



NORTHWEST FLORIDA STATE COLLEGE

100 College Boulevard, E. • Niceville, FL 32578-1347 • (850) 678-5111 • www.nwfsc.edu

ESC-1000: Earth Science (online)

CRN: 20097, 3 Credit Hours

Northwest Florida State College, Winter-Spring Semester 2026, Session 1

INSTRUCTOR INFORMATION

- Professor: Dr. Jon Bryan
- Email: bryanj@nwfsc.edu
- Phone: 850-729-5246
- Office Hours: MTWR 8:00-9:30 AM; Bldg. 350, Room 217
- Office Location (Campus/Building/Room): Bldg. 350, Rm. 217

INSTRUCTOR COMMUNICATION

Your NWFSC email is the official communication medium of the College. Please check your College email regularly for any class and College notifications.

COURSE INFORMATION

- Course ESC-1000, Course Reference Number (CRN): 20097, 3 Credit Hours
Session 1
- Class Location (Campus/Building/Room): Online
- Class Modality: Online.
- Class Days: n/a
- Class Times: n/a
- Online Classroom with Gradebook: [Canvas class shell](#)
- Final Exam: Last week of class

COURSE DESCRIPTION (STATE OF FLORIDA)

INTRODUCTION TO EARTH SCIENCE USING THE SCIENTIFIC METHOD, CRITICAL THINKING SKILLS, DATA ANALYSIS, THIS COURSE WILL EXAMINE THE FUNDAMENTAL PROCESSES OF THE EARTH SYSTEM, COMPOSED OF AN ATMOSPHERE, HYDROSPHERE, LITHOSPHERE, BIOSPHERE, AND EXOSPHERE, THROUGH TIME. THE COURSE WILL ALSO EXPLORE INTERACTIONS BETWEEN THESE SPHERES, INCLUDING CRITICAL ANALYSIS OF SCIENTIFIC THEORIES AND EMPHASIZE EARTH'S CONNECTIONS WITH HUMANS.

COURSE DESCRIPTION (NWFSC)

An introductory survey of all sciences pertaining to the study of planet Earth, including planetary science, meteorology, oceanography, and geology.

STUDENT LEARNING OUTCOMES (STATE OF FLORIDA)

- STUDENTS WILL USE CRITICAL THINKING TO RECOGNIZE THE RIGOROUS STANDARDS OF SCIENTIFIC THEORIES.
- STUDENTS WILL ANALYZE AND SYNTHESIZE EARTH SCIENCE DATA TO DRAW SCIENTIFICALLY VALID CONCLUSIONS.
- STUDENTS WILL RECOGNIZE THE DIFFERENT TIME SCALES ASSOCIATED WITH DIFFERENT EARTH PROCESSES.
- STUDENTS WILL EFFECTIVELY COMMUNICATE THE IMPORTANCE OF THE INTERACTIONS BETWEEN HUMANS AND THE EARTH'S SPHERES.
- STUDENTS WILL APPLY THEIR UNDERSTANDING OF THESE EARTH SCIENCE PRINCIPLES TO COMPLEX GLOBAL AND LOCAL ISSUES.

Course-Level Student Learning Outcomes (NWFSC)

ES-1: Apply the correct scientific meaning of fact, hypothesis, law, and theory.

ES-2: Use scientific inquiry skills to identify common minerals and rocks based on their unique physical properties and describe their economic uses.

ES-3: Cite the fundamental processes related to Plate Tectonics and identify the patterns of geophysical features on and within the Earth's surface that demonstrate these processes are active.

ES-4: Explain the scientific causes of natural disasters, such as earthquakes, volcanic eruptions, and weather-related events, and describe their impact on society.

ES-5: Recall the timing of major events since the Earth's origin, including its formation, the development of life, and extinction events.

ES-6: Identify major features from the ocean floor and margins and explain their origins.

ES-7: Explain the processes responsible for global oceanic circulation patterns and their influence on climate.

ES-8: Explain the major processes driving atmospheric circulation and their influence on weather.

ES-9: Cite the evidence for past and future climate change.

ES-10: Describe basic characteristics for each of the major components of the solar system.

COURSE PREREQUISITES

No prerequisites.

COURSE MATERIALS

Textbook: McConnell, D, & Steer, D, 2021, *The Good Earth, 5th Edition*. Pearson.

