

## PHSC 4011 Earth Science Laboratory

Department of Physics, Brailsford College of Arts and Sciences

**INSTRUCTOR:** Mr. Brian M. Cudnik, Physics Laboratory Specialist  
**OFFICE LOCATION:** E. E. O'Banion (New) Science Building, room 330 AE  
**OFFICE PHONE:** (936) 261-3136  
**OFFICE FAX:** (936) 261-3149  
**E-MAIL:** [bmcudnik@pvamu.edu](mailto:bmcudnik@pvamu.edu)  
**SNAIL MAIL (U.S. POSTAL SERVICE) ADDRESS:**

Prairie View A&M University  
P.O. Box 519, Mail Stop 2230  
Prairie View, Texas 77446

**OFFICE HOURS:** Tues. and Thurs. 1pm – 3pm

**VIRTUAL OFFICE HOURS (WHEN I CHECK E-MAIL):**

Mon. thru Fri. 9am – 11am, 1pm – 3pm

**COURSE LOCATION:** E. E. O'Banion Science Building, Room 303

**CLASS MEETING DAYS AND TIMES:** Wednesdays 4:00pm – 5:50pm

**TEXTBOOK:** none (materials will be provided in class)

**COREQUISITES:** PHSC 4013

**ACCESS TO LEARNING RESOURCES:**

*PVAMU Library:*

phone: (936) 261-1500;

web: <http://www.tamu.edu/pvamu/library/>

*University Bookstore:*

phone: (936) 261-1990;

web: <https://www.bkstr.com/Home/10001-10734-1?demoKey=d>

**COURSE GOALS:** This is the Laboratory course to support PHSC 4013. Exercises select from a variety of activities done in the context of Earth Science and are timed to reinforce what is done in class. A tentative list of the exercises selected for the semester is presented below.

**LABORATORY SCHEDULE:** There will be a total of 12 laboratory exercises, plus two take-home exercises. The following schedule is tentative and is likely to change at short notice. There will be no lab meeting the first week of class.

- **LAB 1:** Orientation to Earth Science Laboratory; Density of Earth's Material and Earth's Internal Structure
- **LAB 2:** Soils and the Environment
- **LAB 3:** Online Lab Exercises: Earthquakes
- **LAB 4:** Online Lab Exercises: Virtual River
- **LAB 5:** The Reasons for the Seasons
- **LAB 6:** Finding the Fronts / Single Station Weather Forecasting
- **LAB 7:** Online Lab Exercise: Global Warming
- **LAB 8:** Energy in the 21<sup>st</sup> Century

- **LAB 9:** Geologic Features of Mars
- **LAB 10:** Kepler's Laws applied: Jupiter's Galilean Moons
- **LAB 11:** Introduction to Spectroscopy
- **LAB 12:** The Hertzsprung-Russell Diagram

**LEARNING OBJECTIVES:** This laboratory course will enable students to have a hands-on laboratory experience with some of the main topics of Earth Science, and will include the use of technology in exploring these topics. The exercises are meant to support the work done in the Earth Science course.

**LEARNING OUTCOMES:** The objective of the study of the natural sciences component of the core curriculum is to enable the student to understand, construct, and evaluate empirical relationships in the natural sciences, and to enable the student to understand the bases for theory-building and testing. Exemplary Educational Objectives include the abilities to: (1) understand and apply the empirical method to the study of the natural sciences; (2) recognize scientific and quantitative methods and the differences between these approaches and other methods of inquiry and to communicate findings, analyses, and interpretation both orally and in writing; (3) to identify and recognize the differences among competing scientific models of the universe; (4) to demonstrate knowledge of the major issues and problems facing modern science, including issues that touch upon ethics and values; and (5) to demonstrate knowledge of the interdependence of science and technology and their influence on, and contribution to, modern culture.

**GRADING, LAB REPORTS & ATTENDANCE:** Each in-class lab exercise will be worth 10 points and will be due at the end of class. There will be one 10-point take home lab assignment ("Earth Science in the News") and one 20-point take home assignment ("Sky Journal"). No grade is given for lab periods where students do not have a valid excuse for missing class. Students can make up one missed lab at the end of the semester. Opportunities for extra credit may be given in a few of the labs. There will be a total of 150 points, which breaks down as follows:

A	90 – 100%	(135 to 150 points)
B	80 – 89%	(120 to 134 points)
C	70 – 79%	(105 to 119 points)
D	60 – 69%	(90 to 104 points)
F	0 – 59%	(0 to 89 points)

## **UNIVERSITY RULES AND PROCEDURES:**

### **Disability statement (See Student Handbook):**

Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

**Academic misconduct (See Student Handbook):**

You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

**Forms of academic dishonesty:**

1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.
2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.
3. Fabrication: use of invented information or falsified research.
4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else's words, ideas, or data as one's own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one's own work also constitutes plagiarism.

**Nonacademic misconduct (See Student Handbook)**

The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor's ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

**Sexual misconduct (See Student Handbook):**

Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

**Attendance Policy:**

Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student's course grade being reduced or in assignment of a grade of "F". Absences are accumulated beginning with the first day of class. It is also imperative that you be on time as much as it is possible. You can find more details in the University Undergraduate Catalog (2005 – 2007, p.111).

**Student Academic Appeals Process**

Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.