 **Date:** Sep. 2015

Course Name and Number:

Introduction to Biology 1-2

80-055-01

80-056-01

**Type of course:**Lecture

**Year of Studies:** 2015-2016 **Semester:** Fall & Spring **Hours/credits**: 3

**The courses objectives: (Overall Objectives/ Specific Objectives)**

Introduction to major biological concepts and cellular processes common to various life forms.

First semester- introduction to cellular biology; second semester- human physiology. Language: English

**Course Description:**

Emphasis will be placed on cell structure and function, energy transformation, genetics and molecular biology, ecology, homeostatic mechanisms and current issues in biology

**The Process of the Course:**

**(Teaching Methods, use of technology, Guest Speakers)**

Frontal lectures, overhead transparencies, ppt presentation, animations, movies,

**Detailed Lesson plan:**

**Fall Semester**

|  |  |  |  |
| --- | --- | --- | --- |
| Comment | Required Reading | Topic of the Lesson | Number of Lesson |
|  | Ch. 1 | Introduction; interdependency of biological systems | 1 |
|  | Ch. 3 | The chemistry of life: organic compounds | 2 |
|  | Ch. 4 | Cell structure & function | 3 |
|  |  | Con’t. | 4 |
|  | Ch. 5 | Biological membranes | 5 |
|  | Ch. 6-8 | Enzymes & metabolic reactions | 6 |
|  | Ch. 9 | Cell cycle: mitosis | 7 |
|  |  | Meiosis- cloning | 8 |
|  |  | cont | 9 |
|  | Ch. 11 | DNA: The molecular basis of inheritance | 10 |
|  | Ch. 12 | DNA – RNA - Proteins | 11 |
|  |  | Current Topics | 12 |

**Spring Semester**

|  |  |  |  |
| --- | --- | --- | --- |
| Comment | Required Reading | Topic of the Lesson | Number of Lesson |
|  | Ch 10 | Mendelian genetics | 1 |
|  |  | Corn & population genetics | 2 |
|  |  | Mendelian genetics (con’t) | 3 |
|  | Ch. 13 | Human genetics and gene regulation | 4 |
|  |  | Current Topics in genetic Engineering | 5 |
|  | Ch. 45 | The digestive system | 6 |
|  |  | Con't  | 7 |
|  | Ch. 44 | Respiratory Sustem | 8 |
|  | Ch. 42 | Physiology of the circulatory system | 9-11 |
|  | Ch. 43 | Blood and body defenses | 12 |
|  |  | AIDS | 13 |
|  | Ch. 53 | Interactions of Life: Ecology | 14 |

**Grade Components: Number grade.**

Final – 50%

Midterm – 50%

**Required textbooks, other textbooks:**

Biology 5th- 8th Edition , Solomon, Berg, Martin