KILGORE COLLEGE
BIOLOGY DEPARTMENT
Biology 1408 Syllabus

COURSE: BIOL 1408 (4-3-3)

TITLE: Biology for Non-Science Majors I

CATALOG DESCRIPTION: A general introduction that provides basic information about the following concepts: the scientific method, cell structure and reproduction, genetics, physical and chemical processes occurring in living systems, and diversity of living organisms. This course is designed to fulfill four credit hours of a non-science major's laboratory science requirement. IT WILL NOT SATISFY THE REQUIREMENTS FOR SCIENCE OR PREPROFESSIONAL MAJORS.

CREDIT HOURS: Four (4)

PREREQUISITE: The student must have passed all sections of the THEA test and/or completed all reading, writing, and math requirements or be taking Math 0308 concurrently. Laboratory fee $35. F, Sp, Su (2601015103).

INSTRUCTOR: Dr. James Collins, Dr. Thomas DeLany, William Stowe, Dr. Leon Wooten

COURSE RATIONALE: A well informed person will have knowledge of the working of his/her body and the various physical and chemical processes that occur in it. Such a person will also have a rudimentary understanding of genetics and reproduction. An introduction to the great diversity of life on our planet and the even greater similarity of living organisms will enhance such a person and make them a more valuable member of the human species.

Lab Supplement: Kilgore College Biology 1408 Lab Packet current semester year

EVALUATION: Lecture: 50% of final (transcript) grade. Includes 4 major exams, comprehensive final; and outside assignments (News Journal) and homework. Homework grades are averaged and the average is valued as a major exam. The News Journal is also valued as a major exam.

Revised: 08/03/10
Laboratory: 50% of final (transcript) grade. Includes 4 major practicals/exams, internet assignment and homework/laboratory hand-ins. Homework and lab hand-ins will be averaged and the average valued as a major exam. Outside internet assignment will be valued as a major exam.

CLASSROOM POLICIES:

Attendance: As stated in the Kilgore College Student Handbook.
Make-up exam procedure: As stated in the individual instructor's information sheet.
Academic Dishonesty: As stated in the Kilgore College Student Handbook.
Drop date: As determined by the Registrar and listed in the current Kilgore College Calendar.

DISCLAIMER:
The individual instructors reserve the right to make modifications as necessary to promote the best education possible. See individual instructors' information sheets.

COMMON COURSE OUTCOMES:

A. Memorize, explain and apply the scientific method as it pertains to biology.
Activities: Text and lab manual readings, class lecture and discussions, laboratory assignments and web site activities.
Assessments: Major exams, practicals, quizzes, on line web assignments, final exam. (1,2,4,5,7) (EEO B,D)

B. Demonstrate basic atomic theory and apply this knowledge of inorganic and organic molecules to living organisms.
Activities: Text and lab manual readings, class lecture and discussions, laboratory assignments and web site activities.
Assessments: Major exams, practicals, quizzes, on line web assignments, final exam. (1,2,4,5,7,8)

C. Compare and contrast the structural and functional differences between prokaryotic and eukaryotic cells and between plant and animal cells.
Activities: Text and lab manual readings, class lecture and discussions, laboratory assignments and web site activities.
Assessments: Major exams, practicals, quizzes, on line web assignments, final exam. (1,2,5,6,7,8)

D. Explain the structure of the cell membrane and/or wall of organisms and differentiate the types of process by which substances enter and leave the cell.
Activities: Text and lab manual readings, class lecture and discussions, laboratory assignments and web site activities.
Assessments: Major exams, practicals, quizzes, on line web assignments, final exam. (1,2,3,4,5,7,8) (EEO B,C)
E. Compare, contrast and differentiate between the taxonomic kingdoms of life, the characteristic of each kingdom, their economic importance.
Activities: Text and lab manual readings, class lecture and discussions, laboratory assignments and web site activities.
Assessments: Major exams, practicals, quizzes, on line web assignments, final exam. (1,2,4,5,7) (EEO B,C,D)

F. Compare and contrast the energy processes of respiration and photosynthesis, and summarize their importance to living organisms.
Activities: Text and lab manual readings, class lecture and discussions, laboratory assignments and web site activities.
Assessments: Major exams, practicals, quizzes, on line web assignments, final exam. (1,2,3,4,5,6,7,8) (EEO A,C,D)

G. Explain, differentiate and apply the basic concepts of molecular and Mendelian genetics.
Activities: Text and lab manual readings, class lecture and discussions, laboratory assignments and web site activities.
Assessments: Major exams, practicals, quizzes, on line web assignments, final exam. (1,2,3,4,5,6,7,8,) (EEO A,B,C,D)

H. Explain the basic tenets of natural selection and evolutionary concepts.
Activities: Text and lab manual readings, class lecture and discussions, laboratory assignments and web site activities.
Assessments: Major exams, practicals, quizzes, on line web assignments, final exam. (1,2,3,4,5,6,) (EEO A,B,C,D)

I. Compare and contrast the steps of DNA replication and protein synthesis.
Activities: Text and lab manual readings, class lecture and discussions, laboratory assignments and web site activities.
Assessments: Major exams, practicals, quizzes, on line web assignments, final exam. (1,2,4,5,6,7)

J. Identify, analyze and evaluate the benefits and risks of genetic engineering.
Activities: Text and lab manual readings, class lecture and discussions, laboratory assignments and web site activities.
Assessments: Major exams, practicals, quizzes, on line web assignments, final exam. (1,2,3,4,5,6,7,8) (EEO A,C)
K. Identify, analyze and evaluate the present and future problems of the biosphere, including human population, ozone depletion, deforestation and global warming. Activities: Text and lab manual readings, class lecture and discussions, laboratory assignments and web site activities. Assessments: Major exams, practicals, quizzes, on line web assignments, final exam. (1,2,3,4,5,6,7,8) (EEO A,B,C,D)

Exemplary Educational Objectives (EEO) are in the Faculty Handbook or on the Kilgore College web-site.
KILGORE COLLEGE  
BIOLOGY DEPARTMENT  
Biology 1408 Syllabus  
Tentative Lecture Schedule

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