

 FLORIDA ATLANTIC UNIVERSITY	COURSE CHANGE REQUEST Undergraduate Programs	UUPC Approval <u>2/26/24</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department Geosciences College Science	

Current Course Prefix and Number GLY4310C	Current Course Title Petrology of Igneous and Metamorphic Rocks
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Syllabus must be attached for ANY changes to current course details. See [Template](#). Please consult and list departments that may be affected by the changes; attach documentation.

<p>Change title to: Mineralogy and Petrology</p> <p>Change prefix From: _____ To: _____</p> <p>Change course number From: _____ To: _____</p> <p>Change credits* From: _____ To: _____</p> <p>Change grading From: _____ To: _____</p> <p>Change WAC/Gordon Rule status** Add <input type="checkbox"/> Remove <input type="checkbox"/></p> <p>Change General Education Requirements*** Add <input type="checkbox"/> Remove <input type="checkbox"/></p> <p><small>*See Definition of a Credit Hour.</small> <small>**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See WAC Guidelines.</small> <small>***GE criteria must be indicated in syllabus and approval attached to this form. See Intellectual Foundations Guidelines.</small></p>	<p>Change description to: Identification and classification of rocks and minerals in hand samples and thin sections using their physical and chemical properties. Discussion of elementary crystallography, symmetry and chemical bonding in controlling physical and chemical mineral properties. Association of igneous and metamorphic rocks to structures, landforms and tectonic settings. Use of mineral suites and textures to constrain rock crystallization and deformation history. Discussion of chemical equilibrium and the phase rule, and x-ray mineralogy techniques. Lecture and laboratory.</p> <p>Change prerequisites/minimum grades to: GLY 2010C (Minimum Grade of C) CHM 2045 (Minimum Grade of C) CHM 2045L (Minimum Grade of C) PHY 2048 (Minimum Grade of C)</p> <p>Change corequisites to:</p> <p>Change registration controls to:</p> <p>Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).</p>
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Effective Term/Year for Changes: Fall 2024	Terminate course? Effective Term/Year for Termination:
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Faculty Contact/Email/Phone Tiffany Roberts Briggs / briggst@fau.edu / 561-297-4669

Approved by Department Chair _____ College Curriculum Chair _____ College Dean _____ UUPC Chair <u>Korey Sorge</u> Undergraduate Studies Dean <u>Dan Meeroff</u> UFS President _____ Provost _____	Date 1/31/24 2/15/24 <u>2/5/24</u> <u>2/26/24</u> <u>2/26/24</u> _____ _____
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Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.



FLORIDA ATLANTIC UNIVERSITY

GLY 4310C-00X [enter CRN]

Mineralogy and Petrology

**Tuesdays & Thursdays, 12:30 – 1:50 pm
(lecture)**

**Tuesday or Thursday, 2:00 – 3:50 pm
(lab)**

4 Credit(s)

[enter semester and year] - 1 Full Term

Instructor Information

Instructor Name

Email:

Office: SE 4XX

Office Hours:

Phone: 561 297

TA Name:

Office: SE 4XX

Office Hours:

Email:

Course Description

Mineralogy and Petrology

Prerequisites: GLY 2010C, CHM 2045, CHM 2045L, PHY 2048

Identification and classification of rocks and minerals in hand samples and thin sections using their physical and chemical properties. Discussion of elementary crystallography, symmetry and chemical bonding in controlling physical and chemical mineral properties. Association of igneous and metamorphic rocks to structures, landforms and tectonic settings. Use of mineral suites and textures to constrain rock

crystallization and deformation history. Discussion of chemical equilibrium and the phase rule, and x-ray mineralogy techniques. Lecture and laboratory.

Prerequisites/Corequisites

Prerequisite(s): All of the following:

- GLY 2010C Graduate / Undergraduate (Minimum Grade of C)
- CHM 2045 Graduate / Undergraduate (Minimum Grade of C)
- CHM 2045L Graduate / Undergraduate (Minimum Grade of C)
- PHY 2048 Graduate / Undergraduate (Minimum Grade of C)

Instructional Method

In-Person

Traditional concept of in person. Mandatory attendance is at the discretion of the instructor.

Required Texts/Materials

Manual of Mineral Science

ISBN: 9781119111696

Publisher: John Wiley & Sons, Incorporated

Edition: 23rd

Manual of Mineral Science (w/CD)

ISBN: 9780471721574

Publisher: John Wiley & Sons, Incorporated

Edition: 23rd

Manual of Mineral Science

ISBN: 9781119111696

Publisher: John Wiley & Sons, Incorporated

Edition: 23rd

Principles of Igneous and Metamorphic Petrology

Authors: John D. Winter

Edition: Second Edition

Prin of Igneous & Metamorphic Petrology

ISBN: 9780321592576

Publisher: Pearson

Edition: 2nd

Course Objectives/Student Learning Outcomes

This course aims to introduce students to the fundamentals of mineralogy and petrology through a combination of lectures and hands-on lab work.

At completion of this course, students will:

- Identify and classify rocks and minerals and recognize the importance of mineral identification in a broad range of geological disciplines;
- understand the fundamentals of mineral properties, structures and stability, and predict tectonic settings based on rock and mineral assemblages;
- be familiar with a range of optical mineralogy techniques and apparatus be able to identify a vast range of minerals in hand sample as well as thin section.

