RICHLAND COLLEGE DEPARTMENT OF GEOLOGY
School of Mathematics, Science, and Health Professions
Course Syllabus For GEOL 1401: Earth Science
(4 credit hours) (12/12/2019)

GEOL 1401 COURSE SYLLABUS

Semester and Year: Spring, 2020
Classes begin Tuesday, January 21
Classes end Thursday, May 14

Section: 83005

Class time and days:
TR: 11 AM - 12:20 PM WH205
R: 8 AM - 10:50 AM SH253

Instructor: Robert Mims, Ed.D.

Contact Info: Office SH274.
Telephone: 972-238-6041
If I don’t answer, please call again. Do not ask me to call you.

Office Hours:
M: 11 - 12 NOON
T: 10 - 11 AM
W: 10 - 11 AM
R: 2 - 3 PM
F: 10 - 11 AM

mims@dcccd.edu
EMAIL IS BETTER THAN PHONING

Emails are usually promptly answered.

Please write which 1401 class you are in.

Last date to withdraw: Thursday, April 16
Final Exam Day and time: TBA

Attendance Policy: You should attend class and lab regularly AND BE ON TIME.
Required:

(1) **Lab Manual:** *EARTH SCIENCE LAB MANUAL*

AUTHOR: MIMS  
PUBLISHER: KENDALL HUNT  
EDITION #: 2nd  
ISBN: 978-1-5249-3212-1  
COPYRIGHT: 2017

You really do need this for lab. It would be best to buy this at the Richland College Bookstore.

(2) **Scantron forms (882 series):**  
One for the final exam and about six for lab.  
*Always bring some to lab.*

Optional:

**Textbook:** *EARTH SCIENCE*  
AUTHOR: MARSHAK and RAUBER  
PUBLISHER: NORTON  
EDITION #: 1st  
COPYRIGHT YEAR: 2017  
ISBN: 978-0-393-61410-7

This is a nice book but the answers to all lecture quiz questions will come from our class notes.
# LECTURE TOPICS BY WEEK

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<th>Week 1</th>
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<td>MINERALS</td>
<td>ATOMS</td>
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<td>IGNEOUS ROCKS</td>
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<td>SOILS</td>
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<tr>
<td>SEDIMENTARY ROCKS</td>
<td>METAMORPHIC ROCKS</td>
<td>GEOLOGIC TIME</td>
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<tr>
<td>GEOLOGIC MAPS</td>
<td>EARTHQUAKES</td>
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<td>STREAMS</td>
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## SPRING 2020 CALENDAR

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<tr>
<th>Date</th>
<th>Event Description</th>
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<tr>
<td>January 2 (Thursday)</td>
<td>College buildings and offices open</td>
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<tr>
<td>January 13 (Monday)</td>
<td>Faculty Reports</td>
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<tr>
<td>January 20 (Monday)</td>
<td>Dr. Martin Luther King, Jr. Day - Holiday</td>
</tr>
<tr>
<td>January 21 (Tuesday)</td>
<td>Classes Begin</td>
</tr>
<tr>
<td>February 3 (Monday)</td>
<td>12th Class Day (Certification Date)</td>
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<tr>
<td>February 27 - 28 (Thursday thru Friday)</td>
<td>Professional Development Days -- Thursday and Friday day classes will not meet. Friday evening, Saturday and Sunday classes will meet.</td>
</tr>
<tr>
<td>March 2 (Monday)</td>
<td>Classes Resume</td>
</tr>
<tr>
<td>March 16-20 (Monday thru Friday)</td>
<td>Spring Break - College buildings and offices will be closed for the week.</td>
</tr>
<tr>
<td>March 23 (Monday)</td>
<td>Classes Resume</td>
</tr>
<tr>
<td>April 10 (Friday)</td>
<td>Holiday</td>
</tr>
<tr>
<td>April 13 (Monday)</td>
<td>Classes Resume</td>
</tr>
<tr>
<td>April 16 (Thursday)*</td>
<td>Last Day to Withdraw*</td>
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<tr>
<td>May 11-14 (Monday thru Thursday)</td>
<td>Final Exams</td>
</tr>
<tr>
<td>May 14 (Thursday)</td>
<td>Semester Ends</td>
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<tr>
<td>May 18 (Monday)</td>
<td>Last Day for faculty to submit grades electronically through eConnect to the Registrar's Office.</td>
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<tr>
<td>May Graduation</td>
<td>Ceremony dates may vary at the colleges depending on space available.</td>
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### GEOLOGY PROJECT

