Instructor Information

Instructor: Dr. Madhu Shaw Reniguntala
Office: Building B Rm 105A
Mailbox: Building B Rm 105A

Hours:

<table>
<thead>
<tr>
<th>Time</th>
<th>Mon</th>
<th>Tues</th>
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Phone: 501-771-6071
Email: mreniguntala@uaptc.edu

*All emails and telephone calls will receive a response within 24-48 hours

Chair: Mr. Thomas Russell 501-812-2705 trussell@uaptc.edu
Dean: Dr. Marico B. Howe 501-812-2342 mbryanthowe@uaptc.edu

*If your emails and telephone calls do not receive a response within 48 hours, the appropriate chain of command is above.

Course Information

The Physical Science (PHYS1400-01) course is a 4 credit hour course (3 hours lecture per week and 2 lab hours). The course meets twice a week on campus as follows:

Lecture: Monday 6:00 pm – 8:40 pm SciB 113
Lab: Wednesday 6:00 pm – 7:50 pm SciB 104

Blackboard will be used for resource distribution.

Catalog Description
This course is an introduction to the basic concepts of Earth sciences. Topics of study include Earth structure and processes; earthquakes, volcanism, glacial formations, plate tectonics, weathering, and erosion; the atmosphere, climate, and weather; oceans; rocks, minerals, and fossils; history of the Earth; and the scientific method. This course is not appropriate for transfer for STEM majors (such as Science, Technology, Engineering, and Mathematics and other related majors). This is not acceptable for courses requiring Physical Science as a prerequisite. See prerequisite details below. 3 lecture hours, 2 lab hours. (4 credit hours/special course fee) **Prerequisite:** (must meet one of the following requirements) • A score of 22 or above on the Math section of the ACT • A score of 97 or above on the Accuplacer Elementary Algebra test • A score of 50 or above on the COMPASS Math Placement test • MATH 1300 with a grade of “C” or better • Completion of all required zero (0) level mathematics coursework

**Course Materials**

**Required textbooks:**

- **Earth Science (15th Edition)** by Edward J. Tarbuck, and Lutgens
  Copyright Year: 2015; Publisher: Pearson

- **Applications and Investigations in Earth Science LAB (9th Edition)** by Edward J. Tarbuck, Lutgens, Tasa, and Pinzke
  ISBN-10: 0-13-474624-4

**Other Requirements:**

- Laboratory Goggles (Chemical Splash Proof)

**Mission Statement**

University of Arkansas – Pulaski Technical College provides access to high-quality education that promotes student learning and enables individuals to develop to their fullest potential.

**Institutional Learning Outcomes and General Education**

UA-PTC supports a college-wide institutional learning assessment program which concerns effective instructional methods and promotes student learning achievement by assessing:

1. Communication
2. Critical Thinking
3. Cultural Awareness
4. Information Literacy
5. Professionalism
6. Quantitative Literacy  
7. Technology Literacy  
For more information, please consult the following website: https://uaptc.edu/sla/learning-outcomes/student-learning-outcomes

**Department / Program Learning Outcomes**
The Physical Science department, consistent with the College’s mission and the Division’s objectives, encourages the success of its students in the health related fields and academic disciplines emphasizing Critical Thinking and Quantitative Literacy by the following program outcomes:

1. Critical and investigative thought  
2. Academic Integrity  
3. Independent thinking and learning  
4. Written communication on a collegiate level  
5. Exposure to natural science, human health, and nutrition.  
6. Recognition of the influence of scientific thought on individuals and society  
7. Collaborative investigation  
8. Basic mastery of scientific concepts and the demonstration of scientific skills  
9. Correct use of instrumentation and proper laboratory techniques

**Student Learning / Course Outcomes**

**ACTS**
Expected Student Learning Outcomes: The student will be able to explain, describe, discuss, recognize, and/or apply knowledge and understanding of the following topics:

1. Earth structure and processes  
2. Earthquakes, volcanism, glacial formations, plate tectonics, weathering, and erosion  
3. Atmosphere, climate, and weather  
4. Oceans  
5. Rocks, minerals, and fossils  
6. History of the Earth  
7. Scientific method/inquiry

