

PVAMU Course Syllabi Template

Course Title: Science of Everyday Life				
Department of		Physics	College of	Arts & Sciences
Instructor Name:	A. Anil Kumar			
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		P.O. Box	519	
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		Prairie View, TX 77446		
Office Hours:	MTW 10AM - 12 Noon, RF 2 PM - 4 PM			
Virtual Office Hours:	Always accessible via e-mail.			
Course Location:	Room 323, E.E. O'Banion Building			
Class Meeting Days & Times:	MW 3:30 PM - 4:50 PM			
Course Abbreviation and Number:	PHSC 3083			
Catalog Description:	Credit 3 semester hours. Presents a description of daily phenomena, demonstrating how science provides a basis for comprehending them and discusses relationships between various apparently unrelated phenomena.			
Prerequisites:	PHSC 1123			
Co-requisites:	None			
Required Text:	No text is available. Reading materials provided in class and via web.			
Recommended Text:	None			
Access to Learning Resources:	Course Website: http://www.pvamu.edu/pages/5344.asp 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 or Overview:				
	The goal of this course is to expose the science behind everyday things that students see or use, help them enhance their appreciation for the human ingenuity that created them, and most importantly, be able to communicate with their own students in schools.			

Course Objectives/Accrediting Body (NCATE, ABET, NAAB, etc...) Standards Met: (standards will depend on the course)				
At the end of this course, the student will				
		Alignment with Academic Program		Alignment with Core Curriculum
1	Demonstrate an understanding of the science behind the most natural and commonly observed phenomena and employed devices by providing clear explanations	Science requirement for education majors		Enhance and expand on the Physical Science I & II courses
2	Demonstrate a comprehension of the scientific process – observation, inference, model building – by analyzing a given system	Science requirement for education majors		Enhance and expand on the Physical Science I & II courses
3	Discuss the new Texas 4x4 graduation plan, compare with the previous 3x3 plan, and offer a prescription for the steps necessary to take to adapt to the new plan	Science requirement for education majors		Enhance and expand on the Physical Science I & II courses
4	Compare science education standards in Texas, a few selected states across the nation and a few selected countries	Science requirement for education majors		Enhance and expand on the Physical Science I & II courses
5	Develop a detailed lesson plan for physics/physical science curriculum for the grade level of your interest	Science requirement for education majors		Enhance and expand on the Physical Science I & II courses

Course Evaluation Methods

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

Exams – written tests designed to measure knowledge of presented course material

Papers – Papers on specific topics relating to the course

Projects – Both open-ended and specific projects

Panel Discussions

Presentations

Class Participation – daily attendance and participation in class discussions

Grading Matrix

Instrument	Value (points or percentages)	Total
Panel Discussions	2 at 10 points each	20
Presentations	2 at 10 points each	20
Papers	8 papers at 10 points each	80
In-Class Exam (Mid-Term)	1 at 50 points	50
Projects	2 projects at 20 points each	40
Class Participation/Discussion	5	5

Final Term Paper	15	15
Final Presentation	20	20
In-Class Exam (Final)	1 at 50 points	50
Total:		300

Grade Determination:

- A = 300 – 280 pts;
- B = 279 – 260 pts;
- C = 259 – 230 pts;
- D = 229 – 190 pts;
- F = 189 pts or below

Course Procedures: A strict code of ethics will be imposed during the entire session. You shall take a pledge that you will not copy, steal or plagiarize someone else's work nor will you tolerate anyone else doing the same. You must ensure that all your reports are written by you in your own words. Any material taken from a published report (in print or on the web) must be given appropriate credit by providing a reference. Read the copyright statement carefully so that the conditions under which the report or some material from it is cited, are met. It shall be the policy in this course to discourage any such activity to the extent possible rather than punish. HOWEVER, IN FAIRNESS TO ALL CONCERNED, CHEATING AND PLAGIARISM WILL BE DEALT WITH SEVERELY WHEREVER THEY ARE FOUND. You are advised to read and abide by the rules and the regulations of the University as mentioned in the Catalog, in particular the topics Student Life and Academic Regulations. Graduating means more than completing a certain number of hours and obtaining a reasonable GPA. You must strive to develop a code of strict conduct, acquire a sense of discipline, serve as a role model to your juniors and in particular experience the feeling of accomplishment.

