Course Profile - Department of Physics

Course Number : PHYS 141	**Course Title :** Science and Nature I
Required / Elective : elective	**Pre / Co-requisites :** -
Catalog Description: The workings of nature (comprising the physical universe and living organisms). Introduction of some of the basic concepts of our knowledge of nature; natural laws in their interconnectivity; the way science operates; the method of scientific thinking. Probing a scientific question in practice. The answers that we have -or don't have as yet.	**Textbook / Required Material :** James Trefil, Robert M. Hazen The Sciences: An Integrated Approach Wiley 5th Edition, 2007
Course Structure / Schedule : (3+0+0) 3 / 5 ECTS	
Extended Description : This course is designed for science non-majors students who are not on the track to become scientists or engineers, and aims to give a multidisciplinary understanding of science and nature. It will focus on examining few universal laws that describe the behaviour of our world, which is increasingly dominated by science and technology. A broad range of issues such as matter and energy, forces and motions will be investigated in an integrative manner and in relation to great ideas in science. Discussions will be enhanced through presentations and by watching documentary films in the relevant topics.	
Design content : None	**Computer usage**: No particular computer usage required

Course Learning Outcomes [relevant program outcomes in brackets]:

1. to apply analytical and critical thinking skills to contemporary global issues ().

2. to describe the interrelationships between science, technology, and society ().

3.to demonstrate an ability to function on teams().

4. to improve students' oral and written communication skills()

Recommended readings

1.Robert N. March, Physics for Poets, Vol. I (3rd Edition) McGraw-Hill Pub. 1996

2.Paul Hewitt Conceptual Physics, 8th Edition, , Addison Wesley, 2001

3.Raymond Chang, Chemistry, 9th edition,McGraw-Hill

Teaching methods

Class participation: Pre-readings, lecture and class discussions, individual readings and team work for presentation.

Assessment methods (Related to course outcomes)**:**

Two mid-term examinations, a final examination, homework assignments, quizzes, class presentation.

Student workload:

Pre-class reading .....25 hrs

Lectures ……45 hrs

Homework preparatory reading ……30 hrs

Literature review for research …… 15 hrs

Team work for presentation …….10 hrs

TOTAL …… 125 hrs …… to match 25x5 ECTS

Prepared by : Prof. Dr. Betül Kırdar, 01.02.2010	**Revision Date :**