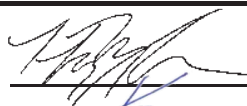
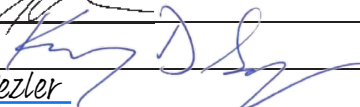
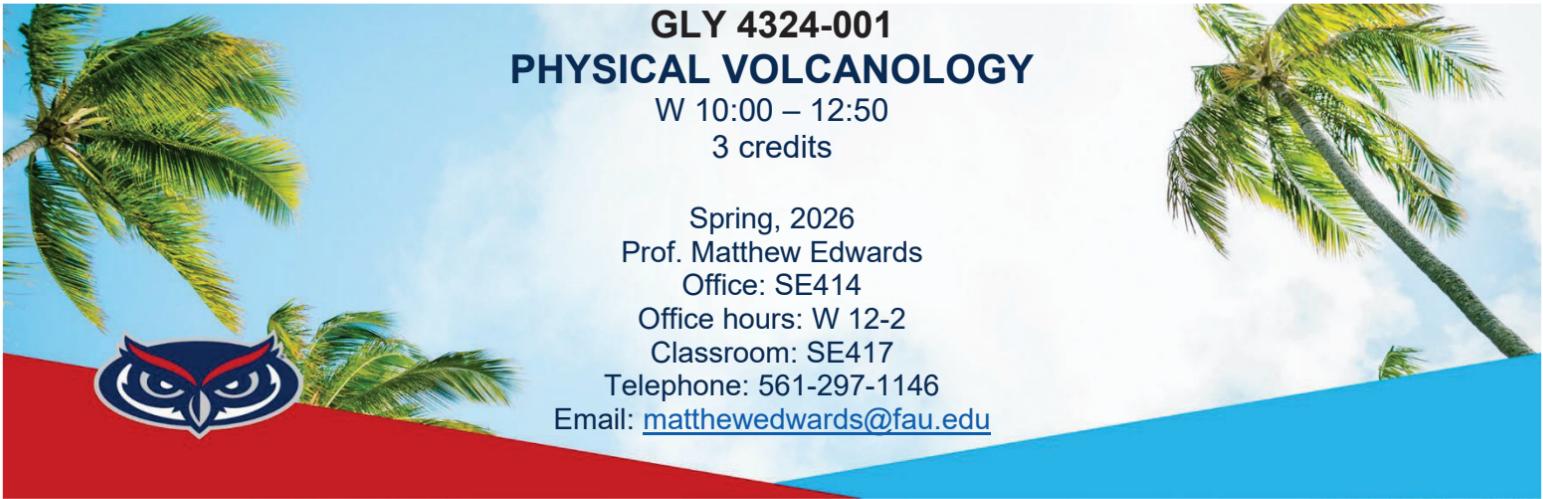
 FLORIDA ATLANTIC UNIVERSITY	NEW COURSE PROPOSAL Undergraduate Programs		UUPC Approval <u>4/21/2025</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department Geosciences College Science (To obtain a course number, contact erudolph@fau.edu)		
Prefix GLY Number 4324	(L = Lab Course; C = Combined Lecture/Lab; add if appropriate) Lab Code	Type of Course <div style="border: 1px solid red; padding: 2px;">Lecture</div>	Course Title Physical Volcanology
Credits (See Definition of a Credit Hour) 3	Grading (Select One Option) Regular <input checked="" type="radio"/> Sat/UnSat <input type="radio"/>	Course Description (Syllabus must be attached; see Template and Guidelines) This course will introduce students to physical volcanology and the processes that control volcanic activity, from magma generation through to magma ascent, degassing, and fragmentation. Further processes of transportation and deposition of erupted material will be discussed and related to the volcanic landforms that are produced. Both effusive and explosive volcanism will be explored and contrasted through case studies of historic and active volcanism. The course also includes frequency and forecasting of volcanic eruptions and techniques for quantifying eruption dynamics.	
Effective Date (TERM & YEAR) Spring 2026			
Prerequisites, with minimum grade*		Corequisites	Registration Controls (Major, College, Level)
*Default minimum passing grade is D-. Prereqs., Coreqs. & Reg. Controls are enforced for all sections of course			
WAC/Gordon Rule Course <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to proposal. See WAC Guidelines .		Intellectual Foundations Program (General Education) Requirement (Select One Option) None General Education criteria must be indicated in the syllabus and approval attached to the proposal. See Intellectual Foundations Guidelines .	
Minimum qualifications to teach course 18 relevant graduate credit hours			
Faculty Contact/Email/Phone Matthew Edwards, matthewedwards@fau.edu		List/Attach comments from departments affected by new course	
Approved by Department Chair  College Curriculum Chair  College Dean <u>Evonne Rezler</u> UUPC Chair <u>Korey Sorge</u> Undergraduate Studies Dean <u>Dan Meeroff</u> UFS President _____ Provost _____			Date <u>4/1/25</u> <u>4/10/25</u> <u>04/10/25</u> <u>4/21/2025</u> <u>4/21/2025</u> _____ _____

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.



