IDS 2403 Physical Science & IDS 3201 Advanced Physical Science Lab

Spring 2008

Syllabus

Instructor:

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Office Phone:
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Print this Syllabus and add it to your course notes

Office Hours: By appointment

Office Location: Main Building 1.302

Course Prerequisites

College-level algebra or higher math. UTSA students must have completed core curriculum requirements.

Course Description

IDS 2403 - (3-0) 3 hours credit.

This conceptually-based course provides nonscience majors with an interdisciplinary survey of topics in physics and chemistry. Major themes include energy, forces, and atomic and subatomic interactions. Specific topics may include, but are not limited to: density, motion, work, power, waves, thermodynamics, electromagnetism, relativity, atomic and subatomic interactions, as well as acids and bases.

IDS 3201 - (0-3) 1 hour credit.

Familiarizes students with laboratory tools and techniques and allows them to form a better understanding of topics in physics and chemistry by experimentation. Major themes include energy, forces, and atomic and subatomic interactions.

Course Goals:

1. Providing students with a conceptual introduction to a variety of topics in physics and chemistry.

2. Guiding students with a math phobia and/or science phobia toward overcoming these obstacles to learning in the sciences and to appreciate the role of science in everyday interactions.
3. Helping non-science majors who plan to teach at the elementary and middle-school levels to gain a basic understanding of scientific principles so that they are better equipped to address these in their future classrooms.

Students will:

demonstrate estimation, measurement, and observation skills;
manipulate variables, observe natural phenomena, analyze data, and draw conclusions;
solve problems and pose multiple solutions;
define concepts, apply rules, articulate principles;
practice safe laboratory rules;
collaborate, communicate, and interact with course members, instructor, and others.

Course Materials

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(1) *Conceptual Physical Science*, 3rd ed, by Hewitt, Suchocki, Hewitt (publisher: Pearson/Addison-Wesley; ISBN 0-321-26430-4) -- If you are near the University of Texas at San Antonio (UTSA), you can purchase the textbook at the bookstore. However, if you are not located closely to UTSA, you can purchase the book directly from the publisher through this link: http://www.aw-bc.com/catalog/academic/product/0,1144,0321264304,00.html

(2) Scientific calculator (non-graphing) - examples: TI30 or TI36 series calculators are available for less than $20.

Special Accommodations

If a student requires accommodations related to a disability, he or she should make an appointment with the course instructor to discuss these special needs. See Disabled Student Services.

Course Conventions

Taking a course online is very different than attending a course on campus. Although the course is designed to support your learning, you must be prepared to learn in a different way. The VARK Learning Style Evaluation is a good starting point for you to find out what your learning preferences and strengths are. Once you have completed the questionnaire and received feedback, take a little time to think about incorporating some of the suggested activities in your learning patterns.

Some critical issues in whether you will enjoy this course and will successfully master the content are the following:

1. You must have access to a computer and the Internet, and you must know how to use both.
2. You need to be a motivated and disciplined learner with good time management skills - it is easy to fall behind.
    - Be an active participant in your own learning
    - Self-direct your learning through self-discipline and metacognition

3. You are open to communication with the instructor and your classmates through e-mail and online discussions.
4. You are willing to
    - Ask questions when you are unsure of what to do
    - Report problems with either technology or assignments
    - Turn in assignments on time

UTSA Standard of Conduct

Students are expected to be above reproach in scholastic activities. Students who violate University rules on scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the University. "Scholastic dishonesty includes, but is not limited to cheating, plagiarism, collusion; the submission for credit any work or materials that are attributable in whole or in part to another person; taking an exam for another person; any act designed to give unfair advantage to a student; or the attempt to commit such acts" (Regent's Rules and Regulations, Part One, Chapter VI, Section 3, subsection 3.2, subdivision 3.22). Since scholastic dishonesty harms the individual, all students and the integrity of the University, policies on scholastic dishonesty will be strictly enforced. See http://www.utsa.edu/infoguide/appendices/b.cfm for the Student Code of Conduct.

Plagiarism

If you are not sure what constitutes plagiarism, please visit http://www.indiana.edu/~wts/wts/plagiarism.html.

Course Design

Assignments: These include online discussions, reports on virtual and hands-on labs, and a web-based project.

Readings: Readings consist of online and textbook assignments. Expect a minimum of 40 pages per week.

Tests: The midterm and final exam will consist of short-answer essays and will be open book and open notes.