Class Schedule

<u>Dates/Week</u>	<u>Assigned Lecture # and Topics</u>	<u>Textbook Chapters</u>
Module 1—Introduction to Planet Earth		
Jan 12-17	Welcome and Introduction to Course <i>Topic 1.1</i> — Earth’s Global Environments, Cycles, and Habitability <i>Topic 1.2</i> —The Nature of Scientific Investigation <i>Topic 1.3</i> —Orienting and Mapping the Earth/Basic Sky Observations Text Chapter 1 Quiz <i>*Do Check-In E-Mail to Instructor, and Attendance Confirmation Assignment due (used to “take roll” and establish presence/attendance at beginning of course)*</i>	1,2 2
Jan 18-24	<i>Topic 1.4</i> —Cosmic, Galactic, & Solar Context of the Earth <i>Topic 1.5</i> —Terrestrial Planets & the Moon <i>Topic 1.6</i> — Asteroids/Meteorites, Comets Text Chapter 2 Quiz, Text Chapter 3 Quiz	2 3 3
Module 2—The Atmosphere: Composition, Structure, & Dynamics		
Jan 25-31	<i>Topic 2.1</i> —Atmospheric Composition & Structure <i>Topic 2.2</i> —Major Controls on Global Climate <i>*Labor Day (Sept 1st)—College Closed, Online Classes Remain Open</i> Module 1 Exam (on “class notes” Topics 1.1-1.6)	14 14
Feb 1-7	<i>Topic 2.3</i> —Atmospheric Moisture Circulation <i>Topic 2.4</i> — Severe Weather: Thunderstorms Text Chapter 14 Quiz	14,15 15
Feb 8-14	<i>Topic 2.5</i> — Severe Weather: Tropical Cyclones <i>Topic 2.6</i> —Global Climatic Change Since the End of the Pleistocene Epoch Text Chapter 15 Quiz, Text Chapter 17 Quiz	15,17
Module 3—Oceanic Hydrosphere: Environments and Processes		
Feb 15-21	<i>Topic 3.1</i> —The Global Ocean/Seafloor & Ocean Environments <i>Topic 3.2</i> —Ocean Sediments <i>Topic 3.3</i> —Seawater Chemistry Module 2 Exam (on “class notes” Topics 2.1-2.6)	13 13 13
Feb 22-28	<i>Topic 3.4</i> —Ocean Circulation <i>Topic 3.5</i> —Waves & Tides Text Chapter 13 Quiz	13 13
Module 4—Mineralogy, Petrology, Stratigraphy & Geologic Time		
Mar 1-7	<i>Topic 4.1</i> —Minerals & Gemstones <i>Topic 4.2</i> —Igneous Rocks <i>Topic 4.3</i> —Sedimentary Rocks <i>Topic 4.4</i> —Metamorphic Rocks Text Chapter 7 Quiz Module 3 Exam (on “class notes” Topics 3.1-3.7)	7 7 7 7

Mar 8-14	<i>Topic 4.5—Igneous Processes: Plutonism and Volcanism</i>	6
	<i>Topic 4.6—Relative Geologic Time/Geologic Time Scale</i>	8
	<i>Topic 4.7—Absolute Geologic Time</i>	8
	<i>Topic 4.8—Survey of Geologic Time</i>	8
	Text Chapter 6 Quiz, Text Chapter 8 Quiz	
Module 5—Earth’s Structure, Seismology, & Plate Tectonics		
Mar 15-21	<i>Topic 5.1—Earth’s Crustal Structure & Deformation</i>	5
	<i>Topic 5.2—Seismology</i>	5
	<i>Topic 5.3—Earth’s Interior Structure</i>	5
	Text Chapter 5 Quiz	
	Module 4 Exam (on “class notes” Topics 4.1-4.8)	
Mar 22-28	<i>Topic 5.4—Continental Drift/Intro to Plate Tectonics</i>	4
	<i>Topic 5.5—Theory of Plate Tectonics</i>	4
	Text Chapter 4 Quiz	
Module 6—Geomorphology—Earth’s Surficial Environments & Processes		
Mar 29-	<i>Topic 6.1—Weathering/Soils/Erosion-Mass Wasting</i>	9,10
Apr 4	<i>Topic 6.2—Coastal Environments</i>	13
	<i>Topic 6.3—Coastal Processes</i>	13
	<i>Topic 6.4—River Environments & Processes</i>	11
	Text Chapter 9 Quiz, Text Chapter 10 Quiz, Text Chapter 11 Quiz	
Apr 5-11	<i>*Veteran’s Day (11th)—College Closed, Online Classes Remain Open</i>	
	<i>Topic 6.5—Groundwater/Karst</i>	12
	Text Chapter 12 Quiz	
	Module 5 Exam (on “class notes” Topics 5.1-5.5)	
Apr 12-18	<i>Topic 6.6—Glacial Environments & Processes</i>	16
	<i>Topic 6.7—Desert Environments & Processes</i>	16
	Text Chapter 16 Quiz	
Apr 19-25	Module 6 Exam (on “class notes” Topics 6.1-6.5)	
	Administer SLOs	
	<i>*Course Closes at midnight, Sunday, May 3rd *</i>	

STUDENT EXPECTATIONS AND RESOURCES

NWFSC aims for excellence in education and scholarly pursuits. Campus policies and procedures support this goal by protecting the health, safety, welfare, and property of the College and its students. To view all campus policies, please see the [college catalog](#). Several essential policies are provided below.

