BIOLOGY 112
BIOLOGY II
SPRING 2014

Instructor: Dr. Bill P. Stark

Office: H-209
Phone: 925-3340 (off), 924-2244 (hm)
Email: stark@mc.edu

Credit, 4 semester hours; Prerequisite, Biology 111. Lecture three hours a week. Laboratory three hours a week.

Course Description: A survey of the diversity of life forms inhabiting our planet. This course is designed for biology majors and minors.

Rationale for Course: Living things are unified by such shared features as cellular organization, energetics, and nucleic acid based genomes, yet they are fantastically diverse. An appreciation for the extent, and the evolutionary processes leading to such biodiversity is basic to the biological sciences. This course is required for admission to graduate biology programs, medical schools and other professional schools and thus is an important preparatory step for students who seek careers in the biological and allied health fields. Contemporary events and current research results which impact our daily lives are an integral part of this course.

Learning Objectives:

1. Students will become familiar with the evolutionary concept and the theory of natural selection.

2. Students will become familiar with the Linnaean system of classification.

3. Students will become familiar with the biological Kingdoms and their characteristics.

4. Students will become familiar with the diversity of monerans, protists, fungi, plants and animals.

Academic Integrity:

Students are expected to be honest and to submit their own work on exams and projects. The Mississippi College Honesty Policy will be followed.

Instructional Materials: Text: ***Campbell Biology***, J.B. Reece, L.A. Urry, M.L. Cain, S.A. Wasserman, P.V. Minorsky & R.B. Jackson, 9th Edition, Pearson, Benjamin Cummings.

Laboratory Manual- Biology II Laboratory Manual, Department of Biological Sciences, Mississippi College

Tentative Course Outline

I. Introduction to Classification, Diversity and Origins of Life (Chapters 1, 22, 23, 24, 25, 26)

A. How Science Works – Chpt. 1
B. Origin and history of life – Chpt. 25
C. Darwin and evolution - Chpt. 22
D. Natural selection - Chpt. 23
E. Classification and the species concept - Chpts. 24, 26

II. Animal Diversity and Biology (Chapters 32, 33, 34)

A. Sponges, Cnidarians, Ctenophores and Flatworms - Chpt. 33
B. Mollusks and Annelids - Chpt. 33
C. Nematodes and Arthropods - Chpt. 33
D. Echinoderms - Chpt. 33
E. Chordates - Chpt. 34
F. Human Origins - Chpt. 34

III. Protists and Prokaryotes (Chapters 27, 28)

A. Prokaryote structure and nutrition - Chpt. 27
B. Protists - Chpt. 28

IV. Fungi (Chapter 31)

A. Fungal characteristics - Chpt. 31
B. Fungal classification - Chpt. 31
C. Fungal reproduction - Chpt. 31

V. Plants (Chapters 29, 30, 35, 38)

A. Non-vascular plants - Chpt. 29
B. Seedless vascular plants - Chpt. 29
C. Gymnosperms - Chpt. 30
D. Angiosperms - Chpts. 30, 35, 38

VI. Ecology (Chapters 53-55)

A. Populations- Chpt. 53
B. Community Interactions and Diversity- Chpt. 54
C. Ecosystems- Chpt. 55

Methods of Instruction: Presentations of illustrated lectures on course outline topics will be given. Presentations may include use of power point, transparencies, videotapes, and written or oral class exercises.

Exam Schedule: Regular exams are tentatively scheduled for these dates: Exam 1 – Feb. 13-14; Exam 2 – March 19-20; Exam 3 – April 10-11; Exam 4 – April 24-25

Individualized Accommodation Plan: If you need special accommodations due to learning, physical, psychological or other disabilities, please contact the Student Counseling Services in Alumni Hall, Room 4. They may be reached by phone at 601-925-7791 or by email at mbryant@mc.edu or rward@mc.edu. If this applies to you it is imperative that you contact the Student Counseling Services immediately upon recognition of the disability, or if already diagnosed, you should contact SCS as soon as classes begin each semester.

Evaluation Methods: Four objective exams are scheduled. Exams may include discussion, multiple choice, or other types of questions. The average on these exams will comprise 50% of the course grade. A comprehensive final exam will comprise 20% of the course grade, and your laboratory average will comprise the other 30% of your course grade.

You may earn a bonus point to be added to your exams average for any of these activities. A maximum of five bonus points is permitted. **Bonus activities are not required; please turn in bonus materials as they are completed.**

1. Read, and write a brief synopsis of an article from the magazine Natural History. You may submit two of these articles.

2. Take a nature walk at the Clinton Community Nature Center on Dunton Road. Make a list of the ferns identified along the Fern Gully trail and of the trees and shrubs along the Grapevine Loop. This activity should be done after mid- March.

3. Attend an approved seminar at the Clinton Community Nature Center. You may attend and use up to three of these presentations. Write a brief summary of the presentation.

Final grades will be assigned based on this scale:

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

Attendance and Make-up Policy: The Mississippi College attendance policy will be followed. Any student whose absences, whether excused or unexcused, exceed 25% of the class meetings will receive a grade of F in the course.

The student is responsible for work missed during an absence. **Exams should be made up promptly, usually within one week after the student has returned**.

Tuition Refunds for Dropped Classes: Deadlines for receiving refunds for dropped classes are published on the University calendar. The last date to receive full refunds after withdrawal from classes in the Spring 2014 semester is January 23. At the end of the 2nd week of classes the refund is reduced to 75%, the third week to 50% and the 4th week to 25%. **Subsequently there is no refund**.

Early Alert System: Mississippi College has adopted the practice of identifying students early in the semester who may be exhibiting behaviors that could ultimately have a negative impact on their academic progress. These behaviors are often called "red flag" behaviors and include, but are not limited to excessive absences, poor test grades, and lack of class participation or evidence of non-engagement. Identifying these behaviors early gives the instructor the opportunity to raise the "red flag" on behalf of a particular student so that the student can take the appropriate action to redirect his/her progress. The system alerts the student, the student's advisor, and the Office of Student Success.

These messages are intended to help a student recognize an area of concern and to encourage him/her to make some choices to improve the situation. When a student receives an Early Alert message, the student should quickly make an appointment to talk with his/her professor about the situation. Also, students can make full use of the Office of Student Success to set academic goals and connect to campus resources.

Some Important Dates:

January 20- Martin Luther King Holiday, no day or night classes
January 21 – Last day to enroll or add a class
March 10-16 Spring Break
March 21 – Drop Deadline, last day to drop a class
April 21 – Easter Holiday
April 30 – Last day of classes, night exams begin
May 2-7 – Final Exams
May 9-10 - Graduation