



NORTHWEST FLORIDA STATE COLLEGE

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

ESC-1000: Earth Science

Course Reference Number (CRN): 20263 Winter-Spring SEMESTER 2026

(Traditional In-Class, Lecture Format, 3 Credit Hours)

INSTRUCTOR INFORMATION

- Professor: Dr. Jon Bryan
- Email: bryanj@nwfsc.edu
- Phone: 850-729-5246 (office)
- Office Hours: M,W: 8:00-9:00; T, Th: 8:00-11:00
- Office Location (Campus/Building/Room): Niceville Campus, Bld. 350, Room 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. The instructor will respond within 36 hours, Monday through Friday.

COURSE INFORMATION

- Course Name and Number: ESC-1000, CRN: 20263
- Class Location (Campus/Building/Room): Niceville, Bldg. 350, Room 110
- Class Modality: Traditional format, in-class lecture
- Class Days: Monday & Wednesday
- Class Times: 9:30-10:50 AM
- Online Classroom with Gradebook: [Canvas class shell](#)
- Final Exam: Monday, 4 May 2026

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.

ASSIGNMENTS, GRADING SCHEME AND PROCEDURES

Assignments and Grading

Your course grade will be based on the following six, 100-point exams (total 600 points). All exams, including the final exam, are *not* cumulative. The final exam is simply exam number 6 and has no more point value than the others. Each exam has an extensive study guide to help you prepare. You may not drop any test grade. No make-up tests will be given without proof that you could not attend class on test day. Contact me *in advance* if there is a problem!

Extra Credit: There is NO extra credit available. Exams usually have bonus questions.

Grading Scheme

Grade	Range
A	90 – 100 %
B	80 – 89 %
C	70 – 79 %
D	60 – 69 %
F	59 and less %

ELECTRONIC DEVICES IN CLASS

Electronic devices must not distract from learning. Courtesy to the professor and other students requires that phones be on vibrate or silent mode during class. No student should initiate conversations, including texts, during class activities. Use of electronic communication devices during examinations or other graded activities may constitute grounds for disciplinary action; such devices must be completely out of sight during exams or other assessments. Where emergency or employment situations require access to electronic communication services, arrangements may be made in advance with the instructor.

Phones and Computers in Class: Personal phones and laptop computers have proven to be distractions from the classroom experience. They prevent the user from paying full attention, can

easily distract students in the immediate vicinity, and their use is disrespectful to the instructor. Except for immediately before or after class, or during a class break, use of cellular phones and laptop computers is not permitted during class. They should be put in a backpack, purse, etc., so as to not be seen or used in any way. *Students observed using personal phones when class is in session are subject to the immediate loss of points (5 points per use), that will be tallied on the class roster or seating chart during class.* These 5 points are not percentage points of an overall grade but are raw points (equivalent to dropping 5 points on a 100-point exam). Every use may result in the additional loss of points. If emergency or employment situations require access to a phone during class, arrangements may be made in advance with your instructor.

Class Schedule

<u>Date</u>	<u>Topic</u>	<u>Text Chapters</u>
Part 1—Introduction to Planet Earth		
Jan 12	Introduction: Earth’s Global Environments, Cycles, Habitability	1,2
	The Nature of Science, Science & Society (online)	1
14	Orienting and Mapping the Earth/Basic Sky Observations	2
19	<i>(Monday) MLK, Jr. Day—College Closed</i>	
21	Cosmic, Galactic, & Solar Context of the Earth	2
26	Terrestrial Planets & the Moon	3
28	Asteroids/Meteorites, Comets	3
Part 2—The Atmosphere: Composition, Structure, & Dynamics		
Feb 2	Atmospheric Composition & Structure/Controls on Global Climate	1
4	Atmospheric Moisture & Circulation	14
9	Severe Weather: Thunderstorms & Tropical Cyclones	15
	Global Climatic Change Since the End of the Pleistocene Epoch (online)	
11	Exam 1—Introduction to Planet Earth	
Part 3—The Oceanic Hydrosphere: Environments and Processes		
16	The Global Ocean/Ocean Environment/Seafloor, & Sediments	13
18	Seawater Chemistry	13
23	Ocean Circulation	13
25	Waves, Tides	13
Part 4—Mineralogy, Petrology, Plutonism & Volcanism, Stratigraphy & Geologic Time		
Mar 2	Minerals & Gemstones	7
4	Exam 2—Atmosphere	

	9	Igneous, Sedimentary, & Metamorphic Rocks	7
	11	Igneous Processes: Plutonism and Volcanism	6
19-20 Spring Break— <i>College Closed</i>			
Part 5—Earth’s Structure, Seismology, & Plate Tectonics			
	23	Geologic Time	8
	25	Earth’s Crustal Structure & Deformation/Seismology	5
	30	Earth’s Interior Structure/Continental Drift	5
Apr	1	Exam 3—Oceanic Hydrosphere	
	8	Plate Tectonics	4
Part 6—Geomorphology—Earth’s Surficial Environments & Processes			
	8	Weathering/Soils/Erosion-Mass Wasting	9
	13	Coastal Environments & Processes	13
	15	Exam 4—Mineralogy, Petrology, Stratigraphy & Geologic Time	
	20	River Environments & Processes	11
	22	Groundwater/Karst	12
	27	Glacial Environments & Processes	16
	29	Desert Environments & Processes	16
May	4	Exam 6 (Final Exam)—Geomorphology <i>Administer SLOs</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 with the corresponding link to the full policy for your review.

NWFSC POLICY	DESCRIPTION
Academic Integrity	Students are expected to behave responsibly as members of the College community and be honest and forthright in their academic endeavors. This includes the use of generative AI tools. Using genAI in any form to substantially complete an assessment is prohibited, except where explicitly allowed by the instructor.

	<p>Any time the instructor suspects there is a violation of Academic Integrity or there is a reported Academic Integrity Incident, the instructor is required to investigate it as outlined in the Academic Integrity section of the handbook (linked to the left). The instructor will provide information to the student about the procedure, the complaint, the findings, and any consequence imposed.</p> <p>Students are also expected to behave professionally and refrain from disrupting other students' learning environments.</p>
<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. All students should adhere to the College calendar. For dual enrolled students, high school holidays may not be College holidays.
<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>	All students should review the Student Rights and Responsibilities section of the Student Handbook to understand their role as a student.

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!