If we are requested by the college administration we will produce a Geology Project consisting of a simple one page assignment per student. The details will be announced later in the semester and it will be due the latter part of the semester.

### NO NOTES ONLINE

**Class notes will not be posted online.** If you do not want to come to class regularly then sign-up for my online course. If you miss class for some reason then ask a classmate to email you the notes.

### LETTERS

Please do not ask for letters of various sorts such as letters of recommendation, letters confirming grades, letters to your employer, etc.
LECTURE GRADES:

15 Lecture Quizzes (15 x 200 PTS) = 3000 pts
   20 points of the 200 points will be for class attendance (10 points per lecture).

Description: We will take weekly lecture quizzes (less material) instead of monthly exams!

**Composition Notebook .................. 100 Extra Credit Points!**
(containing all class notes, of course, in your handwriting, in excellent condition with all pages bound)

Geology Project .................. 100 pts
(If we do not do it the points will be added to the Final Exam)

Final Exam *(Open Book)* ........ 100 pts

Description: The final exam will be open book and consist of 50 multiple-choice question. Bring a new Scantron form and pencils to the final exam. The Final Exam is open book.

LAB GRADES:

20 Lab Exercises @ 10 pts. .... 200 pts
Mineral Exam .................. 200 pts
Rock Exam .................. 200 pts
Map Exam .................. 200 pts

Total . . 4000 pts (plus any extra credit points)

A = 90-100% of total points (3600 – 4000 points)
B = 80-89% “ “ “ (3200 – 3599 points)
C = 70-79% “ “ “ (2800 – 3199 points)
D = 60-69% “ “ “ (2400 – 2799 points)
F = 0-59% “ “ “ (0 – 2399 points)
# LAB EXERCISES

<table>
<thead>
<tr>
<th>MINERAL PQ 1</th>
<th>U.S. STATES MAP</th>
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<tr>
<td>MINERAL PQ 2</td>
<td>DENSITY</td>
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<td>MINERAL PQ 3</td>
<td>PERIODIC TABLE</td>
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<td>MINERAL PQ 4</td>
<td>EARTH GRID</td>
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<tr>
<td>IG ROCKS PROPERTIES</td>
<td>ROCK PQ 1 (IG ROCKS)</td>
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<td>MINERAL PQ 5</td>
<td>MINERAL EXAM</td>
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<td>ROCK PQ 2 (SED ROCKS)</td>
<td>SAND GRAINS</td>
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<td>ROCK PQ 3 (IG &amp; SED ROCKS)</td>
<td>RELATIVE AGE DATING</td>
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<tr>
<td>ROCK PQ 4 (IG/SED/META ROCKS)</td>
<td>TOPO MAPS 1</td>
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<tr>
<td>ROCK PQ 5 (IG/SED/META ROCKS)</td>
<td>GEOMAPS 1</td>
</tr>
<tr>
<td>ROCK PQ 6 (ALL ROCKS)</td>
<td>ROCK EXAM</td>
</tr>
<tr>
<td>FORMATIONS</td>
<td>GEOMAPS 2</td>
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<tr>
<td>TOPO MAPS 2</td>
<td>TEXAS GEOLOGIC MAP</td>
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<tr>
<td>MAP EXAM</td>
<td>MAKE-UP QUIZZES &amp; LAB EXAMS</td>
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</table>
CLASSROOM POLICY

Please do not: eat, sleep, chew gum, use cell phones, tweedle, bring your children or be disruptive like chatting & frequent tardiness and leaving the room regularly for whatever reason. Write your name legibly on all papers. Do not bring anything to eat into the classroom or lab. Do not use laptops in class without written permission from the Disabilities Services. Do not make videos or audios or use your cell phone in class or lab.