GLY 4324-001
PHYSICAL VOLCANOLOGY

W 10:00 – 12:50
3 credits

Spring, 2026
Prof. Matthew Edwards
Office: SE414
Office hours: W 12-2
Classroom: SE417
Telephone: 561-297-1146
Email: matthewedwards@fau.edu



TA name	N/A
Office	N/A
Office hours	N/A
Telephone	N/A
Email	N/A

Course Description

This course will introduce students to physical volcanology and the processes that control volcanic activity, from magma generation through to magma ascent, degassing, and fragmentation. Further processes of transportation and deposition of erupted material will be discussed and related to the volcanic landforms that are produced. Both effusive and explosive volcanism will be explored and contrasted through case studies of historic and active volcanism. The course also includes frequency and forecasting of volcanic eruptions and techniques for quantifying eruption dynamics.

Instructional Method

In-Person

Prerequisites/Corequisites

N/A

Course Objectives/Student Learning Outcomes

At the successful completion of the course, students will be able to:

- identify volcanic structures and landforms at a variety of scales
- describe the physical processes responsible for various volcanic deposits
- explain the 'life-cycle' of magma from generation to eruption and deposition
- assess eruptive products and data and infer/interpret eruption dynamics

Course Evaluation Method

The graded course components are a mix of exams, homework, and in-class exercises. The breakdown is as follows:

Course Component	Percentage of grade
Exam 1	20%
Exam 2	20%
Final Exam	20%
In-class exercises	20%
Homework	20%

Exams (20% each): Exams will consist primarily of multiple choice and short answer essay questions. Attendance is mandatory for exams as scheduled on the syllabus. Exams are not cumulative; the material covered in each represents the lectures following the previous exam.

In-class exercises (20%): In-class exercises will be distributed and performed within lectures but are assessed on a weekly basis i.e. they are short enough to complete within the lecture time assigned but can be completed outside of class prior to the following lecture. Exercises will be included in half of the scheduled lectures.

Homework (20%): Homework will be distributed on Canvas and consist of a mix of short exercises from real-world volcanic data, multiple choice, and short answer questions. Homework will be assigned in weeks where there is no in-class exercise.

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

Passing of the course requires a minimum grade of C- for non-geology majors. Passing of the course requires a minimum grade of C for geology majors.

Policy on Makeup Tests, Late Work, and Incompletes (if applicable)

Late work will be accepted with a penalty of 10% for each day late past the assigned deadlines. Make-up Tests will be given on a case-by-case basis, provided adequate reasoning has been provided by the student. Students will not be penalized for absences due to participation in university-approved activities or religious observance, including athletic or scholastics teams, musical and theatrical performances, and debate activities.

Grades of Incomplete ("I") are reserved for students who are passing a course but have not completed all the required work because of exceptional circumstances.

Special Course Requirements (if applicable)

There are no special course requirements.

Classroom Etiquette Policy (if applicable)

Students are expected to conduct themselves in a manner that is respectful to both the instructor and their peers.

Policy on the Recording of Lectures (optional)

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.

Attendance Policy

Students are expected to attend all of 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 non-attendance. 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.

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/>

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/.

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](#).

Required Texts/Readings

There is no required textbook for this course. Required readings will be provided by the instructor.

Supplementary/Recommended Readings (if applicable)

The Encyclopedia of Volcanoes.

ISBN: 9780123859396

Authors: Haraldur Sigurdsson, Bruce Houghton, Steve McNutt, Hazel Rymer, John Stix

Publisher: Elsevier

Publication Date: 2015-03-06

Fundamentals of Physical Volcanology

ISBN: 978-0632054435

Authors: Eliabeth Parfitt, Lionel Wilson

Publisher: Wiley-Blackwell

Publication Date: 2008-02-11

Course Topical Outline

Week	Topic	Assessment
Week 1	Introduction to Physical Volcanology; Overview of Global Volcanism	Homework: Canvas Quiz
Week 2	Eruption Styles, Scales and Frequencies	In-class: Eruption Repose Intervals
Week 3	Magma Properties, Origin and Ascent	In-class: Viscosity Controls
Week 4	Volatiles and Fragmentation Dynamics	In-class: Point Counting
Week 5	Exam 1	
Week 6	Effusive Volcanism; Lava Flows and Domes	Homework: Canvas Quiz
Week 7	Explosive Volcanism	In-class: Ballistics
Week 8	Submarine Volcanism	Homework: Canvas Quiz
Week 9	SPRING BREAK	
Week 10	Plume Dynamics and Pyroclastic Flows	Homework: Canvas Quiz
Week 11	Exam 2	
Week 12	Tephra Transport and Deposition	In-class: Tephra Fallout/Distribution
Week 13	Indirect Volcanic Phenomena	Homework: Canvas Quiz
Week 14	Volcano Monitoring	In-class: Eruption Precursors
Week 15	Extraterrestrial Volcanism	Homework: Canvas Quiz

All homework and in-class exercises are due at 11.59pm on the day prior to the next lecture.

A final exam will be scheduled during the exam period following the end of classes.






FAU NewCourse - GLY4324

Final Audit Report

2025-04-10

Created:	2025-04-10
By:	Korey Sorge (ksorge@fau.edu)
Status:	Signed
Transaction ID:	CBJCHBCAABAA6gMCx5O99DQ395pa4bp7EzJcjHI4KRqE

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-  Document created by Korey Sorge (ksorge@fau.edu)
2025-04-10 - 3:25:07 PM GMT
-  Document emailed to Evonne Rezler (erezler@fau.edu) for signature
2025-04-10 - 3:25:13 PM GMT
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2025-04-10 - 3:26:19 PM GMT
-  Document e-signed by Evonne Rezler (erezler@fau.edu)
Signature Date: 2025-04-10 - 5:30:30 PM GMT - Time Source: server
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