BISC 102 - INQUIRY INTO LIFE - HUMAN BIOLOGY
COURSE SYLLABUS - SPRING 2010

Instructor: 
Spring 2010
Shoemaker Hall 303
Section 2: T, TH 9:30 - 10:45 AM

Office hours: Tuesday 1:00 - 3:00 PM
Office hours in 524 Shoemaker Hall
Office phone: (662) 915-7457
Email: tlgoulet@olemiss.edu

Write BISC102 sec 02 in subject heading

BISC 102 applies to the science requirement of the core curricula. The associated laboratory is BISC 103. Please note that this course will NOT count for credit if BISC 160 is counted.

GOALS OF COURSE:

For students to:

1) Understand familiar actions such as eating, breathing and exercise;

2) Learn the biology needed to ask good questions of their physician about their own or family members’ health, and to evaluate the answers;

3) Be able to critically analyze media reports and advertisements on health topics.

ISSUES APPROACH: Students should be aware that we have chosen to cover some controversial issues in this course, like contraception, stem cell technology, etc. Everyone is welcome to share their opinions on these issues, but a respectful attitude is expected from all present, whether or not they agree with the points of view expressed in class.

REQUIRED MATERIAL:


2) Assigned readings which will be posted on Blackboard.

3) Interwrite™ PRS RF (radio frequency) clicker (audience response system).

COURSE REQUIREMENTS:

Exams: During the semester, there will be three exams. Exams will be based on material taught in class supported by assigned readings from the textbook and other sources. Students are responsible for all material and announcements made in class. Exams will include multiple-choice questions and multiple formats of fill-in the blank questions. The exams will include both factual and application questions. Students may be required to read a short story and answer questions about the story as part of the exam. A cumulative final will be given during final's week. To take an exam, students must use their PRS clicker.

Quizzes/class polls: The number, frequency and time of quizzes/polls are at the discretion of the instructor, but students need to be ready for a quiz/poll every time class meets. Quizzes/polls will be either on assigned materials or on the material covered in class. Points earned above the 100 quiz/poll points will be used as extra credit. There will not be an opportunity to make up in-class quizzes. Excused absences should be reported to the instructor and will be taken into consideration. To participate in a quiz, students must use their PRS clicker.
Grading:

Exam 1 (50 questions): 100 points
Exam 2 (50 questions): 100 points
Exam 3 (50 questions): 100 points
Final exam (100 questions, cumulative) 200 points
In-class quizzes: 100 points or above

Total points: 600 points

Final grade distribution:
A = 540 - 600; B = 480-539; C = 420 - 479; D = 360 - 419; F = 359 or less.

Exam Make-Up Policy:

1) A student who misses one exam (but not more than one) can make it up, if the instructor judges that the student had a good reason for missing (family emergency, health issues). The make up exam will be given within a week of the student's return to school.

2) Under special circumstances, and with the instructor's approval (e.g. University-excused absence), students may arrange ahead of time to make-up an exam before the class exam.

3) In all cases, students must notify the instructor that they missed the exam as soon as possible, make an arrangement to make-up the exam, and bring appropriate documentation to justify their absence. Otherwise they will earn a zero on that exam.

Academic Misconduct and Its Consequences:

According to UM Academic Conduct and Discipline policy: "Dishonesty, cheating, or plagiarism, or knowingly furnishing false information to the University are regarded as particularly serious offenses." In this course, for example, cheating on an exam or quiz, or taking an exam or quiz for someone else will be severely punished. At the discretion of the instructor, the student can receive an F on the assignment or an F in the class (without the possibility of invoking the forgiveness policy).

This syllabus is subject to change at the discretion of the instructor to accommodate instructional, and/or student needs.
BIOLOGY 102 - SPRING 2010 TOPICS AND ASSIGNED READINGS

Week 1: 21 January – The Process of Science
Chapter 1: INTRODUCTION: BIOLOGY TODAY
   The Process of Science p. 14 - 18 only

Week 2: 26 - 28 January – Nutrition & Digestive System
   Bring a food label
Chapter 3: THE MOLECULES OF LIFE
   Organic Molecules
   Biological Molecules

Week 2-3: 28 January - 2 February – Nutrition & Digestive System
Chapter 5: THE WORKING CELL pp. 76-82
   Some Basic Energy concepts
   ATP and Cellular Work
   Enzymes

Week 3-4: 4 - 9 February – Nutrition & Digestive System
Chapter 22: NUTRITION AND DIGESTION
   Overview of Animal Nutrition
   A Tour of the Human Digestive System
   Human Nutritional Requirements
   Nutritional Disorders

Week 4: 9 February
Chapter 21: UNIFYING CONCEPTS OF ANIMAL STRUCTURE AND FUNCTION

*********************** TEST #1 February 11 ***********************

Week 5: 16 - 18 February – Circulatory & Respiratory Systems
Chapter 23: CIRCULATION AND RESPIRATION
   Unifying Concepts of Animal Circulation
   The Human Cardiovascular System
   Unifying Concepts of Animal Respiration
   The Human Respiratory System

Week 6-7: 23 February - 2 March – Immune System
Chapter 24: THE BODY’S DEFENSES
   Nonspecific Defenses
   Specific Defenses: The Immune System
   Immune Disorders

Week 7: 2 - 4 March – Hormone System
Chapter 25: HORMONES
   Hormones: An Overview
   The Human Endocrine System

*********************** TEST #2, March 9 ***********************

Week 8-10: 11 - 23 March – Nervous, Sensory & Motor Systems
Chapter 27: NERVOUS, SENSORY AND MOTOR SYSTEMS
   An Overview of Animal Systems
   Organization of Nervous Systems
   Neurons
The Human Nervous System: A Closer Look
The Senses

******** Week 9: SPRING BREAK March 15 – 19 ********

Week 8-10: 11 - 23 March – Nervous, Sensory & Motor Systems - continued
Chapter 27: NERVOUS, SENSORY AND MOTOR SYSTEMS

Week 10-12: 25 March - 6 April - Genetics
Chapter 10: THE STRUCTURE AND FUNCTION OF DNA
The Structure and Replication of DNA
The Flow of Genetic Information from DNA t RNA to Protein
Viruses: Genes in Packages

Chapter 11: HOW GENES ARE CONTROLLED
Only cover cloning and stem cells. Other topics inserted into other chapters.

Chapter 12: DNA TECHNOLOGY
Recombinant DNA Technology
DNA Fingerprinting and Forensic Science
Genomics
Human Gene Therapy
Safety and Ethical Issues

****************** TEST #3 April 8 ******************

Week 13-14: 13 - 22 April – Reproduction & Inheritance
Chapter 8: CELLULAR REPRODUCTION: CELLS FROM CELLS
What Cell Reproduction Accomplishes
The Cell Cycle and Mitosis (with emphasis on Cancer Cells)
Meiosis, the Basis of Sexual Reproduction
    Homologous Chromosomes
    Gametes and the Life cycle of a Sexual Organism
The Origins of Genetic Variation
    When Meiosis goes Awry

Chapter 9: PATTERNS OF INHERITANCE
Heritable Variation and patterns of Inheritance
    Beyond Mendel
    The Chromosomal Basis of Inheritance; Sex Chromosomes and Sex-Linked Genes

Week 14-15: 22 - 29 April – Reproductive System
Chapter 26: REPRODUCTION AND DEVELOPMENT
    Unifying Concepts of Animal Reproduction
    Human Reproduction
    Reproductive Health
    Reproductive Technologies

******* Final Exam – Thursday, May 6, 2010 8:00 am in 303 Shoemaker Hall *******