If you have any questions or have any problems that you think I may be able to help with, please do not hesitate to contact me. I am here to help. Learning does hurt. But I am here to make it hurt a little less.

HAVE A PRODUCTIVE AND AN ENJOYABLE SEMESTER!

Submission of Assignments: All assignments should be submitted on or before the deadline. No makeup assignments will be allowed except under documented emergencies (See Student Handbook).

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. The final documents submitted MUST be in MS Word format.

Microsoft PowerPoint is the required format for all presentations.

Exam Policy

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

Case Studies:

Christiaan Eijkman, Beriberi and Vitamin B1

http://nobelprize.org/educational/medicine/vitamin_b1/eijkman.html

Ease of Development on BlackBerry Solution Paves the Road for Remote Patient Monitoring System

http://na.blackberry.com/newsroom/success/UHN_TCS.pdf

Professional Organizations and Journals

1. What is Science? by Richard Feynman, Presented at the fifteenth annual meeting of the National Science Teachers Association, 1966 in New York City, and reprinted from The Physics Teacher Vol. 7, issue 6, 1968, pp. 313-320 <http://southerncrossreview.org/32/feynman3.htm>

2. http://www.stmary.ws/physics/home/links/physics_in_everyday_life.htm
3. Rising Above The Gathering Storm: Energizing and Employing America for a Brighter Economic Future (2005)
4. Creating A High School Diploma that Counts, American Diploma Project Network
5. Less Than Proficient, A Review of the Draft Science Framework for the 2009 National Assessment of Educational Progress, Thomas B. Fordham Foundation Report (2005)
6. Teacher Education: Coming Up Empty, Thomas B. Fordham Foundation Publication (2006)
7. No Dream Denied, A Pledge to America's Children, National Commission on Teaching and America's Future (2003)
8. Students failing in science proficiency <http://www.timesguardian.com/2006/011106/011106-3.html>
9. The State of State SCIENCE Standards, Thomas Fordham Institute (2005)
http://www.edexcellence.net/detail/news.cfm?news_id=352
10. College Board 2007 Results on graduation statistics from U.S. schools
<http://www.collegeboard.com/press/releases/152694.html>
11. Case Studies of Science Education Reform with inquiry-based instruction
<http://www.nsrconline.org/pdf/ScienceAchievementStudies.pdf>
12. Asan, A. (2007). Concept Mapping in Science Class: A Case Study of fifth grade students. *Educational Technology & Society*, 10 (1), 186-195. http://www.ifets.info/journals/10_1/17.pdf

References

1. How Things Work – The Physics of Everyday Life, by Louis Bloomfield, Third Edition, John Wiley & Sons, Inc. (2006).
2. How Stuff Works: <http://www.howstuffworks.com/>
3. Mad About Modern Physics – Braintwisters, Paradoxes and Curiosities, by Franklin Potter and Christopher Jargodzki, John Wiley & Sons, Inc. (2005).
4. The Flying Circus of Physics, Second Edition, by Jearl Walker, John Wiley & Sons, Inc. (2007).
5. How to Dunk a Doughnut – The Science of Everyday Life, by Len Fisher, Weidenfeld and Nicolson (2002).
6. The Last Word from New Scientist – Questions and Answers on Everyday Science, Edited by Mick O'Hare, Oxford University Press (2000).
7. The Science of Everyday Life Everyday Kitchen, Household Science makes Learning Fun http://early-childhood-development.suite101.com/article.cfm/the_science_of_everyday_life
8. Inventing the 20th Century – 100 Inventions that Shaped the World: From the Airplane to the Zipper, by Stephen van Dulken, Barnes & Noble (2007)
9. You Are Here – Exposing the Vital Link Between What We Do and What That Does to our Planet, Thomas M. Kostigen, Harper One (2008)
10. Talking Science - <http://www.talkingscience.org/>
11. The Science Babe - <http://www.thesciencebabe.com/>
12. The Story of Stuff – Annie Leonard, Free Press (2010)

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.