KEY TO SUCCESS

Take thorough notes. Make the same drawings I draw. Write down everything on the screen that is printed in red. Pay attention when I show you PowerPoint slides of geologic phenomenon - they will help you remember your class notes.

If you study your class notes 30 minutes /day I predict you will make an "A" in the course! Students that use cue cards tend to do really well!

COURSE DESCRIPTION

This course is for the non-science major. It is an introductory survey of physical geology, historical geology, oceanography, meteorology, and astronomy. It relates the interaction of the earth sciences to the physical world. (3 Lec., 3 Lab.)

THE SCANTRON DILEMMA

We commonly turn-in Scantron forms for lab grades. Scantron forms which will not run through the grading machine will receive zero points. I will try three times and if your Scantron stops the grading machine the third time you will receive a zero. The typical problem is the leading edge of the form being wrinkled, not the overall form:
LAB POLICY

You must perform lab exercises during your assigned lab time to receive full credit. Lab exercises are due at the end of the lab in which they are assigned unless stated otherwise. Papers without names will receive no credit. Only pages out of our lab manual will be accepted for full credit.

Remember: You always turn in something every lab. If we perform more than 20 lab activities then the remainder will be for extra credit!

You are expected to buy a lab manual and only use those Report Sheets. If you forget your lab manual you can do the lab on scratch paper and copy it onto your lab manual and turn it in next week.

We may have some lecture in lab and we often refer to our class notes in lab. Always bring Scantron forms to lab. No food or drink (except bottled water) is allowed in lab.

COLLEGE POLICIES & PROCEDURES

Additional information is available in the "Student Handbook" and "Code of Student Conduct." This includes: catalog description of course, prerequisites, core objectives, course objectives, financial aid info, food and drink policy, religious holiday policy, withdrawing from the course and each of the following:

ACADEMIC HONESTY : http://www1.dcccd.edu/cat0910/ss/code.cfm
ADA STATEMENT: http://www.dcccd.edu/Current+Students/Student+Services/Disability+Services/
OBTAINING FINAL COURSE GRADES: www.econnect.edu.
SIX DROP ISSUE: https://www1.dcccd.edu/6drop
THIRD ATTEMPT TO ENROLL IN A COURSE: http://www.dcccd.edu/thirdcourseattempt/
Inclement Weather Information: In case of inclement weather, please check the Richland College website at www.richlandcollege.edu or call the Inclement Weather Hotline at 972-238-6196
Campus Emergency Operations: http://www.rlc.dcccd.edu/emergency

LECTURE NOTES

All class notes will be presented via Powerpoint slides which will be the source of all quiz questions.
ECAMPUS

All of your grades will be posted on eCampus. The eCampus Help Number: 972-669-6402

MAKE-UP POLICY

At the end of the semester you can make-up two lecture quizzes that you missed, not retakes. This is to accommodate doctor appointments, religious holidays, transportation problems, etc. Don't waste these opportunities and expect additional make-ups. If you arrive for a quiz after other students have finished and left the room then you have missed the quiz. You can make-up one lab exam. You cannot make-up a second lab exam.

EXTRA CREDIT NOTEBOOK

If you take complete class notes in a composition notebook you will earn 100 extra credit points!

