



Science, Technology, Engineering and Mathematics Division
3322 College Drive, Vineland, NJ 08360
856-691-8600

GL 101 Physical Geology

Syllabus

Lecture/Lab Hours/Credits: 3/3/4

Catalog Description

Prerequisites: EN 060, and MA 091 or MA 094

Covers the nature and origin of the land and water features of the earth, including studies available concerning the oceans and their floors, with a view to providing an understanding of why our land looks as it does and the conflicts between natural change and man's use of the land and seas. Field trips may also be part of this course.

Textbook and Course Materials

It is the responsibility of the student to confirm with the bookstore and/or their instructor the textbook, handbook, and any other materials required for their specific course and section.

Click here to see current textbook prices at ccnj.bncollege.com.

Evaluation Assessment

Online Proctoring

All courses offered at RCSJ, whether they are web-enhanced, hybrid, or fully online, may include assessments that make use of Online Proctoring. To find out more about Online Proctoring, and to learn about the minimum technical requirements, visit rcsj.edu/elearning/online-proctoring.

Grading Distribution

Grading to be determined by individual instructors.

Individual instructors may include the following assessment(s):

- *Enter Assessment methods here*

Grading

The grading scale for each course and section will be determined by the instructor and distributed the first day of class.

Rowan College of South Jersey Core Competencies

(Based on the NJCCC General Education Foundation - August 15, 2007; Revised 2011; Adopted 2014)

This comprehensive list reflects the core competencies that are essential for all RCSJ graduates; however, each program varies regarding competencies required for a specific degree. Critical thinking is embedded in all courses, while teamwork and personal skills are embedded in many courses.

1. **Written and Oral Communication:** Students will communicate effectively in both speech and writing.
2. **Quantitative Knowledge and Skills:** Students will use appropriate mathematical and statistical concepts and operations to interpret data and to solve problems
3. **Scientific Knowledge and Reasoning:** Students will use the scientific method of inquiry, through the acquisition of scientific knowledge.
4. **Technological Competency:** Students will use computer systems or other appropriate forms of technology to achieve educational and personal goals
5. **Society and Human Behavior:** Students will use social science theories and concepts to analyze human behavior and social and political institutions and to act as responsible citizens.
6. **Humanistic Perspective:** Students will analyze works in the fields of art, history, music, or theater; literature; philosophy and/or religious studies; and/or will gain competence in the use of a foreign language
7. **Historical Perspective:** Students will understand historical events and movements in World, Western, non-Western or American societies and assess their subsequent significance.
8. **Global and Cultural Awareness:** Students will understand the importance of a global perspective and culturally diverse peoples.
9. **Ethical Reasoning and Action:** Students will understand ethical issues and situations.
10. **Information Literacy:** Students will address an information need by locating, evaluating, and effectively using information.

GL 101 Core Competencies

This course focuses on three of RCSJ's Core Competencies:

- **Scientific Knowledge and Reasoning**
- **Technological Competency**

Student Learning Outcomes: Physical Geology

Successful completion of GL 101 will help students:	RCSJ Core Competencies	Evaluation / Assessment (Additional means of evaluation may be included by individual instructors)
Examine the concepts of systems and how they are used to study geologic systems		<i>Enter assessment methods here</i>
Examine the energy transfer, composition and its influence on the structure of the earth and its systems.	<i>Enter RCSJ Core Competencies</i>	<i>Enter assessment methods here</i>
Categorize earth materials based on their physical properties, method of formation and environment of formation.	<i>Enter RCSJ Core Competencies</i>	<i>Enter assessment methods here</i>
Define the hydrologic cycle and the impact water has on shaping earth's systems	<i>Enter RCSJ Core Competencies</i>	<i>Enter assessment methods here</i>
Identify the major layers of the Earth and how the composition and structure of these layers controls major geologic processes	<i>Enter RCSJ Core Competencies</i>	<i>Enter assessment methods here</i>
Define the structures and geologic processes that shape and form shoreline environments	<i>Enter RCSJ Core Competencies</i>	<i>Enter assessment methods here</i>
Apply geologic processes and principles at work on the earth to other planets in the solar system	<i>Enter RCSJ Core Competencies</i>	<i>Enter assessment methods here</i>
Interpret how large scale systems control global events	<i>Enter RCSJ Core Competencies</i>	<i>Enter assessment methods here</i>
Examine the geologic history of New Jersey and be able to place these events in the larger global system	<i>Enter RCSJ Core Competencies</i>	<i>Enter assessment methods here</i>

Topical Outline

- Define system terminology including: compartments, internal and external variables, flow, open and closed systems.
- Discuss the limitations placed systems.
- Draw and identify the parts of a system given an ecosystem/environment.
- Define the controls on the health and stability of a system and how the health of a system is measured.
- Determine what feedback is and how negative and positive feedback affects systems.
- Describe and discuss the environmental implications of the cycles of matter and energy through the ecosystem.
- Discuss the limitations placed on living systems by energy forms and transfer methods.
- Define the basic laws of thermodynamics and how they influence geologic systems.
- Identify the basic states of matter and how energy controls the state of matter.
- Identify important earth materials such as elements, minerals, sediment and rocks using the properties and characteristics of the material.
- Classify the three major types of rocks and identify how each type is formed and the environments where they form using the concept of the rock cycle.
- Examine sedimentary environments including where they are located, the types of sediment, rocks and features associated with each and how they are recognized in the rock record.
- Diagram the hydrologic cycle and the important processes.
- Identify the basic concepts associated with groundwater including: structure, controls on groundwater movement, pollution and management.
- Summarize the relationships between the atmosphere and hydrosphere.
- Diagram the major layers of the Earth including properties and relative position.
- Compare and contrast the asthenosphere, lithosphere, oceanic crust and continental crust.
- Define plate tectonics and list the major plate types and the characters for each plate type.
- Summarize plate movement through time and how the changing lithosphere has influenced major events through time and controls the position of major geologic landforms.
- Explain what seismic energy is, how it is created and what effects it has on the upper layers of the Earth.
- Compare and contrast the main types of volcanoes and how the composition of lava controls the shape, explosiveness, and other volcanic features.
- Describe the important features found in a shoreline environment.
- Calculate and assess the physical forces that shape these environments (tidal, wave, sea level changes, etc.)
- Define mitigation and assess various mitigation for natural hazards that impact these environments.
- Compare and contrast the resources associated with these environments.
- Identify geologic structures found on other planets and moons in the solar system.
- Compare and contrast earth's features with features found on other planets and explain why there are differences and similarities.
- Develop timelines for the rates and scales of change that have occurred through Earth's history.
- Analyze climatic variations through time to determine if patterns exist.
- Determine if large scale processes such as global warming and plate tectonics promote environmental hazards and identify variables that influence changes in those systems.
- Propose mitigation methods and alternate solutions to influence the impact of changes in the environment based on past history.
- Identify local systems and resources a student living in this area will encounter.

