CREDIT COURSE OUTLINE

I. COVER PAGE

(1) PHYS 30	(2) PHYSICAL SCIENCE	(3) 3
Number	Title	Units

(4)	Lecture / Lab Hours:				(8)Classification:			
	Total Course Hours							
		Total Lec hours:		54.00			Degree applicable:	X
		Total Lab hours:		0			Non-degree applicable:	
		Total Contact hours:		54.00			Basic skills:	
	Lec will generate 0 hour(s) outside work.				(9)RC		Fulfills AS/AA degree requirement: (area)	
	Lab will generate 0 hour(s) outside work.						General education category:	
							Area A Natural Sciences	
(5)	Grading Basis:	Grading Scale Only					Major:	
		Pass/No Pass option		X			Certificate of:	
		Pass/No Pass only					Certificate in:	
(6)	Advisories: Eligibility for Math 101 Eligibility for English 126 Eligibility for English 125				(10)CSU		Baccalaureate:	X
					(11)Repeatable: (A course may be repeated three times)			0
(7)	Pre-requisites(requires C grade or better):							
	Corequisites:							

(12) Catalog Description:
This is a survey course that introduces students to basic physical science principles in the topics of mechanics, work and energy, chemical elements and bonding, selected topics in astronomy.

II. COURSE OUTCOMES:

(Specify the learning skills the student demonstrates through completing the course and link critical thinking skills to specific course content and objectives.)

Upon completion of this course, students will be able to:

A. Recognize and use new vocabulary words specific to physical science.
B. Demonstrate college level communication skills both written and verbal as they apply to technological information. This skill could be applied, for example, in the selection of products or services in our technologically advanced society.
C. Recognize and manipulate graphs and mathematical problems as they relate to physical science topics as they appear in periodicals and books.

III. COURSE OBJECTIVES:

(Specify major objectives in terms of the observable knowledge and/or skills to be attained.)

In the process of completing this course, students will:

A. Develop new physical science vocabulary as it is used in printed periodicals.
B. Learn to apply basic algebra skills to physical science problems.
C. Read physical science periodicals and write research papers at the college level.

D. Develop sound reasoning skills as they are applied in physical science topics.

IV. COURSE OUTLINE:

Lecture Content:

A. Part One: Overview of Physics
1. Measurement and motion
2. Force
3. Work and energy

B. Part Two: Overview of Chemistry
1. Chemical Elements
2. Chemical Bonding and Reactions
3. Organic Chemistry

C. Part Three: Overview of Astronomy
1. Solar system overview and planets
2. Moon and other solar system objects
3. Our sun and the stars

D. Part Four: Overview of Geology
1. Minerals and Rocks
2. Structural geology
3. Surface processes and geologic time

V. APPROPRIATE READINGS

Reading assignments may include but are not limited to the following:

A. Sample Text Title:
1. Recommended - Hewitt, P *Conceptual Physical Sciences,* ed. 4 Addison Wesley, New York, 2008,

B. Other Readings
1. Recommended - *1. Selected articles from Scientific American, Astronomy!, Sky and Telescope, Science and other scientific magazines 2. Various internet articles*

___ Global or international materials or concepts are appropriately included in this course
___ Multicultural materials and concepts are appropriately included in this course

If either line is checked, write a paragraph indicating specifically how global/international and/or multicultural materials and concepts relate to content outline and/or readings.

VI. METHODS TO MEASURE STUDENT ACHIEVEMENT AND DETERMINE GRADES:

Students in this course will be graded in at least one of the following four categories. Please check those appropriate. A degree applicable course must have a minimum of one response in category A, B, or C.

A. Writing Check either 1 or 2 below	
X	***1. Substantial writing assignments are required. Check the appropriate boxes below and provide a written description in the space provided.***
	2. Substantial writing assignments are NOT required. If this box is checked leave this section blank. For degree applicable

	courses you must complete category B and/or C.		
X	a) essay exam(s)	X	d) written homework
X	b) term or other paper(s)		e) reading reports
	c) laboratory report(s)		f) other (specify)

Required assignments may include but are not limited to the following:
There will be essay questions on the exams, a short essay (term paper) and the homework will require some essay questions be answered.

B. Problem Solving Computational or non-computational problem-solving demonstrations, including:			
X	a) exam(s)		d) laboratory reports
X	b) quizzes		e) field work
X	c) homework problems		f) other (specify):

Required assignments may include but are not limited to the following:
There will be simple computations required on the exams and quizzes, as well as on the homework assignments.