Your composition notebook class notes (including drawings) should be graded as follows:

20 pts ________ (1) All in one notebook, not two
20 pts ________ (2) Nothing else in it (like class notes from another class)
20 pts ________ (3) No loose pages or taped in pages or sticky tabs
20 pts ________ (4) Excellent condition
20 pts ________ (5) All class notes from the course in your handwriting
COURSE OBJECTIVES

Upon successful completion of this course:

1) Students should be able to explain the basic characteristics of common minerals.
2) Students should be able to discuss the properties of the Periodic Table of the Elements and describe five types of chemical bonding.
3) Students should be able to name and describe the types of intrusive and extrusive structures of igneous activity, the types of volcanoes and reason for their occurrence.
4) Students should be able to explain the classification and occurrence of igneous rocks and sketch and label the Rock Cycle.
5) Students should be able to describe the types of mechanical and chemical weathering.
6) Students should be able to describe soil profiles and the three major soil types.
7) Students should be able to explain the classification of sedimentary rocks.
8) Students should be able to explain the classification of metamorphic rocks.
9) Students should be able to sketch the Geologic Time Scale and discuss five types of fossil preservation.
10) Students should be able to sketch and label a geologic map and cross-section of Dallas County.
11) Students should be able to explain how and where earthquakes originate, sketch and label a cross-section of the Earth and read a seismogram.
12) Students should be able to name and describe the different types of meteorites found on Earth.
13) Students should be able to cite 12 major types of evidence supporting the theory of plate tectonics.
14) Students should be able to name, describe and give examples the different types of plate boundaries.
15) Students should be able to name and locate the major plates of the Earth.
16) Students should be able to discuss the Cycle of Erosion and give examples.
17) Students should be able to discuss the occurrence of groundwater.
18) Students should be able to explain the relationship between deserts and atmospheric circulation.
19) Students should be able to name the five types of deserts and explain their occurrence.
20) Students should be able to identify common rocks and minerals.
21) Students should be able to read geologic maps.
22) Students should be able to read topographic maps.
**QUIZ POLICY**

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Generally we will take weekly lecture quizzes instead of monthly lecture exams.

During all quizzes there should not be anything on the desk tops (i.e. no packs, coats, books, purses, etc.) except your iphone and digital watch. If you arrive late you have a choice: (1) Take the quiz at the end of the semester or (2) take the quiz but turn in your quiz at the same time as the rest of the class.

Students engaged in suspicious activities (such as watching me during a quiz) might be requested to retake the quiz at the end of the semester and thus use one of their two make-up quiz opportunities. You may be asked to change seats during a quiz. You should not cause problems during a quiz such as constantly asking for explanations of quiz questions.

**LAB SAFETY**

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Fire - If the fire alarm sounds then exit the room and go down the stairs to the outdoors away from the building. Stools - Place the lab stools under the counters when not in use. Sit up straight on the stools. Food - Do not eat in lab, some of the minerals are toxic if swallowed. Water - If you notice water or some other liquid on the floor then tell the professor. Intruder Lockdown - Lock the doors, turn out the lights, hide and turn off your cell phone! Stools - Put stools (and packs) under the table when not in use. Sit-up straight on the stools!

My biggest fear is someone tripping on a stool or pack on the floor and hitting their head on the edge of a counter on the way down. **Please, please put your stools and packs under the counters when not in use.** Another concern is rocks falling from the specimen trays when we take them from the cabinets. Please do not tilt the trays when removing them from the cabinets because some of the specimens could roll out and strike your head!

Absolutely no eating in lab! The same goes for drinking except from water bottles. Coffee mugs and the like are not permitted in lab unless they are in your pack. Don't tell me that your coffee mug only has water in it, put your coffee mug in your pack. Don't tell me that coffee is mainly water (that has happened before)! Another hazard is spilled water on the floor, tell me if this happens and I will take care of it.
MAKE-UP QUIZZES

Our day to make-up quizzes and make-up lab exams is the last lab of the semester.

BE COLLEGIATE

Do not turn in lab papers which are non-collegiate. Here is the classic example of being non-collegiate: Ripping lab manual report sheets out of your notebook instead of taking the time to open the binder rings.

COURSE PREREQUISITES

One of the following must be met: (1) DREA 0093 or (2) English as a Second Language (ESOL) 0044 or (3) have met the Texas Success Initiative (TSI) Reading standard

EXTRA CREDIT

There will be a large number of extra credit opportunities.

SYLLABUS DISCLAIMER

The professor reserves the right to amend this syllabus as necessary.