**Policies**

**Report a Complaint or Concern**
UA-PTC takes very seriously complaints and concerns regarding the institution. Most complaints or concerns of a specific nature should be initiated and resolved at the campus level through normal college processes whenever possible. UA - Pulaski Technical College receives and resolves complaints using a variety of methods. To report a complaint or concern, please follow the link below.

https://www.uaptc.edu/report-a-concern-complaint

**UA-PTC Attendance Policy**
Education at UA-PTC requires students’ active involvement in the learning process. Thus, students are expected to attend all classes and actively engage in all learning assignments and/or opportunities provided in their classes. Class attendance should be treated as mandatory by all students as attendance will be taken by
all instructors during the first two weeks of class. Additionally, a written policy on student attendance that is tied to course objectives and included in a course syllabus will be provided for each course by instructors.

**Department Attendance Policy**

Agencies granting financial assistance may be notified of the violation of the attendance policy by students receiving financial aid.

Attendance is taken starting the first day of the semester, with the exception of students who enroll after classes have started. Instructors have the right to count students as absent if they arrive late to class, leave class early, or go in and out of the classroom during class time. Instructors have the right to lower a student’s grade based on excessive absences.

You will be given a failing grade (F) for the course if you miss more than 25% of lab sessions regardless of your overall grade. You will be given a failing grade (F) for the course if you miss more than 25% of lecture sessions regardless of your overall grade.

Any student who does not attend within the first two weeks of class will be considered a “no show” according to the campus attendance policy and will be reported as such and dropped from the class.

Instructors have the right to enforce UA-PTC’s administrative drop policy for days of consecutive nonattendance. Such particulars as determined by the instructor are detailed in the paragraph below.

**Attendance Artifact Policy**

Attendance and Participation are both required for this class and are tracked using daily signing sheets records. Agencies granting financial assistance may be notified of violations of the attendance policy by students receiving financial aid.

In an online class, eligibility for Financial Aid is based on student participation. Logging into the course does not constitute participation. For purposes of roster certification, students must complete a gradable attendance artifact.

**Course Policies**

The UA-PTC Catalogue rules and regulations will be enforced in this course at all times.

Please consult the following website for more information: [https://www.uaptc.edu/catalog](https://www.uaptc.edu/catalog)

Professional behavior is required. Punctual attendance and intelligent participation are expected. Particulars as determined by the instructor are detailed in the paragraph below.

Appropriate behavior is expected for all communications, including any notes, email messages, or telephone conversations. Some guidelines for communication are included in this syllabus to help you.

**Grading Policy**

Letter grades will be based on the following scale:

- 90 to 100%  A
- 80 to 89%  B
- 70 to 79%  C
- 60 to 69%  D
- 0 to 59%  F
The final grade in the course will be based on the weighted average of six categories with the following weights: Laboratory Experiments (25%), Information Literacy (5%), Quizzes (20%), Tests (30%), and Final exam (20%).

The “percents” (not points!) of each assignment within a category will be averaged to give the pre-weighted value. Each category “percent” will then be weighted to give a contribution to the final course grade. These contributions will be summed and then divided by “100” giving the final course grade percent. A sample weighted average calculation is shown in the table below:

<table>
<thead>
<tr>
<th>Category</th>
<th>Pre-Weighted Value</th>
<th>Weight %</th>
<th>Weighted Contribution</th>
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<tbody>
<tr>
<td>Lab Experiments</td>
<td>93</td>
<td>25</td>
<td>2325</td>
</tr>
<tr>
<td>Information Literacy</td>
<td>96</td>
<td>5</td>
<td>480</td>
</tr>
<tr>
<td>Quizzes</td>
<td>65</td>
<td>20</td>
<td>1300</td>
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<tr>
<td>Tests</td>
<td>85</td>
<td>30</td>
<td>2550</td>
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<tr>
<td>Final Exam</td>
<td>70</td>
<td>20</td>
<td>1400</td>
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<td><strong>GRADE</strong></td>
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<td><strong>8055 / 100</strong></td>
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B. Quizzes
Quizzes will be given regularly throughout the semester at the beginning of the class period; they may not be announced in advance. The quizzes are always a subset of the previous lecture’s material. In this way, you get additional reinforcement for keeping current with studying, prior to coming to class. The real reward is on exams—experience shows exam and quiz scores are highly correlated!
C. Lab
Laboratories are worth 100 points each and count as 25% of your grade. You will work in small groups under my supervision, and fill out data sheets as well as assigned questions on each. While group members will have the same numerical data, each student is responsible for their own data sheet which is turned in at the end of the lab. Wrong data and answers will count off from the 100 points possible. When in the lab, you agree to work only the assigned experiment(s), in the manner determined by the instructor, and in the safest manner possible. **There are no laboratory makeup sessions, and misses count as zero points for that lab.** If you are late or leave early (less than 10 minutes) 20% is counted off, and if less than 30 minutes (late or leave early) 40% is counted off—outside of 30 minutes is no credit.

