

SCIN138

STUDENT WARNING: This course syllabus is from a previous semester archive and serves only as a preparatory reference. Please use this syllabus as a reference only until the professor opens the classroom and you have access to the updated course syllabus. Please do NOT purchase any books or start any work based on this syllabus; this syllabus may NOT be the one that your individual instructor uses for a course that has not yet started. If you need to verify course textbooks, please refer to the online course description through your student portal. This syllabus is proprietary material of APUS.

Course Summary

Description

Course Description: Geology encompasses the study of our planet, and students in this course will explore: how it formed, the nature of its interior, the materials of which it is composed, landforms, earthquakes and volcanoes, geologic resources, and geologic history. Current events that students learn about in the news, ranging from volcanic eruptions, earthquakes, landslides, and more will fit into a larger picture of how Earth works and why such things happen. The Geology lab provides students with a laboratory manual, 36 rock and mineral samples, a topographic map, and other tools to give students a hands-on opportunity to explore geologic concepts covered in the lecture portion of the course as well as virtual field trips related to the geologic sciences.

Course Scope:

This 'Physical Geology' course takes students on a journey to discover how the Planet Earth originated and was modified since its formation about 4.5 billion years ago. Geologic processes from the time of the 'Big Bang' to the last 'Ice Age' and everything in-between will be discussed and explored in this course. The class begins with the origin and birth of the universe and the different planets in our solar system. From this broader perspective, we will zoom in to study the intricacies of our planet. Students will then learn about the origin, structure, chemical and physical contents, geomorphology and various physical features that exist on Earth. Specifically we will study the crystals, minerals, rocks, and fossils that form the outer layer of the planet and how they have been modified by the agencies of erosion – namely wind, water and ice over billions of years. We will also study phenomena like volcanism, earthquakes and folding/faulting that mold and shape the structure of the Earth. A concurrent laboratory component that emphasizes the skills needed for the identification of minerals and rocks, the interpretation of land surface features based on topographic maps, and an understanding of folding, faulting, and rock relationships through the interpretation of geologic maps is included in this course.

Objectives

At the conclusion of this course, the student will be able to:

- CO-1** Recognize the general structure of the Earth and how it was formed, including the origin of elements and mineral structures.
- CO-2** Recall how the Earth and living organisms have changed over the last four billion years.
- CO-3** State the dynamic processes of rock formation and deformation, volcanism, and earthquakes within the framework of Plate Tectonic Theory.
- CO-4** Compare and contrast igneous, sedimentary, and metamorphic rocks, including formation processes.

- CO-5** Recognize the geologic settings and formation processes for common landforms and soil types.
CO-6 Identify the principles and processes related to transport and storage of subsurface and surface water.
CO-7 State the physical and chemical properties of the oceans and atmosphere and how these affect climate.
CO-8 Identify present and future energy resources and associated challenges.
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Outline

Week 1: A First Look at Planet Earth & Minerals

Learning Objectives(s)

CO-1

Reading(s)

Murck et al.-

Chapter 1. Earth as Planet;

Chapter 2. Earth Materials.

Laboratory Manual-

Lesson 5: *Minerals*, p. 101.

Assignment(s)

Forum #1 Posts must be at least 250 words long and submitted before the end of the first week.

Exam 1 (covers Murck et al. chapters 1 & 2. Due Week 1)

Lab Lesson 5 Quiz Due

Week 2: Telling Time Geologically & Plate Tectonics

Learning Objectives(s)

CO-2

CO-3

Reading(s)

Murck et al.-

Chapter 3. How Old is Old? The Rock Record and Deep Geologic Time;

Chapter 4. Plate Tectonics.

Laboratory Manual-

Lesson 9: *Geologic Time*, p. 191

Lesson 2: *Plate Tectonics*, p. 31

Assignment(s)

Exam 2 (Murck et al. chapters 3 & 4; due Week 2)

Lab Lessons 9 and 2 Quizzes Due

Forum #2 Posts due

Week 3: Earthquakes, Igneous Rocks & Volcanoes

Learning Objectives(s)

CO-3

CO-4

Reading(s)

Murck et al.-

Chapter 5. Earthquakes and Earth's Interior;

Chapter 6. Volcanoes and Igneous Rocks.