Assessment

Varied formative and summative assessment components are collected throughout the semester. Each chapter module will be accompanied by a hands-on exploration and a discussion board collaborative component. If an assignment is turned in late, 10 points will be deducted for every day that it is late, regardless of the reason. In addition, students will submit a group project on a science topic. The midterm and final exam will allow students to apply understanding they gained in solving a problem based on the topics explored in the course of the semester.

Grading Scale			Grade Distribution		
	> 90	A		Lab Reports:	25%
	89 - 80	B		Midterm (Covering	15%

		Physics Only):	15%
		Final Exam (Covering Chemistry Only):	
79 - 70	C	Project:	15%
69 - 60	D	HG Assignments:	30%
< 60	F		

General Statements

If you are planning to become a certified teacher in Texas, please click here for a document detailing the SBEC standards addressed in this course.

For technical support on this UT Telecampus course, please visit http://www.telecampus.utsystem.edu/technicalsupport.aspx

UTTC Digital Library

http://www.telecampus.utsystem.edu/LearningResources/Library.aspx

The UTTC Digital Library supports students and faculty through remote access to more than 61 electronic databases and resources including more than 25,000 unique title full-text electronic journals and more than 45,000 ebooks. The UTTC Librarian provides reference and research assistance Monday through Friday from 8 a.m. to 5 p.m. Central time, offers Ask-A-UT System-Librarian Chat Service Monday through Friday from noon until 6 p.m. Central time, issues TexShare cards for borrowing privileges at participating academic and public libraries in Texas and offers a document delivery service with return postage pre-paid for materials not available online.

Smarthinking

http://www.smarthinking.com/

UTTC students each have a Smarthinking account, which they link to through a Blackboard portal as well as the course tools area. The Smarthinking Writing Center includes a comprehensive Writers Handbook and an ESL Writers Handbook. Additionally, students may submit papers for extensive feedback from well-qualified and trained e-structors within 24 hours. There is a Grammar Center for answering quick questions and a Brainstorming Center for paper topic ideas. Smarthinking also offers tutoring support for all core subjects; students may schedule one session or receive ongoing tutoring. Smarthinking also provides career resources, as the writing center will help students with resumes and cover letters. The Telecampus encourages the integration of Smarthinking resources and services as a tool that improves the quality of the writing they receive from students, while offering the students opportunities to improve their individual writing skills.

UTSA Diversity Statement

The University of Texas at San Antonio (UTSA) is committed to the success of every student, staff and faculty member – on campus, at work and in life. For all members of our university community to excel, we must preserve freedom of thought and

expression and promote a climate of respect that honors the rights, safety, dignity and worth of every individual. We choose to be members of this community and pledge our respect for the well-being of all its members.

To further strengthen our wonderful UTSA community, we affirm the following values:

- **RESPECT**. We respect the dignity, worth and contribution of all individuals.
- **INCLUSIVENESS**. We include people of every race, culture, ethnicity, ability, religion, gender, sexual orientation and socio-economic status, and we include a diversity of ideas and points of view.
- **RESPONSIBILITY**. We take responsibility for struggling against and eliminating hate, injustice, discrimination, harassment, bigotry, violence or intimidation of any kind.
- **SELF-EXAMINATION**. We examine our own biases and struggle against racism, sexism, homophobia and other forms of oppression.
- **CIVILITY**. We recognize differences among people as a natural thing and see each new experience working with diverse groups as an opportunity to be better than we were before. We listen, and when we disagree, we work to resolve all disagreements with integrity.
- **INTEGRITY**. We practice personal and academic integrity and value service, citizenship and leadership.
- **CELEBRATION**. We celebrate all of the many backgrounds, experiences, similarities and differences among members of the university community.

For all our differences, we share one world.

To embrace diversity is to welcome the differences and delight in the sharing.

Department of Interdisciplinary Learning and Teaching Mission and Goal Statements:

MISSION

The mission of the department of ILT is to foster the intellectual and professional growth and integrity of students and faculty through critical reflection and dialogue, civic responsibility, and leadership. This mission will be accomplished by nurturing a community of interdisciplinary learners who:

Promote excellence in academic and pedagogical knowledge and research
Engage in reflective practice
Embody a strong professional identity and can articulate their philosophies and values
Value diversity and multiple perspectives

Promote equality and social justice
Care about their students and their profession
Advocate for educational change and reform

GOALS

The department of ILT will create a context that nurtures interdisciplinary learners who:

Acquire and demonstrate content and discipline knowledge
Demonstrate an awareness and acknowledgement of and engagement in research-based, reflective, culturally responsive practices
Are producers, disseminators, and critical consumers of research
Demonstrate an awareness and acknowledgment of and engagement in social justice and equitable practices
Articulate their professional philosophy and demonstrate a strong professional identity