

## Earth Science Geol 1401.042DC Course syllabus Fall 2022

Northeast Texas Community College exists to provide responsible, exemplary learning opportunities

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday
	8:05-8:55	8:05-8:55	8:05-8:55	8:05-8:55	8:05-8:55
	4:00-4:30	4:00-4:30	4:00-4:30	4:00-4:30	4:00-4:30

The information contained in this syllabus is subject to change without notice. Students are expected to be aware of any additional course policies presented by the instructor during the course.

**Catalog Course Description (no prerequisites): 4 credit hrs.** The objective of this course is to provide students with a better understanding and appreciation of the Earth Sciences and the knowledge of how the earth's systems (geosphere, hydrosphere, biosphere, and atmosphere) work and interact.

This course is the first semester of a two-semester sequence delivered in a traditional face to face classroom.

## ➤ The last day to drop with a "W" is **Tuesday November 15, 2022**

It is the student's responsibility to withdraw by that date if they are not able to complete the course. Failure to do so WILL result in a grade of "F" for the semester.

#### **Required Textbook(s):**

McGraw Hill The Good Earth 5th Ed.

#### **College Student Learning Outcomes:**

**Critical Thinking Skills** 

CT.1

Students will demonstrate the ability to 1) analyze complex issues, 2) synthesize information, and 3) evaluate the logic, validity, and relevance of data.

**Communication Skills** 

CS.1

Students will effectively develop, interpret, and express ideas through written communication.

**Empirical and Quantitative Skills** 

EQS.1

Students will manipulate numerical data or observable facts by organizing and converting relevant information into mathematical or empirical form.

EQS.2

Students will analyze numerical data or observable facts by processing information with correct calculations, explicit notations, and appropriate technology.

#### Teamwork

TW2. Students will work with others to support and accomplish a shared goal.

## Student Learning Outcomes for GEOL 1401 Earth Sciences for Non-Science Majors I

Survey of geology, meteorology, oceanography, and astronomy.

Upon successful completion of this course, students will:

- 1. Explain the current theories concerning the origin of the Universe and of the Solar System.
- 2.Explain the place of Earth in the Solar System and its relationships with other objects in the Solar System.
- 3.Relate the origin and evolution of Earth's internal structures to its resulting geologic systems, including Earth materials and plate tectonic activities.
- 4.Explain the operation of Earth's geologic systems and the interactions among the atmosphere, the geosphere, and the hydrosphere, including meteorology and oceanography.
- 5. Explain the history of the Earth including the evolution of earth systems and life forms.
- 6.Classify rocks and minerals based on chemical composition, physical properties, and origin.
- 7.Apply knowledge of topographic maps, diagrams, and/or photographs to identify landforms and explain the processes that created them.
- 8.Differentiate the types of plate boundaries, explain the processes that occur at each and identify associated structural features on maps, block diagrams and cross sections.
- 9. Apply relative and numerical age-dating techniques to construct geologic histories.
- 10. Measure atmospheric processes that affect weather and climate.
- 11.Describe the composition and motion of ocean water and analyze the factors controlling both.
- 12. Compare properties and motions of objects in the solar system.
- 13. Demonstrate the collection, analysis, and reporting of data.
- 14. Students will perform lab experiments to develop a better understanding of how scientists gather data and will use scientific methods to gain knowledge about the earth and earth systems.

#### **Evaluation/Grading Policy:**

Daily Classwork/Homework 25% of final course grade Tests & Selected Labs 75% of final course grade

- ➤ <u>Free Response Questions:</u> FRQs require the student to respond to a question or open-ended prompt in a scientific manor and should be stated in clear simple English. Meandering, descriptive, decorative text is inappropriate. If written well, it would be impossible to misinterpret your statements or findings.
- ➤ Homework/Classwork: Will be assigned weekly and will be expected by the due date.
- **QUIZZES**: Quizzes will be administered often to check for understanding.

