

**PS 3312 (section 010): Physical Science Concepts II**  
**Course Syllabus for Spring 2006, MWF 8:00-8:50 am**

Instructor: Dr. Wayne Keith (942-2524 x227, [wayne.keith@angelo.edu](mailto:wayne.keith@angelo.edu))  
Office Hours: VIN 123 - MW 9-11, TR 9:30-11, WR 2-3, and F 9-10  
Web: <http://physics.angelo.edu/~wkeith> and <http://blackboard.angelo.edu>  
Text: *Advanced Physical Science Vol. 2*  
Required: calculator, paper, pencil

**Course Description:** An interactive course designed to study physical systems concerning electricity and magnetism, heat and energy, properties of matter and chemical reactions. Teams of four students will conduct the investigations. Team assignments will be made at the beginning of the term and may be changed at any time during the term. Grades will be based on three exams, a daily grade, homework, and projects.

**Course Goal:** To explore through inquiry the concepts of voltage, current, heat, density and viscosity; forms of energy, mixtures and solutions, and physical and chemical properties of matter.

**Grading:**

**25%** Daily grade: attendance, class participation, and journal entries.

**25%** Homework/projects

**30%** Exams: (15% for each exam)

**20%** Final Exam

**ADA Statement:** Persons with disabilities which may warrant academic accommodations must contact the Student Life Office, Room 112 University Center, in order to request such accommodations prior to any accommodations being implemented. You are encouraged to make this request early in the semester so that appropriate arrangements can be made.

**Academic Honesty:** Angelo State University expects its students to maintain complete honesty and integrity in their academic pursuits. Students are responsible for understanding the Academic Honor Code, which is contained in both print and web versions of the Student Handbook.

**Attendance:** Students are expected to be in class on time and to attend all class meetings. Since this class is founded on the principles of inquiry-based learning, attendance is of utmost importance. Absences for any reason will result in a reduction of the course grade according to the following table:

Number of absences	Reduction in final grade
1	0%
2	0%
3	0%
4	2%
5	4%
6	8%
7	16%
8	24%
9	32%
10 or more	Automatic F for the course

### PS 3312.010 Spring 2006 Course Schedule

All dates are tentative and subject to change except **bold** dates.

<b>Date</b>	<b>Tentative Topic</b>
1/18	Introduction
1/20	E1(1,2)
1/23	E1(3,4,5) and The Van de Graff generator
1/25	E2(1,3,5)
1/27	E2(6)
1/30	E3(1,2,3)
2/1	E3(4)
2/3	E3(5)
2/6	E4(1,2)
2/8	E4(3)
2/10	E5(1,2)
2/13	E5(3)
2/15	E5(4b,5,6)
2/17	Fuses and Generators
2/20	Magnets and Motors
2/22	Advanced Circuits, Review
<b>2/24</b>	<b>Test 1</b>
2/27	H1(1,2,3)
3/1	H2(1)
3/3	H2(2a)
3/6	H3(1)
3/8	H3(4,6)
3/10	H4(1,2,3)
<b>3/13 – 3/17</b>	<b>Spring Break</b>
3/20	H4(3,4)
3/22	H5(1,3)
<b>3/24</b>	<b>Physics Conference at ASU (no class)</b>
3/27	Energy Transformations
3/29	Ice Cream, Review
<b>3/31</b>	<b>Test 2</b>
4/3	M1(1,2,3,4)
4/5	M1(5,6,7)
4/7	M2(1,2)
4/10	M2(3 with discussion)
4/12	M3(1)
<b>4/14</b>	<b>Easter Holiday</b>
4/17	M3(2,4,5)
4/19	M4(1,3,4,5)
4/21	The particulate nature of matter
4/24	M5(1,2), Advanced Chemical Reactions
4/26	Qualitative Analysis in Chemistry
4/28	Acids, Base Indicators (M7)
5/1	Chromatography
5/3	A brief look at the Weather - Meteorology
5/5	Combustion Reactions and Review
<b>5/8</b>	<b>Final Exam (Tuesday at 8:00am)</b>