Faculty Rights and Responsibilities

Florida Atlantic University respects the rights of instructors to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede their exercise. To ensure these rights, faculty members have the prerogative to:

- Establish and implement academic standards.
- Establish and enforce reasonable behavior standards in each class.
- Recommend disciplinary action for students whose behavior may be judged as disruptive under the Student Code of Conduct [University Regulation 4.007](#).

Disability Policy

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/.

Course Evaluation Method

Assessment	% of Total Grade
Midterm 1	10
Midterm 2	10
Midterm 3	10
Labs and Lab Tests	35
Homework	10
Attendance (Lectures)	5
Final exam	20

Anyone failing the laboratory examinations will receive a grade no higher than D+, regardless of the overall score.

Attendance at laboratories is essential for satisfactory performance in the course.

Code of Academic Integrity

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys an unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and places high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. For more information, see [University Regulation 4.001](#).

Attendance Policy Statement

Students are expected to attend all their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of nonattendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations, or participation in University-approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances, and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

Religious Accommodation Policy Statement

In accordance with the rules of the Florida Board of Education and Florida law, students have the right to reasonable accommodations from the University in order to observe religious practices and beliefs regarding admissions, registration, class attendance, and the scheduling of examinations and work assignments. University Regulation 2.007, Religious Observances, sets forth this policy for FAU and may be accessed on the FAU website at www.fau.edu/regulations.

Any student who feels aggrieved regarding religious accommodations may present a grievance to the director of Equal Opportunity Programs. Any such grievances will follow Florida Atlantic University's established grievance procedure regarding alleged discrimination.

Time Commitment Per Credit Hour

For traditionally delivered courses, not less than one (1) hour of classroom or direct faculty instruction each week for fifteen (15) weeks per Fall or Spring semester, and a minimum of two (2) hours of outof-class student work for each credit hour. Equivalent time and effort are required for Summer Semesters, which usually have a shortened timeframe. Fully Online courses, hybrid, shortened, intensive format courses, and other non-traditional modes of delivery will demonstrate equivalent time and effort.

Course Grading Scale

Letter Grade	Letter Grade
A	94 - 100%
A-	90 - 93%
B+	87 - 89%
B	83 - 86%
B-	80 - 82%
C+	77 - 79%
C	73 - 76%
C-	70 - 72%
D+	67 - 69%
D	63 - 66%
D-	60 - 62%
F	Below 60

Grade Appeal Process

You may request a review of the final course grade when you believe that one of the following conditions apply:

- There was a computational or recording error in the grading.
- The grading process used non-academic criteria.
- There was a gross violation of the instructor's own grading system.

[University Regulation 4.002](#) of the University Regulations contains information on the grade appeals process

Policy on Make-up Tests, Late work, and Incompletes

Exams will be announced at least one week in advance. It is the student's responsibility to take the tests on the announced date. Failure to take any test will result in a grade of zero (F) on that test. Participation in University-approved activities, including athletic or scholastics teams, musical and theatrical performances, and debate activities, are excused without penalty but arrangements to make-up work missed due to these absences must be made in advance. The same policy applies to work missed due to religious observances.

Make-up tests and quizzes will be given under truly unusual circumstances, which involve a problem or problem beyond the students control, and which could not be foreseen a reasonable time in advance of the examination. Students who know of a problem are urged to contact the instructor two weeks before the examination, to see if alternative arrangements can be made.

Anyone missing a quiz or exam must contact the instructor as soon as possible after the exam. **Do not wait until the next class!** Make-up exams are often in different format than the original examination. Similarly, homework and lab assignments are due on the date announced when the assignment is made. Late assignments will be accepted but deducted at 20% per week - ask for an extension **before** due dates are reached.

Policy on the Recording of Lectures

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

Counseling and Psychological Services (CAPS) Center

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>

Student Support Services and Online Resources

- [Center for Learning and Student Success \(CLASS\)](#)
- [Counseling and Psychological Services \(CAPS\)](#)
- [FAU Libraries](#)
- [Math Learning Center](#)
- [Office of Information Technology Helpdesk](#)
- [Office of International Programs and Study Abroad](#)
- [Office of Undergraduate Research and Inquiry \(OURI\)](#)
- [Science Learning Center](#)
- [Speaking Center](#)
- [Student Accessibility Services](#)
- [Student Athlete Success Center \(SASC\)](#)
- [Testing and Certification](#)
- [Test Preparation](#)
- [University Academic Advising Services](#)
- [University Center for Excellence in Writing \(UCEW\)](#)
- [Writing Across the Curriculum \(WAC\)](#)

Course Topical Outline

Date	Topic(s) Covered
Week 1	Introduction to Mineralogy: Mineral Properties
Week 2	Mineral Chemistry
Week 3	Crystal Structure
Week 4	Midterm 1
Week 5	Mineral Composition
Week 6	Crystal Symmetry and Crystal Systems
Week 7	Mineral Stability
Week 8	Optical Mineralogy & Imaging Methods
Week 9	Midterm 2
Week 10	Introduction to Petrology
Week 11	Igneous Structures, Reaction Series, Effects of P/T
Week 12	Magma Generation and Diversity, Basalts
Week 13	Metamorphic Introduction, Textures
Week 14	Metamorphic Facies
Week 15	Midterm 3
Week 16	Final Exam