**BIOLOGY 5: Human Biology** **Fall 2012**

Instructor: Jason Furumoto
Office Hours: Arranged
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Lecture: 52544 MW 1380-1920 – LS 11
Lab: 52544 MW 1925-2015 - LS 11

**COURSE DESCRIPTION**

Biology 5 is an introductory human biology course designed to acquaint the beginning student with basic human anatomy, physiology, science and societal issues. The basic concepts of homeostasis and cellular functions are emphasized while covering the topics of endocrine, neural, muscular, cardiovascular, respiratory, digestive, renal and reproductive physiologies. Laboratory experiments and exercises are designed to reinforce theories and processes described in lecture and to introduce students to basic physiological scientific investigation utilizing a variety of techniques.

Biology 5 has the following prerequisite courses: English 125, 126 and Math 101.

**COURSE OBJECTIVES**

Upon completion of this course, students will be able to:

- understand the process of science and society, microscopy, and the cell
- identify human body levels of organization and homeostatic mechanism
- understand the chemical basis of life
- evaluate scientific literature and current biological achievements
- apply the principles of genetics to humans and understand the outcome of normal and abnormal DNA
- understand the structure and function for the following systems: circulation, digestive, respiratory, urinary, skeletal, muscular, nervous, sensory, endocrine, reproduction, and genetics and evolution.

**REQUIRED MATERIALS**

- Human Biology, 12th ed, Sylvia S. Mader (ISBN: 978-0073525464)
- Human Biology, 12th ed, Sylvia S. Mader Laboratory Manual (ISBN: 9780077348625)
- 4 scantron 882
- Access to blackboard

**NO FOOD, BEVERAGE, OR WIRELESS PHONES.**

- The functional concept here is to show respect to all others around you in all phases of this course, at all times.
- Be sure to always put relevant information on all papers to insure that you receive credit and do not incur deductions.

**ATTENDANCE**

- There are no excused absences, for any reason
- You are expected to be on time for each class meeting.
- It is your responsibility to sign in when late and to confirm that an absence has been changed to a tardy.
- Three tardies will count as one absence.
- Three absences will lower your course grade by one full letter, six absences will result in being dropped from the course
- Students missing the first meeting of either the lecture or lab components of the course will be dropped.

**TESTS AND EVALUATIONS**

Grading:

| | |
|---|---|
| Lecture exams (3 midterm, 1 final exam x 100 points each) | 400 |
| Quizzes (10 x 10 points each) | 100 |
| Lab reports (10 x 10 points each) | 100 |
| Lab practical (3 x 100 points each) | 300 |
| Research project | 100 |
| **Total** | **1000** |

Grading Scale:

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

- Exams will be multiple format, including multiple choice, fill in, and short answer questions.
- Lab Exercise grades will be based upon your lab work itself. This will include questions, problems, or other work from any handout given during lab or the lab guide. Missed labs can be made up if you attend another section of the lab in the same week. It is at the convenience of the instructor of the lab you wish to attend to allow you to attend their lab. You must obtain that instructor's permission and give said instructor the relevant information to be able to receive credit for attending. Make up of a given lab cannot be done at a later date. No points will be earned for lab work if you were not present during the lab meeting.
- Quizzes will be given at the beginning of each lab period unless there is a lab practical. Each quiz will cover the previous week's lab material and the introductory material from the current week's lab. Missed quizzes may not be made up.
- Make up exams will be in a format determined by the instructor and are always at the instructor's discretion. If you must miss on an exam date, please try to make prior arrangements. You have one week to make up a missed exam. After one week, no make ups will be given unless permission is explicitly given by the instructor.

**OTHER INFORMATION**

- Adds: If you are given an add slip, be sure to turn it into Student Services within two days of receipt. After two days, you will not be allowed to add the course using that add slip.
- Drops: You have until the end of Week 9 of the semester to drop. If you choose to drop, you are responsible to handle all procedures related to dropping the course. Do not assume you have been automatically dropped. After Week 9, California law mandates that all students enrolled in a course receive a grade for that course, regardless of attendance.

**HELP**

- Please see your instructor if you are having any difficulty grasping the material presented during the course. In many cases, a few minutes of additional explanation can clear up many problems or points of disconnect.
- Additional help, study hints, or a tutor can be obtained from the Tutorial Center. Please do not hesitate to use this resource.
- As a general rule, each hour of lecture requires approximately 2-3 hours of additional study outside of the classroom each week and each hour of lab requires 1-2 hours of study time outside of the laboratory each week. This equals a minimum of 8 hours of study each week in order to pass this course, so plan accordingly. I have the sincerest hope that we have a fun semester and that you learn a lot of biology along the way. Good luck!

