

# Course Syllabus

Barbara Scown      **Biology 1408 for Non-Majors**

**Fall 2011**

**NOTE: This syllabus is subject to change during the semester . Please check this syllabus on a regular basis for any updates.**

|                     |   |                             |
|---------------------|---|-----------------------------|
| <b>Department</b>   | : | Biology                     |
| <b>Course Title</b> | : | 1408 Biology for Non-Majors |
| <b>Section Name</b> | : |                             |
| <b>Start Date</b>   | : | 8/23/2011                   |
| <b>End Date</b>     | : | 12/8/2011                   |
| <b>Modality</b>     | : | Face- to - Face             |
| <b>Credits</b>      | : | 4                           |

## Instructor Information

|                   |   |                         |
|-------------------|---|-------------------------|
| <b>Name</b>       | : | Barbara Scown           |
| <b>OC Email</b>   | : | bscown@pbtisd.esc18.net |
| <b>OC Phone #</b> | : | 432-448-3179            |

## Course Description

BIOL 1408 Introduction to Biology I (26.0101.5103) (3-3)

4 hours

This course is a survey of biology including molecular and cellular biology, genetics, DNA, evolution and ecology. The cellular and molecular basis of life will be emphasized. Current topics in biology and medicine will be discussed. Designed as a transferable lab science course for non-science majors. Lab fee required.

## Prerequisites/Corequisites

None

## Scans

(SCANS 3, 6, 9)

## Course Objectives

1. Learner will be able to identify the significant concepts of the atom and how it forms bonds with other atoms to form molecules.
2. Learner will be able to explain the difference between inorganic molecules and organic molecules and recognize the various forms of each and the significance of these forms as they relate to living organisms.
3. Learner will be able to identify the 4 macromolecular molecules found common to living organisms and their units of structure as well as their functions important for life.
4. Learner will be able to understand the cell in terms of its anatomical structure and the functions of each structure and understand the processes by which substances move into and out of the cell.
5. Learner will be able to explain energy production and utilization by the different forms of cells which are common to our planet.
6. Learner will be able to understand the heredity of life and the alterations which occur in it's structure and the consequences of these alterations.
7. Learner will be able to recognize the importance of evolution to the continuity of living forms and the various forms of support for evolution.
8. Learner will be able to understand the various concepts of ecology required to have a rudimentary grasp of its aspects.

## Required Readings/Materials

You must purchase the following **required** readings/materials:

*Biology: A Guide to the Natural World*, 5th ed. by David Krogh, Pearson Publishing Co.

## Course Requirements (Assignments and Assessments)

| Due              | Description  | Type        |
|------------------|--|-------------|
| <b>August</b>    |  |             |
| Tu 23            | Biological Themes; Characteristics of Life                                 | Lecture/Lab |
| Th 25            | Biological Processes; Scientific Method                                    | Lecture/Lab |
| Tu 30            | Eukaryotic and Prokaryotic Cells (structure and function)                  | Lecture/Lab |
| <b>September</b> |  |             |
| Th 1             | Prokaryotic and Eukaryotic cells (cont) ( <u>Exam 1</u> )                  | Lecture/Lab |
| Tu 6             | Cell theory, Levels of Organization  | Lecture/Lab |
| Th 8             | Chemistry—Composition of Matter  | Lecture/Lab |
| Tu 13            | Chemistry of Cells   | Lecture/Lab |
| Th 15            | Biochemistry (Photosynthesis and Respiration)                              | Lecture/Lab |
| Tu 20            | Cell Membrane and it's Environment   | Lecture/Lab |
| Th 22            | Osmosis&Cell (hypotonic, hypertonic, isotonic solutions) ( <u>Exam 2</u> ) | Lecture/Lab |
| Tu 27            | Genetic Code-Nucleic Acids   | Lecture/Lab |

Th 29 Genetic Code-DNA and Replication Lecture/Lab

**October**

Tu 4 Genetic Code-RNA and Protein Synthesis Lecture/Lab

Th 6 Genetic Code-Transcription And Translation Lecture/Lab

Tu 11 Genetic Code-Transcription and Translation (Exam 3) Lecture/Lab

Th 13 Gene Regulation Lecture/Lab

Tu 18 Chromosome and Sister Chromatid Structure Structure Lecture/Lab

Th 20 Haploid and Diploid Cells Lecture/Lab

Tu 25 Cell Cycle Lecture/Lab

Th 27 Mitosis

Lecture/Lab

**November**

Tu 1 Mitosis Cont. / (Exam 4)

Lecture/Lab

Th 3 Sexual and Asexual Reproduction Lecture/Lab

Tu 8 Meiosis and Sex Cell Formation (Gametogenesis) Lecture/Lab

|                 |    |  |             |
|-----------------|----|--|-------------|
| Th              | 10 | Meiosis  | Lecture/Lab |
| Tu              | 15 | Blastulation and Stem Cell Formation ( <i>Exam 5</i> )         | Lecture/Lab |
| Th              | 17 | Mendelian Genetics/Genotype,Phenotype, Dominance,Recessiveness | Lecture/Lab |
| Tu              | 29 | Mendelian Genetics—Complex Patterns Of Inheritance             | Lecture/Lab |
| <b>December</b> |    |  |             |
| Th              | 1  | Geologic History of the Earth and Mass Extinctions             | Lecture/Lab |
| Tu              | 6  | Darwinian Natural Selection                                    | Lecture/Lab |
| Th              | 9  | Origin of Life and Human Ancestry ( <i>Exam 6</i> )            | Lecture/Lab |
| Tu              | 14 | <b>Finals</b>  | <b>EXAM</b> |
| Th              | 16 | <b>Finals</b>  | <b>EXAM</b> |

### Grading Policy

**Attendance:** Your attendance in a science lab course is mandatory. If an absence occurs, contact me immediately.

**Grades:** The Course Grade will be determined by the following weighted scale: Lab Work 25%, Homework 20%, Final Exam 25%, Lecture Exams 30%.

| Percentage % | Grade |
|--------------|-------|
|--------------|-------|

|        |   |
|--------|---|
| 90-100 | A |
| 80-89  | B |
| 70-79  | C |
| 60-69  | D |
| 0-59   | F |

## Special Needs

Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability services at 432-335-6861 to request assistance and accommodations.

## Learning Resource Center (Library)

The Library, known as the [Learning Resources Center](#), provides research assistance via the [LRC's catalog \(print books, videos, e-books\)](#) and [databases \(journal and magazine articles\)](#). [Research guides](#) covering specific subject areas, [tutorials](#), and the ["Ask a Librarian"](#) service provide additional help.

## Student E-mail

Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All correspondence for this class will be conducted using your Odessa College email.**

## Student Portal

Please access your [Odessa College Student E-mail](#), by following the link to either set up or update your account: <http://www.odessa.edu/gmail/>. **All correspondence for this class will be conducted using your Odessa College email.**

## **Technical Support**

For Blackboard username and password help and for help accessing your online course availability and student email account contact the Student Success Center at 432-335-6878 or online at [https://www.odessa.edu/dept/ssc/helpdesk\\_form.htm](https://www.odessa.edu/dept/ssc/helpdesk_form.htm).

## **Important School Policies**

For information regarding student support services, academic dishonesty, disciplinary actions, special accommodations, or student's and instructors' right to academic freedom can be found in the [Odessa College Student Handbook](#).