- Describe events in New Jersey through geologic time.
- Determine what environmental hazards would impact New Jersey.
- Applying the scientific method, students will analyze a problem and draw conclusions from the data and evidence.
- Students will distinguish between scientific theory and scientific discovery, between science and its scientific technological applications, and they will explain the impact of each on society.
- Students will use computer systems and/or other appropriate forms of technology to present scientific information.
- Students will use appropriate forms of technology to identify, collect and process scientific information.
- Students will use appropriate scientific library/learning resource tools such as cataloging systems to access information in reference publications, periodicals, bibliographies and data bases.

Affirmative Action Statement

The Board of Trustees is committed to providing a work and academic environment that maintains and promotes affirmative action and equal opportunity for all employees and students without discrimination on the basis of certain enumerated and protected categories. These categories are race, creed (religion), color, national origin, nationality, ancestry, age, sex (including pregnancy and sexual harassment), marital status, domestic partnership or civil union status, affectional or sexual orientation, gender identity or expression, atypical hereditary cellular or blood trait, genetic information, liability for military service, or mental or physical disability, including AIDS and HIV related illnesses.

For questions concerning discrimination, contact Almarie J. Jones, Special Assistant to the President, Diversity and Equity/Title IX and Compliance, 856-415-2154 or ajones@rcsj.edu or (Cumberland) Nathaniel Alridge, Jr., JD, Director, Diversity and Equity/Title IX and Judicial Affairs, 856-691-8600, ext. 1414 or nalridge@rcsj.edu. For disability issues or any barriers in the learning or physical environment related to a document condition/disability please contact: Gloucester campus – Carol Weinhardt, Director, Department of Special Services, ADA/504 Officer at 856-415-2247 or cweinhar@rcsj.edu; or Cumberland Campus – Meredith Vicente, Senior Director, Department of Special Services/Project Assist at 856-200-4688 or mvicent1@rcsj.edu

Department of Special Services

The Department of Special Services is committed to providing support services and ensuring equal access to eligible students with documented conditions/disabilities as outlined by the Americans with Disabilities Act (ADA) and the Americans with Disabilities Act with Amendments Act (ADAAA).

(Gloucester Campus Location and Contact)

Location: Instructional Center, room 425A.

Primary Contact: Director, Carol Weinhardt, (email) cweinhar@rcsj.edu; or (phone) 856-415-2247.

(Cumberland Campus Location and Contact)

Location: Center for Academic & Student Success (CASS)

Primary Contact: Senior Director, Meredith Vicente, (email) mvicent1@rcsj.edu; or (phone) 856-200-4688.

Reporting Allegations of Sexual Assault Resource Referrals (8/2021) Cumberland Campus

There are multiple safe places for students to report allegations of sexual assault, both on and off campus.
Reports of sexual assault can be made to any of the following offices listed in the chart below.

All students are encouraged to report alleged crimes on campus.
Employees must report crimes that pose an immediate threat to the campus Security Office, the local Police Department or the Sheriff's Office.

Service	Resource	Phone Number/Location/Website
Non-Confidential Reporting Law Enforcement	Vineland Police Dept. Millville Police Department Cumberland Co. Sheriff's Office Cumberland County Emergency Services Cumberland Campus Security 856-200-4706 (Direct)	856-691-4111 856-825-7010 856-451-4449 9-1-1 Andres Lopez, Director Safety and Security 856-200-4706
Non-Confidential On-Campus Reporting Support Services	Almarie J. Jones Special Assistant to the President Diversity and Equity, Title IX and Compliance Nathaniel Alridge, Jr., JD, Director Diversity and Equity, Title IX and Judicial Affairs Kellie W. Slade Executive Director Student Services, Student Life	856-415-2154 Gloucester Campus College Center, Room116 <i>ajones@rcsj.edu</i> 856-498-9948 Catherine J. Arpino Education and Humanities Center, <i>nalridge@rcsj.edu</i> 856-200-4615 Student & Enrollment Services Center <i>kslade@rcsj.edu</i>
Confidential On-Campus Counseling and Support Services	Student Counseling and Wellness Center John Wojtowicz, LCSW	Academic Building – 1 st floor 856-200-4760 <i>jwojtowi@rcsj.edu</i>
Confidential Off-Campus Full-Service Support	Center for Family Services – Services Empowering Rights of Victims (SERV)	24/7 Hotlines Cumberland Co. – 1-800-225-0196 <i>www.centerffs.org/serv</i>
Hospital Sexual Assault Nurse Examiner on Site	Inspira Medical Center Vineland	1505 W. Sherman Ave., Vineland, NJ 856-641-8000