimum impact on staffing.

Relationship to Existing Programs:

This course will be available for graduate students interested in paleontology from the Earth Systems Science MS, MS and PhD degrees in ESP, and graduate degrees in Biology.

Relationship to Existing Courses:

As noted, this course will be cross listed GEOL 312 Invertebrate Paleontology.

Additional Comments:

We have already accommodated students desiring to take this course with a Special Topics class in Geology, and have recognized enough demand to make it a new course of its own.

Reviewer Comments

Key: 17002



INVERTEBRATE PALEONTOLOGY

Geology 512

Spring 2022

Instructor: Dr. Stacey Verardo

Contact information: Exploratory Hall 3451 office# 703-993-1045

Email: sverardo@gmu.edu

Class hours: Tuesdays and Thursdays 9:00-10:15am

Lab Tuesdays 10:30 - 1:15pm

Lecture and Lab room: Exploratory Hall 1309

Texts

Ancient Invertebrates and their Living Relatives. Levin, Prentice Hall, 1999.

Lab: Labs will be posted on Blackboard

LECTURES

SECTION 1 PALEOBIOLOGY

- January 21 The Fossil Record and Fossil Variation
- January 23 Fossil Variation and Species and Speciation
- January 28 Systematics and Evolution
- January 30 Extinction
- February 4 Paleoecology
- February 6 Paleoecology
- February 11 Biogeography and Biostratigraphy
- February 13 Review
- February 18 **EXAM 1**

SECTION 2 PALEONTOLOGY

- February 20 Early Life
- February 25 Trace Fossils
- February 27 Protista
- March 3 Porifera
- March 5 Cnidarians/ Lophopore-Bryozoa
- March 10 **SPRING BREAK**
- March 12 **SPRING BREAK**

March 17	SPRING BREAK II
March 19	SPRING BREAK II
March 24	Lophopore –Brachiopoda
March 26	Review
March 31	EXAM 2
April 2	Mollusca
April 7	Arthropoda
April 9	Arthropoda
April 14	Echinodermata
April 16	Hemichordata/ Conodonts
April 21	Presentations
April 23	Review
April 28	
May 14	FINAL EXAM NOTE: 7:30-10:00am

NOTE: There are THREE lecture exams.

There is ONE lab practical exam encompassing the fossils AND the lecture material associated with it.

COURSE REQUIREMENTS

1. **Attendance** at all scheduled lecture and laboratory sections are required to achieve the requisite level of knowledge in this course.

2. Grading

60% of your total Paleontology grade will be from the three lecture exams. Each will be equally weighted at 20% for the class.

30% of the total grades will come from the lab grade. Individual lab grades incorporate 15% of the grade and one lab practicum (i.e. fossil ID exam) equals 15% of the grade.

10% of the grade will be from a presentation to the class on one of the topics listed above. All topics are cleared through me.

The deadline to choose a topic is XXXX

Make up exams will NOT be given

All exams will emphasize material presented in the lectures

Exams are closed book

INVERTEBRATE PALEONTOLOGY LAB

MANDATORY: You must have a sketchpad, pencils and a good eraser.

Laboratory exercises supplement lectures and provide "hands-on" experience for lecture topics.

SCHEDULE Tuesdays 10:30am -1:15pm

January 21 NO LAB
January 28 Sketch
February 4 Handout chapters 4 & 5
February 11 Handout chapters 10 & 11
February 18 Lecture EXAM
February 25 Trace fossils and Protists
March 3 Porifera and Cnidaria
March 10 SPRING BREAK

ALL THE FOLLOWING LABS WITH BE ONLINE

March 17 SPRING BREAK II
March 24 NO LAB
March 31 Lecture EXAM
April 7 Lophopores and Molluscs
April 14 Arthropods
April 21 Echinoderms and Hemicordata
April 28 Paleontology presentations due

GMU POLICY GUIDELINES

These university and class policies are important to understand:

- *Integrity: GMU has an Honor Code with guidelines regarding academic integrity; please see <http://oai.gmu.edu> for more information.*
- *Disability: If you are a student with a disability and you need academic accommodations, please see me and also contact the Office of Disability Services (ODS) at 703-993-2474 or <http://ods.gmu.edu>. All academic accommodations must be arranged through the ODS.*
- *Diversity: Diversity is a core value at GMU; please see <http://ctfe.gmu.edu/professional-development/mason-diversity-statement> for more information.*
- *Privacy: Students must use their MasonLive email account to receive important University information, including messages related to this class. Please see <http://masonlive.gmu.edu> for more information.*
- *Electronics: Please be respectful of our time together and do not engage in activities that are unrelated to class. Cell phones may be left on but muted and used for emergencies only.*