**ACADEMIC DISHONESTY**

- Students at Reedley College are entitled to the best education that the campus can make available to them and the responsibility to ensure this education is honestly attained is shared by the students and instructors. Academic dishonesty is a serious offense and will incur serious consequences. Refer to the Reedley College catalog for full details.

**ACCOMODATIONS**

- Upon identifying themselves to the instructor and the college, students with disabilities will receive reasonable accommodation for learning and evaluation. Please contact me as soon as possible.

**Biology 5 – Spring 2012**
**Tentative Schedule**

**Week 1** – Week of 8/13/2012
Lecture – Orientation, Syllabus, Ch. 1 – Exploring Life and Science
Lab – M – Lab 2 - Light Microscopy, W - Lab 3 - Chemical Composition of Cells

**Week 2** – Week of 8/20/2012
Lecture – Ch. 2 – Chemistry of Life
Lab – M – Lab 3 – Chemical Composition of Cells, cont., W – Lab 4 - Cell Structure and Function

**Week 3** – Week of 8/27/2012
Lecture – Ch. 3 – Cell Structure and Function
Lab – M - Lab 5 - Body Tissues and Model for Figure 6.1, W - Lab 7 – Cardiovascular System

**Week 4** – Week of 9/3/2012
Lecture – Ch. 4 – Organization and Regulation of Body Systems
Lab – M – Lab 10 – Homeostasis and Models, W – Lab Practical 1 (Labs 2-7)

**Week 5** – Week of 9/10/2012
Lecture – Exam 1
Lab – M – Lab 11 – Musculoskeletal System, W - Lab 12 – Nervous System

**Week 6** – Week of 9/17/2012
Lecture – Ch. 5 – Cardiovascular System: Heart and Blood Vessels Ch. 6 – Cardiovascular System: Blood, Ch
Lab – M - Lab 13 – Reproduction and Development, W – Lab 14 - Mitosis and Meiosis

**Week 7** – Week of 9/24/2012
Lecture – Ch.7 – Lymphatic System and Immunity
Lab – M - Lab 15 – Patterns of Inheritance Lab, W – Lab 16 – DNA and Biotechnology

**Week 8** – Week of 10/1/2012
Lecture – Ch. 8 – Digestive System and Nutrition, Ch. 9 – Respiratory System
Lab – M - Lab 17 – Evolution, W – Lab Practical 2 (Labs 10-16)

**Week 9** – Week of 10/8/2012
Lecture – Ch.10 – Urinary System, Ch. 11 – Skeletal System
Lab – M and W – Models, charts, and slides for Cumulative Anatomy

**Week 10** – Week of 10/15/2012
Lecture – Exam 2
Lab – M and W – Models, charts, and slides for Cumulative Anatomy

**Week 11** – Week of 10/22/2012
Lecture – Ch. 12 – Muscular System, Ch. 13 – Nervous System,
Lab – Cumulative Anatomy

**Week 12** – Week of 10/29/2012
Lecture – Ch. 15 – Endocrine System, Ch. 16 – Reproductive System
Lab – M – Lab Practical 3 (Labs 11-16, cumulative anatomy)

**Week 13 –** Week of 11/5/2012
Lecture - Ch. 17 – Development and Aging, Ch.18 – Patterns of Chromosome Inheritance
Lab – Faculty consultation

**Week 14** – Week of 11/12/2012
Lecture - Ch.19 – Cancer, Lecture - Ch. 20 – Patterns of Genetic Inheritance
Lab – Faculty consultation

**Week 15** – Week of 11/19/2012
Lecture - Exam 3

**Week 16** – Week of 11/26/2012
Lecture - Ch. 21 – DNA Biology and Technology
Lab – Faculty consultation

**Week 17** – Week of 12/3/2012
Lecture - Ch. 22 – Human Evolution, Ch. 23 – Global Ecology and Human Interferences, Ch. 24 – Human Population, Planetary Resources, and Conservation, Review
Lab – Faculty consultation

**Week 18** – Week of 12/10/2012
Lecture – Final Exam 12/10/2012, 1800
Lab – Faculty consultation