NWFSC POLICY	DESCRIPTION
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<u>Academic Integrity</u>	Students are expected to behave responsibly as members of the College community and be honest and forthright in their academic endeavors. They are also expected to behave professionally and refrain from disrupting other students' learning environments.
<u>Accommodations</u>	The <u>Accommodation Resource Center</u> at Northwest Florida State College is committed to providing equal access and opportunities for educational success to all students with disabilities as guided by the American Disabilities Act and other disability-related laws.
<u>Attendance</u>	Regular attendance and participation in the course is expected.
<u>Tutoring Services</u>	Tutoring services are available in person and online.
<u>Counseling Services</u>	All actively enrolled students can receive an initial assessment and up to five therapeutic sessions with a Behavioral Health provider at no cost to the student.
<u>Student Code of Conduct</u>	Students are expected to adhere to the rules, regulations, and policies outlined in the Student Code of Conduct.
<u>Student Complaints</u>	NWFSC desires to resolve student grievances, complaints, and concerns expeditiously, fairly, and in an amicable manner. A student who desires to resolve a grievance may initiate the resolution process using the information in the link provided to the left.
<u>Student Rights and Responsibilities</u>	Understanding your role as a student.

ASSIGNMENTS, GRADING SCHEME AND PROCEDURES

Course Directions and Material: Week by week you will find my comments and instructions posted in **Canvas** (also posted to your RaiderNet e-mail). Course material is organized into 6 Modules found in the *Modules* menu of the course. Each module includes assigned chapters from the textbook (you need a **hard copy**), Power-Point video lectures (by Dr. Bryan) for each topic, and Topics Notes (these are numbered in the Module folders as 1.2, 1.2, 2.1, 2.1, etc.—I call the Topics notes "*Class Notes*"). The class schedule below shows how the course will progress week-by-week. If you want to work ahead, I suggest you read ahead in the textbook, making highlights and notes in it (quizzes come from the textbook). The content in the modules of the course will be posted weekly.

Quizzes: Quizzes are *exclusively from textbook chapter readings*. They will be posted on a weekly basis at the beginning of the week and are usually available for two weeks. This gives you much flexibility. Most of the quizzes are 20-questions in length, all multiple choice, and worth 20-points each. Quizzes may be attempted only once, with a 60-minute time limit. Your score is

automatically exported to the grade book. If there are any technical issues or other problems, contact me.

Exams: Exams will be similar to quizzes, just longer (50 MC questions at 2 points per multiple choice question, or 100 questions at 1 point for each question). Exam material is exclusively from the Topics Notes (“Class Notes”) that I post in the Module folders. Since your exams (and quizzes) are entirely online, you may use notes or text. You will have ample time to complete the exams, but *you must do them in one sitting*—you will need to schedule enough uninterrupted time to finish the quiz or exam in one session on the computer. You will have sufficient time to answer, but not too much time to “research” an answer (from scratch) during the exam. When exams are made available, you usually have about two weeks to complete them (same as quizzes). All scheduling is subject to change if circumstances require it (e.g., system down, college closed for storms, etc.), but any changes, problems, or mistakes on my part, will not negatively affect any student grade.

Grades: Your grade will be based on: (a) 6, 100-point, online exams (= ~60% of grade); (b) 17, 20-point (total 340 points possible), online chapter quizzes (= ~34% of grade), and (c) some interactive questions assignments (= 60 possible points; ~6% of grade).

Grading Scale: A = 90-100 B = 80-89 C = 70-79 D = 60-69 F = <60

Extra Credit: There will be absolutely NO extra credit, bonus points, or special projects. The open-note/open-book nature of this course is “bonus” enough.

Online Proctoring: This course supervises exams through an online proctoring tool that will monitor you while completing course assessments. Northwest Florida State College authorizes the use of approved online proctoring solutions, such as Respondus, to promote academic integrity. These solutions have been approved by NWFSC Academic Affairs and NWFSC IT to be used in course assessments. The Respondus solution may monitor assessments by a variety of means, such as but not limited to, viewing and recording through your computer’s webcam, monitoring for noise in the room through your computer’s microphone and speaker system, monitoring for other internet usage while taking the assessment, and recording keystroke and visual images. The College has authorized these approved online proctoring providers to perform this service for the purpose of maintaining academic integrity. Information gathered through the proctoring solution is used by the College to ensure academic integrity in testing and may result in a complaint against you under the Academic Integrity Policy or Student Code of Conduct, should the College have reason to believe either policy has been violated. By registering for this course and maintaining your enrollment and not dropping the course prior to the add/drop deadline, you freely and voluntarily consent to the online proctoring requirement in this course.

OTHER IMPORTANT INFORMATION

EMERGENCY COLLEGE CLOSURE

This course's schedule, requirements, and procedures are subject to change in the event of unusual or extraordinary circumstances. If the College closes for inclement weather or another emergency, any exams, presentations, or assignments previously scheduled during the closure period will automatically be rescheduled for the first regular class meeting held once the college reopens. If changes to graded activities are required, students will not be penalized due to the adjustments but will be responsible for meeting revised deadlines and course requirements.

ACADEMIC CONTINUITY PLAN

NWFSC is dedicated to protecting the health and well-being of its students, staff, and faculty. The College is dedicated to working with faculty and students to ensure timely course and program completion during emergencies. In the event of a College closure, the format of this course may be modified to enable completion of the course through other means, including but not limited to online course delivery through online classrooms. Check your RaiderNet College email and LMS classroom online for any updates.

WELCOME TO CLASS

Thank you for choosing NWFSC for your education—and welcome to class!