Course Title: PHYSICAL SCIENCE II
Course Prefix: PHSC **Course No.:** 2123 **Section No.:** P01

Department of | **Physics** | **College of** | **Arts & Sciences**

Instructor Name: Premkumar B. Saganti, Ph. D.
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Office Hours: Tuesday and Thursdays 11:00 AM – 12:30 PM
Virtual Office Hours: Via email

Course Location: Room-301
Class Meeting Days & Times: Tue / Thurs 4:00 PM – 5:20 PM
Catalog Description: Credit 3 semester hours. An interdisciplinary examination of the physical and biological sciences. The course helps students understand how quantitative tools are used in modern scientific discovery. The course includes basic concepts of mechanics, chemistry, and astronomy. Prerequisite: PHSC 1123.

Prerequisites: **PHSC-1123**
Co-requisites: **n/a**

Required Text: **Physical Sciences, 9th Edition (or later),** Bill W. Tillery
ISBN: 978-0-07-304992-1 (or 978-0-07-351221-1) McGraw Hill

Recommended Text/Readings: **An Introduction to Physical Science**, Shipman, Wilson, and Todd
ISBN: 978-0-538-49362-8 (Thomson/Brooks-Cole)

Access to Learning Resources:
PVAMU Library:
phone: (936) 261-1500;
web: http://www.pvamu.edu/pages/3585.asp
University Bookstore:
phone: (936) 261-1990;
web: https://www.bkstr.com/Home/10001-10734-1?demoKey=d

Course Goals or Overview:

The primary goal of this course is to understand the fundamental concepts in chemistry including: atomic and periodic properties, solutions, nuclear reactions. In astronomy including: solar system, universe, earth and its dynamics in space. In earth sciences including: rocks and minerals, plate tectonics, volcanoes, atmospheric sciences and weather phenomena.

Course Outcomes/Objectives

		Core Curriculum Objective
1	Students will work on selected problems by inquiry based methods	Critical Thinking
2	Students will discuss and explain fundamental physical science concepts	Communication
3	Students will understand the manipulation and analysis of numerical data	Empirical and Quantitative
4	Students will participate effectively in working on group projects	Teamwork
5	Students will work on assigned research topics and provide as short reports	Communication
6	Students will work on advanced application problems	Empirical and Quantitative

Course Requirements & Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Homework Problems – assigned problems to assess and reinforce mathematical calculations
Research Topics – written assignments designed to supplement and reinforce course material
In-Class Exams – written tests designed to measure knowledge of presented course material
Group Presentation – ability to prepare and present applications of discussed course material
Mid Term and Final Exams - written and comprehensive problem sets of the course material
Class Participation – daily attendance and participation in class discussions

Grading Matrix

Instrument	Value (points or percentages)	Total
Homework Problems	5 assignments at 10 points each	50
Research Topics	5 assignments at 10 points each	50
In-Class Exams / Quizzes	2 exams / quizzes at 25 points each	50
Group Presentation	1 project	25
Mid Term Exam	50	50
Final Exam	50	50
Class Participation/ Discussion	25	25
Total:		**300**

Grade Determination:
A = 250 – 300 pts;
B = 200 – 249 pts;
C = 150 – 199 pts;
D = 100 – 149pts;
F = 99 pts or below

Course Procedures

Submission of Assignments:
Assigned Chapter Problems will be submitted according to the posted due dates. Assigned Research Topics will be provided via eCourses according to the posted due dates.

Formatting Documents:
Microsoft Word is the standard word processing tool used at PVAMU. If you're using other word processors, be sure to use the "save as" tool and save the document in either the Microsoft Word, Rich-Text, or plain text format.

Exam Policy
Exams should be taken as scheduled. No makeup examinations will be allowed except under documented emergencies (See Student Handbook).

Professional Organizations and Journals

IEEE, SPS, and OSA

References

21st Century Astronomy, Hester, Burstein, Blumenthal, Greeley, Smith, and Voss
ISBN: 978-0-393-93009-2 (W. W. Norton Co.)