<u>TESTS</u>: Several tests will be taken. You will be notified when a lab activity is to be counted as a test grade. Tests will cover material presented in the class including textbook readings, homework, discussions, videos, and quizzes.

Tests must be taken by the due date. Plan to take a test early if you have extracurricular activities that will cause you to miss a test day.

#### $\succ$ FINAL EXAM:

Final Exam must be taken by the due date, no exceptions.

#### **➤** Other Course Requirements:

This is a face to face Dual Credit course in Earth Science. Lecture, study materials and assignments will be delivered either in class, through Schoology at MPHS, or Blackboard Learning Management System at NTCC. Students should ensure that they have the appropriate hardware, software, and technical skills for completing all assignments and tests.

#### **Minimum Technology Requirements:**

Access to high-speed daily internet

Microsoft Office 365 (available as a free download for all NTCC students)

#### **Required Computer Literacy Skills:**

Ability to use a web browser to access NTCC Blackboard System for course information

Ability to access NTCC student email system and communicate professionally and competently with instructor Ability to create and complete Word documents, save them on your computer and upload into Schoology or Bb assignment links

## **Student Responsibilities/Expectations:**

Northeast Texas Community College is a "community of scholars." Please remember that you and all students in this class are pursuing important goals in your lives. As scholars, I expect every student to be courteous to other students and the instructor in all class experiences. The academic honesty and ethics statements below are crucial to the integrity of any college coursework, particularly in an online setting.

#### **NTCC Academic Honesty/Ethics Statement:**

NTCC upholds the highest standards of academic integrity. The college expects all students to engage in their academic pursuits in an honest manner that is beyond reproach using their intellect and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. This course will follow the NTCC Academic Honesty and Academic Ethics policies stated in the Student Handbook. Refer to the student handbook for more information on these subjects.

#### Alternate Operations During Campus Closure and/or Alternate Course Delivery Requirements

In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Northeast Texas Community College to move to altered operations. During this time, Northeast Texas Community College may opt to continue delivery of instruction through methods that include, but are not limited to, online through the Blackboard Learning Management System, online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor NTCC's website (<a href="http://www.ntcc.edu/">http://www.ntcc.edu/</a>) for instructions about continuing courses remotely, Blackboard for each class for course-specific communication, and NTCC email for important general information.

Additionally, there may be instances where a course may not be able to be continued in the same delivery format as it originates (face-to-face, fully online, live remote, or hybrid). Should this be the case, every effort will be made to continue instruction in an alternative delivery format. Students will be informed of any changes of this nature through email messaging and/or the Blackboard course site.

#### **ADA Statement:**

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student's

responsibility to request accommodations. An appointment can be made with the Academic Advisor/Coordinator of Special Populations located in Student Services and can be reached at 903-434-8264. For more information and to obtain a copy of the Request for Accommodations, please refer to the special populations page on the NTCC website.

#### Family Educational Rights and Privacy Act (FERPA):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

Tentative Course Timeline (\*note\* instructor reserves the right to adjust this timeline at any point in the term):

# **GEOLOGY 1401-INTRODUCTION TO EARTH SCIENCE**

## **Geology 1401 Assignment Topics Schedule**

(Note: Instructor reserves the right to adjust this timeline at any point in the term.)

Week 1 Intro to scientific methods and scientific reasoning

Week 2 Universe & Solar System

Week 3 Earth's place in the solar system

Weeks 4-5 Earth's composition, resources, structure, and dynamics.

Week 6-7 Age of Earth and methods used to determine the age.

Week 8 Topographic Maps

Week 9-10 Rock & Mineral Overview

Enrichment-Geology, Soil & Mineral Resources

Week 11 Minerals

Week 12 Rocks

Week 13 Mining for Resources – locations & methods

Week 14 Effects of mining on the environment

Week 15 Operation of Earth's systems and cycling of nutrients

Week 16 Exam

Week 17 Enrichment - Real World Connections