Course Profile - Department of Physics

Course Number : BIO150	**Course Title :** Introduction to Genetics
Required / Elective : elective	**Pre / Co-requisites :** -
Catalog Description: Mendelism; the basic principles and chromosomal basis of inheritance. Linkage, recombination, crossing over. Molecular structure of chromosomes. Structure and function of the genes. Mutations. Elementary principles of population and evolutionary genetics.	**Textbook / Required Material :** Principles of Genetics D. Peter Snustad & Michael J. Simmons, Wiley, 5th Edition

Course Structure / Schedule : (3+0+0) 3 / 5 ECTS

Extended Description : This course is designed for engineering students to provide fundamental principles of genetics which is placed in the center of a technological revolution affecting society. It will focus on the important concepts of classical, molecular, and evolutionary genetics. Observational and experimental evidence will be integrated with logical analysis in the development of the key concepts of genetics. Analysis of experimental data and problem solving will be emphasized.

Design content : None	**Computer usage**: No particular computer usage required

Course Learning Outcomes [relevant program outcomes in brackets]**:**

1.to provide information on fundamental principles of genetics (?)

2.to develop analytical and critical skills of students to solve problems (?)

3.to analyze the expermental data(?)

3.to analyze how the applications of these current developments in genetics shape human life and society (?)

Recommended reading
                The New Genetics

                NIH Publication No. 07-662

                http://www.nigms.nih.gov

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 :**