Laboratory Manual-

Lesson 4: *Earthquakes and Seismology, p.79.*

Lesson 6: *Igneous Rocks and Volcanism, p. 127.*

Assignment(s)

Exam 3 (Murck et al. chapters 5 &6; due Week 3)

Lab Lessons 4 & 6 Quizzes Due

Forum #3 Posts due

Week 4: Weathering and Soils & Sedimentary Rocks

Learning Objectives(s)

CO-5

CO-4

Reading(s)

Murck et al.-

Chapter 7. Weathering and Erosion;

Chapter 8. From Sediment to Sedimentary Rock.

Laboratory Manual-

Lesson 1: *Topographic Maps, p. 1.*

Lesson 7: *Sedimentary Rocks, p. 149.*

Assignment(s)

Exam 4 (Murck et al. chapters 7 & 8; due Week 4)

Lab Lessons 1 & 7 Quizzes Due

Forum #4 Posts due

Week 5: Crustal Deformation & Metamorphic Rocks

Learning Objectives(s)

CO-3

CO-4

Reading(s)

Murck et al.-

Chapter 9. Folds, Faults, and Geologic Maps.

Chapter 10. Metamorphism: New Rocks From Old.

Laboratory Manual-

Lesson 3: *Rock Deformation and Mountain Building, p. 53;*

Lesson 8: *Metamorphic Rocks, p. 171.*

Assignment(s)

Exam 5 (Murck et al. chapters 9 & 10, due Week 5)

Lab Lessons 3 & 8 Quizzes Due

Forum #5 Posts due

Week 6: Groundwater, Surface Water & the Atmosphere

Learning Objectives(s)

CO-6

CO-7

Reading(s)

Murck et al.-

Chapter 11. Water On and Under the Ground;

Chapter 12. The Oceans and the Atmosphere.

Laboratory Manual-

Lesson 11: *Streams and Groundwater, p. 237;*

Lesson 12: *Oceans and Coastlines, p. 263.*

Assignment(s)

Exam 6 (Murck et al. chapters 11 & 12, due Week 6)

Lab Lessons 11 & 12 Quizzes Due

Forum #6 Posts due

Week 7: Deserts, Glaciers & Climate Change

Learning Objectives(s)

CO-7

CO-5

Reading(s)

Murck et al.-

Chapter 13. Climatic Extremes: Deserts and Glaciers;

Chapter 14. Earth's Climates: Past, Present, Future.

Laboratory Manual-

Lesson 13: *Glaciers*, p. 287;

Lesson 10: Mass Wasting, p. 211.

Assignment(s)

Exam 7 (Murck et al. chapters 13 & 14, due Week 7)

Lab Lessons 13 & 10 Quizzes Due

Forum #7 Posts due

Week 8: Earth's Resources & Earth History, Final Comprehensive Exam

Learning Objectives(s)

CO-2

CO-8

Reading(s)

Murck et al.-

Chapter 15. A Brief History of Life on Earth;

Chapter 16. Understanding Earth's Resources.

Laboratory Manual-

Lesson 14: *Economic Geology and Resources*, p. 311.

Assignment(s)

Final Exam (covers all material from Weeks 1– 8)

Lab Lesson 14 Quiz Due

Forum #8 Posts due

Evaluation

Grades for this course will be based upon the following assignments and exams:

Forums

Participation is mandatory and will count towards the course grade (16%). You are expected to provide a substantial and well-written comment in each session and a similar comment or reflection in reply to at least two other students' contributions. Initial posts are due by Wednesday, 11:55 pm EST; and two replies are due by Sunday, 11:55 pm EST. If you have extenuating circumstances which prevent you from completing your initial forum posts or replies on time, contact your instructor before Wednesday so we can discuss other arrangements.

The initial post in the first forum (Introduction) must be at least 250 words long. Your response must be submitted before the end of the first week. This is a way of confirming your attendance in the course.

Exams

The exams covering the reading assignments in the textbook (Murck et al.) are on-line, open-book, and timed. They may include multiple choice, fill in the blank, and short essay type questions.

Laboratory Quizzes

Multiple-choice, fill in the blank, and T/F quizzes based on the Laboratory Exercises. Quizzes are not timed and can be accessed multiple times. Answers are submitted in the Tests & Quizzes Tool (left-hand menu) of the electronic classroom. Quizzes are due on Sunday evening (11:55 PM EST) of the week that they are assigned.

Please see the [Student Handbook](#) to reference the University's [grading scale](#).