Semester Calendar

Week One: Topic	**Atoms and Periodic Properties**	
Chapter (s):	Ch-08	
Assignment (s):		Assigned Problems from Ch-08
Week Two: Topic	**Atoms and Periodic Properties**	
Chapter (s):	Ch-08	
Assignment (s):		Assigned Topics for Research
Week Three: Topic	**Nuclear Reactions**	
Chapter (s):	Ch-13	
Assignment (s):		Assigned Problems from Ch-13
Week Four: Topic	**Nuclear Reactions**	
Chapter (s):	Ch-13	
Assignment (s):		**Exam-01: In-Class Test**
Week Five: Topic	**The Universe**	
Chapter (s):	Ch-14	
Assignment (s):		Assigned Problems from Ch-14
Week Six: Topic	**The Universe**	
Chapter (s):	Ch-14	
Assignment (s):		Assigned Topics for Research
Week Seven: Topic	**The Solar System**	
Chapter (s):	Ch-15	
Assignment (s):		Assigned Problems from Ch-15
Week Eight: Topic	**The Solar System**	
Chapter (s):	Ch-15	
Assignment (s):		Assigned Topics for Research
Week Nine: Topic	**The Solar System**	
Chapter (s):	Ch-15	
Assignment (s):		**Exam-02: Mid-Term**
Week Ten: Topic	**Earth in Space**	
Chapter (s):	Ch-16	
Assignment (s):		Assigned Problems from Ch-16
Week Eleven: Topic	**Earth in Space**	
Chapter (s):	Ch-16	
Assignment (s):		Assigned Topics for Research
Week Twelve: Topic	**Plate Tectonics**	
Chapter (s):	Ch-18	
Assignment (s):		Assigned Problems from Ch-18
Week Thirteen: Topic	**Plate Tectonics**	
Chapter (s):	Ch-18	
Assignment (s):		**Exam-03: In-Class Test**
Week Fourteen: Topic	**In-Class Presentations: Solar System**	
Chapter (s):	Ch-14 and Ch-15	
Assignment (s):		Group Presentations Part I and II
Week Fifteen: Topic	**In-Class Presentations: Earth**	
Chapter (s):	Ch-16 and Ch-18	
Assignment (s):		Group Presentations Part III and IV
Week Sixteen: Topic	**Course Review**	
Chapter (s):		
Assignment (s):		
Week **Seventeen**: Topic	**FINAL EXAM SCHEDULE**	
Chapter (s):		
Assignment (s):		**Exam-04: Final Exam**

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.

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.

Technical Considerations for Online and Web-Assist Courses

Minimum **Hardware and Software Requirements:**

-Pentium with Windows XP or PowerMac with OS 10
-Wireleess or network access
-Internet provider with SLIP or PPP
-8X or greater CD-ROM
-256 MB Ram
-Hard drive with 40MB available space
-15" monitor, 800x600, color or 16 bit
-Sound card w/speakers
-Microphone and recording software
-Keyboard & mouse
-Microsoft Internet Explorer ver. 5.0 /plug-ins, Moczilla Firefox
-Participants should be proficient in the following:
- ·Sending and receiving email
- · Internet searching
- ·Microsoft Word
- ·Acrobat PDF Reader
- ·Windows or Mac O.S.

Netiquette (online etiquette): students are expected to participate in all discussions and virtual classroom chats when directed to do so. Students are to be respectful and courteous to others in the discussions. Foul or abusive language will not be tolerated. When referring to information from books, websites or articles, please use APA standards to reference sources.

Technical Support: Students should call the Prairie View A&M University Helpdesk at 936-261-2525 for technical issues with accessing your online course. The helpdesk is available 24 hours a day/7 days a week. For other technical questions regarding your online course, call the Office of Distance Learning at 936-261-3290 or 936-261-3282

Communication Expectations and Standards:
All emails or discussion postings will receive a response from the instructor within 48 hours.

You can send email anytime that is convenient to you, but I check my email messages continuously during the day throughout the work-week (Monday through Friday). I will respond to email messages during the work-week by the close of business (5:00 pm) on the day following ***my receipt*** of them. Emails that I receive on Friday will be responded to by the close of business on the following Monday.

Submission of Assignments:
Assignments, Papers, Exercises, and Projects will distributed and submitted through your online course. Directions for accessing your online course will be provided. Additional assistance can be obtained from the Office of Distance Learning.

Discussion Requirement:
Because this is an online course, there will be no required face to face meetings on campus. However, we will participate in conversations about the readings, lectures, materials, and other aspects of the course in a true seminar fashion. We will accomplish this by use of the discussion board.

Students are required to log-on to the course website often to participate in discussion. It is strongly advised that you check the discussion area daily to keep abreast of discussions. When a topic is posted, everyone is required to participate. The exact use of discussion will be determined by the instructor.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their PC or a removable drive before posting to the discussion board. This is important for two reasons: 1) If for some reason your discussion responses are lost in your online course, you will have another copy; 2) Grammatical errors can be greatly minimized by the use of the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, it should be copied and pasted to the discussion board.