C. Skill demonstrations, including:			
	a) class performance(s)		c) performance exams(s)
	b) field work		d) other (specify)

Required assignments may include but are not limited to the following:

D. Objective examinations including:			
X	a) multiple choice	X	d) completion
X	b) true/false		e) other (specify):
X	c) matching items		

COURSE GRADE DETERMINATION:
Description/Explanation: Based on the categories checked in A-D, it is the recommendation of the department that the instructor's grading methods fall within the following departmental guidelines; however, the final method of grading is still at the discretion of the individual instructor. The instructor's syllabus must reflect the criteria by which the student's grade has been determined. (A minimum of five (5) grades must be recorded on the final roster.)

If several methods to measure student achievement are used, indicate here the approximate weight or percentage each has in determining student final grades.
25% Homework 50% Exams 25% Participation

VII. EDUCATIONAL MATERIALS

For degree applicable courses, the adopted texts, as listed in the college bookstore, or instructor-prepared materials have been certified to contain college-level materials.

Validation Language Level (check where applicable):	College-Level Criteria Met YES	NO
Textbook	X	
Reference materials	X	
Instructor-prepared materials	X	
Audio-visual materials	X	

Indicate Method of evaluation:

Used readability formulae (grade level 10 or higher)		
Text is used in a college-level course	X	
Used grading provided by publisher		
Other: (please explain; relate to Skills Levels)		
		X

Computation Level (Eligible for MATH 101 level or higher where applicable)

Content

Breadth of ideas covered clearly meets college-level learning objectives of this course	X	
Presentation of content and/or exercises/projects:		
Requires a variety of problem-solving strategies including inductive and deductive reasoning.	X	
Requires independent thought and study	X	
Applies transferring knowledge and skills appropriately and efficiently to new situations or problems.	X	

List of Reading/Educational Materials

Recommended - Hewitt, P *Conceptual Physical Sciences,* ed. 4 Addison Wesley, New York, 2008, ISBN: 9780321516954

Comments:

_____ This course requires special or additional library materials (list attached).

X This course requires special facilities:
Science lab classroom for lecture demonstrations.

Attached Files:

BASIC SKILLS ADVISORIES PAGE The skills listed are those needed for eligibility for English 125, 126, and Math 101. These skills are listed as the outcomes from English 252, 262, and Math 250. In the right hand column, list at least three major basic skills needed at the beginning of the target course and check off the corresponding basic skills listed at the left.

(eligibility for Math 101) (as outcomes for Math 250) __X__ Performing the four arithmetic operations on whole numbers, arithmetic fractions, and decimal fractions. __X__ Making the conversions from arithmetic fractions to decimal fractions, from decimal fractions to percents, and then reversing the process. __X__ Applying the concepts listed above to proportions, percents, simple interest, markup and discount. __X__ Applying the operations of integers in solving simple equations. __X__ Converting between the metric and English measurement systems	Students will use: 1. the four arithmetic functions to complete homework assignments. 2. fraction to decimal conversions to complete homework assignments. 3. both the above listed, as well as the remaining math skills on examinations.
(eligibility for English 126) (as outcomes for English 262) __X__ Using phonetic, structural, contextual, and dictionary skills to attack and understand words. __X__ Applying word analysis skills to reading in context. __X__ Using adequate basic functional vocabulary skills.	Students will use reading skills: 1. while completing their

__X__ Using textbook study skills and outlining skills. __X__ Using a full range of literal comprehension skills and basic analytical skills such as predicting, inferring, concluding, and evaluating.	homework assignments. 2. reading skills during examinations. 3. while completing their research paper.
(eligibility for English 125) (as outcomes for English 252) __X__ Writing complete English sentences and avoiding errors most of the time. __X__ Using the conventions of English writing: capitalization, punctuation, spelling, etc. __X__ Using verbs correctly in present, past, future, and present perfect tenses, and using the correct forms of common irregular verbs. __X__ Expanding and developing basic sentence structure with appropriate modification. __X__ Combining sentences using coordination, subordination, and phrases. __X__ Expressing the writer's ideas in short personal papers utilizing the writing process in their development.	Students will use writing skills: 1. to complete their homework assignments. 2. during examinations. 3. while completing their research papers.
Check the appropriate spaces. __X__ Eligibility for Math 101 is advisory for the target course. __X__ Eligibility for English 126 is advisory for the target course. __X__ Eligibility for English 125 is advisory for the target course. *If the reviewers determine that an advisory or advisories in Basic Skills are all that are necessary for success in the target course, stop here, provide the required signatures, and forward this form to the department chair, the appropriate associate dean, and the curriculum committee.*	

CONTENT REVIEW

REQUISITES
No requisites