D. Incompletes
If a student has completed 60% of the course work and has a current grade of C, an incomplete may be given in an extreme emergency. The exact conditions are presented in the student handbook. A student requesting an incomplete must sign a statement regarding the date and time by which the remaining coursework must be completed. A copy of this statement will be kept on file in the Dean’s office.

E. Information Technology Requirement:
Write a 4-page research paper based on a topic relating to Earth Science (instructor approved). It must have four academic sources with at least one each from print, electronic and periodical media. It is due on **Wednesday, April 24th, 2019; No late turn in is accepted.** The paper must be submitted to the instructor as a **hard copy (stapled upper left corner).** Please write your own words throughout the paper. Plagiarism is a serious, specific violation of UA-PTC’s Academic Integrity Policy; dealt with per the Student Handbook.

Keep all quotes minimal (one sentence) and explain them in the paragraph containing them:
The guidelines for the paper are:
1. Times New Roman
2. 12-point size
3. Double-spaced

References must be listed on a separate, final 4th page of the report.

Drop Date:
Instructors will not be able to drop a student due to non-attendance. Therefore, it is the student’s responsibility to drop the class if failing or receive a failing grade. The UA-Pulaski Technical College Academic Calendar provides the last date a course may be dropped is **Tuesday, January 15th, 2019** and the Last Day to Withdraw is **Wednesday, April 17th, 2019.**

Academic Integrity
It is expected that all students who attend UA-PTC conduct themselves in a manner appropriate for the college experience. Academic integrity is a vital component of collegiate behavior. The UA-PTC catalogue states, “The gaining of knowledge and the practice of honesty go hand-in-hand.”

The catalogue also states, “The responsibility and authority of initiating discipline arising from violations of the rules against dishonesty during the process of the course are vested in the instructor of that course.”

The complete Academic Integrity Policy is in the UA-PTC code of conduct.
Plagiarism
According to the Merriam-Webster dictionary, plagiarism is defined as, “the act of using another person's words or ideas without giving credit to that person”. It is a serious offense and will not be tolerated. A good reference for recognizing and avoiding plagiarism is listed below. Please click on the link after you have downloaded this syllabus and ensure you review the information provided:
http://www.indiana.edu/~wts/pamphlets/plagiarism.shtml#strategies

If plagiarism is found in your writings for this course, that assignment will be given a zero grade.

Accommodation Policy
Services for Students with Disabilities: UA-PTC is committed to fulfilling all federal requirements as stated in the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990, and the American with Disabilities Amendments Act (ADAAA) of 2008. Accommodations are available to students who have documented disabilities. Students who request accommodations must register with the Disability Services Office (Main Campus: 501-812-2738 or South Campus: 501-812-2862) and must provide current and relevant documentation.

Students requesting accommodations should inform the instructor at the beginning of the course or as soon as accommodations are approved. It is the student's responsibility to provide their Accommodation Letter to the instructor. Accommodations are not retroactive and will only be provided once your instructor receives the Accommodation Letter.