Grading:

Name	Grade %
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Materials

Book Title: Visualizing Geology, 3rd ed. - The VitalSource e-book is provided via the APUS Bookstore

Author: Murk

Publication Info: Wiley

ISBN: 9781118129869

Book Title: Intro. Physical Geology Lab Manual - pdf lab manual provided inside the classroom

Author: Gardiner & Wilcox

Publication Info: Kendall Hunt

ISBN: 9781465270009

Book Title: Intro. Physical Geology Rock/DVD Pak

Author: Gardiner & Wilcox

Publication Info: Kendall Hunt

ISBN: 9781465270825

Book Title: You must validate your cart to get access to your VitalSource e-book(s) and hard copy book(s). If needed, instructions are available here - <http://apus.libguides.com/bookstore/undergraduate>

Author: N/A

Publication Info: N/A

ISBN: N/A

Required Technology

- See the Technology Requirements section of the undergraduate catalog for the minimum hardware and software requirements.
 - Microsoft Office 365 is available to APUS students for free. To sign up, visit <http://products.office.com/en-us/student>. If you have questions about accessing the software, please contact Classroom support at classroomsupport@apus.edu.
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Course Guidelines

Citation and Reference Style

- Attention Please: Students will follow the APA Format as the sole citation and reference style used in written work submitted as part of coursework to the University. Assignments completed in a narrative essay or composition format must follow the citation style cited in the APA Format.

Tutoring

- [Tutor.com](https://www.tutor.com) offers online homework help and learning resources by connecting students to certified tutors for one-on-one help. AMU and APU students are eligible for 10 free hours* of tutoring provided by APUS. Tutors are available 24/7 unless otherwise noted. Tutor.com also has a SkillCenter Resource Library offering educational resources, worksheets, videos, websites and career help. Accessing these resources does not count against tutoring hours and is also available 24/7. Please visit the APUS Library and search for 'Tutor' to create an account.

Late Assignments

- Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. The due date for each assignment is listed under each Assignment.
- Generally speaking, late work may result in a deduction up to 15% of the grade for each day late, not to exceed 5 days.
- As a working adult I know your time is limited and often out of your control. Faculty may be more flexible if they know ahead of time of any potential late assignments.

Turn It In

- Faculty may require assignments be submitted to Turnitin.com. Turnitin.com will analyze a paper and report instances of potential plagiarism for the student to edit before submitting it for a grade. In some cases professors may require students to use Turnitin.com. This is automatically processed through the Assignments area of the course.

Academic Dishonesty

- Academic Dishonesty incorporates more than plagiarism, which is using the work of others without citation. Academic dishonesty includes any use of content purchased or retrieved from web services such as CourseHero.com. Additionally, allowing your work to be placed on such web services is academic dishonesty, as it is enabling the dishonesty of others. The copy and pasting of content from any web page, without citation as a direct quote, is academic dishonesty. When in doubt, do not copy/paste, and always cite.

Submission Guidelines

- Some assignments may have very specific requirements for formatting (such as font, margins, etc) and submission file type (such as .docx, .pdf, etc) See the assignment instructions for details. In general, standard file types such as those associated with Microsoft Office are preferred, unless otherwise specified.

Disclaimer Statement

- Course content may vary from the outline to meet the needs of this particular group.

Communicating on the Forum

- Forums are the heart of the interaction in this course. The more engaged and lively the exchanges, the more interesting and fun the course will be. Only substantive comments will receive credit. Although there is a final posting time after which the instructor will grade comments, it is not sufficient to wait until the last day to contribute your comments/questions on the forum. The purpose of the forums is to actively participate in an on-going discussion about the assigned content.
- “Substantive” means comments that contribute something new and hopefully important to the discussion. Thus a message that simply says “I agree” is not substantive. A substantive comment contributes a new idea or perspective, a good follow-up question to a point made, offers a response to a question, provides an example or illustration of a key point, points out an inconsistency in an argument, etc.
- As a class, if we run into conflicting view points, we must respect each individual's own opinion. Hateful and hurtful comments towards other individuals, students, groups, peoples, and/or societies will not be tolerated.

University Policies

[Student Handbook](#)

- [Drop/Withdrawal policy](#)
- [Extension Requests](#)
- [Academic Probation](#)
- [Appeals](#)
- [Disability Accommodations](#)

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