Student Code of Conduct
All students are expected to abide by the UA-PTC Student Code of Conduct. For the full Student Code of Conduct, access the most current version of the UA-PTC Academic Catalog.
http://uaptc.azurewebsites.net/docs/default-source/course-catalog/2017-18-academic-catalog.pdf?sfvrsn=a08a3038_2

Sexual Misconduct
No person at Pulaski Technical College will, on the basis of gender, be excluded from participation in, be denied benefits of, or be subjected to sex discrimination, sexual harassment or sexual misconduct under any education program or activity. All college administrative policies and procedures regarding sex discrimination, sexual harassment, and sexual misconduct are in compliance with Title IX. Students who feel they are victims of sexual misconduct should contact the UA-PTC Title IX Deputy Coordinator for Students:
Michelle Anderson, Director of Student Life and Leadership
Campus Center Building Room 216
501-812-2756
manderson@uaptc.edu

Course Evaluations
Students may be asked to evaluate their instructor and course near the end of the semester. These student evaluations are very important to the improvement in the quality of instruction and course materials. All results are anonymous and shared with the faculty only after the semester is over and grades have been posted.

Information Literacy
UA-PTC is committed to the Information Literacy Competency Standards for Higher Education as established by the Association of College and Research Libraries and endorsed by the National Forum on Information Literacy. Therefore, all courses will incorporate an information literacy component so that, by
graduation, all students will be able to recognize the need for information, then locate, evaluate, synthesize, and communicate information in an ethical manner. Information literacy encompasses critical thinking, research, media, technology, health, business, and visual literacy skills to produce lifelong learners who can make informed decisions in the workplace and in their personal lives.

**Tentative Course Schedule**
Five concept tests will be given in class during the semester. The date of a concept test will be announced at least one week in advance. **Exams cannot be made up.**

The following is a course outline:

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<tr>
<th>Week</th>
<th>Dates</th>
<th>Assignments and Activity</th>
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<tbody>
<tr>
<td>1</td>
<td>1/9/19 – 1/11/19</td>
<td><strong>Read chapter 1: Introduction to Earth Science (p 4-29)</strong>&lt;br&gt;<strong>Participate in class discussion</strong>&lt;br&gt;<strong>Concept Check-1.1 – 1.7</strong>&lt;br&gt;<strong>NO LAB</strong></td>
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<td>2</td>
<td>1/14/19 – 1/18/19</td>
<td><strong>Read chapter 2: Matter and Minerals (p 34-46)</strong>&lt;br&gt;<strong>Participate in class discussion</strong>&lt;br&gt;<strong>Concept Check-2.1 – 2.3</strong>&lt;br&gt;<strong>Lab Session 1 – Safety</strong></td>
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<td>3</td>
<td>1/21/19 – 1/25/19</td>
<td><strong>Read chapter 2: Matter and Minerals (p 46-55)</strong>&lt;br&gt;<strong>Participate in class discussion</strong>&lt;br&gt;<strong>Concept Check-2.4 – 2.6</strong>&lt;br&gt;<strong>Lab Session 2 – Minerals</strong></td>
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<td>4</td>
<td>1/28/19 – 2/1/19</td>
<td><strong>Read chapter 3: Rocks: Materials of the Solid Earth (p 60-69)</strong>&lt;br&gt;<strong>Infor. Literacy Topic Selection Due</strong>&lt;br&gt;<strong>Concept Check-3.1 – 3.3</strong>&lt;br&gt;<strong>Lab Session 2– Minerals Continue</strong>&lt;br&gt;<strong>Test 1</strong></td>
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<td>5</td>
<td>2/4/19 – 2/8/19</td>
<td><strong>Read chapter 3: Rocks: Materials of the Solid Earth (p 70-89)</strong>&lt;br&gt;<strong>Participate in class discussion</strong>&lt;br&gt;<strong>Concept Check-3.4 –3.5</strong>&lt;br&gt;<strong>Lab Session 3 – Igneous Rocks</strong></td>
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<td>6</td>
<td>2/11/19 – 2/15/19</td>
<td><strong>Read chapter 4: Weathering, Soil and Mass Wasting (p 96-104)</strong>&lt;br&gt;<strong>Concept Check-4.1 – 4.3</strong>&lt;br&gt;<strong>Participate in class discussion</strong>&lt;br&gt;<strong>Read parts of chapter 5: Stream Channels-5.5 (p 141-143) and Shaping stream valleys-5.6 (p 144-146)</strong>&lt;br&gt;<strong>Concept Check-5.5 and 5.6</strong>&lt;br&gt;<strong>Lab Session 4 – Sedimentary Rocks</strong></td>
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<td>7</td>
<td>2/18/19 – 2/22/19</td>
<td><strong>Read chapter 6: Glaciers (p 172-191)</strong>&lt;br&gt;<strong>Participate in class discussion</strong>&lt;br&gt;<strong>Concept Check-6.1 –6.7</strong>&lt;br&gt;<strong>Lab Session 5 – Metamorphic Rocks</strong></td>
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<td>8</td>
<td>2/25/19 – 3/1/19</td>
<td><strong>Read chapter 7: Plate Tectonics (p 210-239)</strong>&lt;br&gt;<strong>Participate in class discussion</strong>&lt;br&gt;<strong>Concept Check-7.1 –7.11</strong>&lt;br&gt;<strong>Lab Session 6 – Permeability</strong>&lt;br&gt;<strong>Test 2</strong></td>
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<td>9</td>
<td>3/4/19 – 3/8/19</td>
<td><strong>Read chapter 8: Earthquakes and Earth’s Interior (p 246-272)</strong>&lt;br&gt;<strong>Participate in class discussion</strong></td>
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<td>Week</td>
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| 10   | 3/11/19 – 3/15/19 | Read chapter 9: Volcanoes and other Igneous Activity (p 278-311)  
Participate in class discussion  
Concept Check-9.1-9.12  
Lab Session 8 – Salinity and Density Experiments |
| 11   | 3/18/19 – 3/22/19 | Spring Break |
| 12   | 3/25/19 – 3/29/19 | Read chapter 11: Geologic Time (p 348-355)  
Participate in class discussion  
Concept Check-11.1-11.4  
Lab Session 9 – Temperature and Density Experiments  
Test 3 |
| 13   | 4/1/19 – 4/5/19 | Read chapter 11: Geologic Time (p 356-366) Continue  
Participate in class discussion  
Concept Check-11.5-11.7  
Read chapter 12: Earth’s Evolution through Geologic time (p 374-403)  
Concept Check-12.1-12.9  
Lab Session 10 – Radiometric Dating and Half Life Experiment |
| 14   | 4/8/19 – 4/12/19 | Read chapter 13: The Ocean Floor (p 410-428)  
Participate in class discussion  
Concept Check-13.1–13.7  
Lab Session 11 – Heating and Atmosphere (The Influence of color on Albedo)  
Test 4 |
| 15   | 4/15/19 – 4/19/19 | Read chapter 14: Ocean Water and Ocean Life (p 434-449)  
Participate in class discussion  
Concept Check-14.1-14.5  
Read chapter 15: The Dynamic Ocean (p 454-479)  
Concept Check-15.1-15.7  
Lab Session 12 – Differential Heating of Land and Water |
| 16   | 4/22/19 – 4/26/19 | Read chapter 16: The Atmosphere: Composition, Structure and Temperature (p 486-511)  
Concept Check-16.1-16.6  
Read chapter 20: World Climates and Global Climates (p 608-633)  
Participate in class discussion  
Concept Check-20.1-20.11  
Lab Session 13 – Weather Station Analysis and Forecasting  
Test 5 |
Concept Check-21.1-21.3  
REVIEW FOR FINALS  
Info. Literacy Paper Due |
| 17   | 5/6/19 – 5/10/19 | FINALS |

Final Exam Schedule: **Wednesday, May 8th, 2019; 6:30 p.m. – 8:30 p.m.**

*Disclaimer: This schedule is a guide for the semester. The instructor reserves the right to amend the schedule as necessary.*
Course Agreement Form

Read, complete, and return to instructor:

I have read the course syllabus for Dr. Reniguntala’s Earth Science (Phys1400-01) class at Pulaski Technical College, and I understand its content. I also understand the rules for the class, and I will follow and abide by these rules, including those relating to attendance, assignments, grading criteria, plagiarism, and behavior.

Semester

Date

Print name

Signature

UA-UA-PTC Email address

Telephone