Biology 5 (BIOL5) Human Biology

Semester: Fall 2017	*Reedley Community College*
Instructor: Andrew Strankman	*Class No. 56659, 56660*
Email:	Lecture Times:
andrew.strankman@reedleycollege.edu	Mon/Wed: 1:00-2:15PM
Phone: 559-638-0300 ext. 3499	Lab Times:
Office: LFS 5	2:30PM - 5:35PM Monday #56659
Office Hours: Tu: 4:00-5:00pm	2:30PM - 5:20PM Wednesday #56660
W: 2:15-3:15pm	
F: 12:00-1:00pm (Digital)	
Date: 08/14/17 - 12/15/17	

Catalog Description:
This course is an introductory human biology course that examines science and societal issues. This course emphasizes the structure of the human body and the functional interrelationships of the body's systems: integument, circulatory, digestive, respiratory, urinary, skeletal, muscular, nervous, endocrine, reproductive, and genetics.

Prerequisites:
None, eligibility for ENGL 125, 126, or 153; or ESL 67 and 68 recommended. This is an introductory course using the principles approach to general biology which satisfies the general science requirements focused on students entering health or science careers. It is a prerequisite for all advanced science courses (Human Anatomy, 20; Human Physiology, 22; Human Anatomy and Physiology, 24; Microbiology, 31).

Student Learning Outcomes:

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

1. demonstrate knowledge regarding the process of science and society, microscopy, and the cell
2. identify human body levels of organization and homeostatic mechanisms
3. demonstrate knowledge of the chemical basis of life
4. evaluate scientific literature and current biological achievements
5. apply the principles of genetics to humans and understand the outcome of normal and abnormal DNA
6. describe the basic cellular, molecular and gross anatomy of tissues, organs and organ systems and explain the basic function of those tissues and organs that relate to the integument, circulation, digestive, respiratory, urinary, skeletal, muscular, nervous, endocrine, reproduction, genetics, and evolution
7. identify and recall fundamental structures from anatomical models and slides using correct nomenclature and language

Course Objectives:

In the process of completing this course, students will:

1. read, analyze, evaluate, and discuss scientific method, the cell, and human levels of organization
2. learn the periodic table of the elements, the chemistry of the carbon atom, and the chemical structure of humans
3. analyze and interpret data on the homeostatic mechanisms within the human body
4. learn the cell's structure, function, and the cell cycle in relation to the multicellular human body
5. observe and document the structure and function of the human body by examining human body systems including: circulatory, digestive, respiratory, urinary, skeletal, muscular, nervous, sensory, endocrine, and reproduction

6. review classical and molecular genetics and learn the processes of replication, transcription, and translation
7. perform experiments, observe, and record data
8. study evolution
9. discuss social issues between humans and science
10. develop a vocabulary to effectively communicate information related to anatomy and physiology.
11. summarize the levels of structural organization important to the human anatomy

Required Materials:

1. Mader, Sylvia S. and Michael Windelspecht, *Human Biology*, 14th edition. 2015. (You don't need a hard copy, just the digital book will do, as long as you have connect access)
2. Mader, Sylvia S., *Human Biology Lab Manual*, 14th edition, 2015. **Make sure you get the bundle from the bookstore which contains CONNECT access**
3. Scantron #882-E for lecture tests (x6)
4. Package of index note cards

Optional Materials:

1. Rubber gloves, protective clothing (for dissection labs)

NO FOOD, BEVERAGES, CELLULAR PHONES, PAGERS, OR PROFANITY AT ANY TIME!

If you or your electronics become a disturbance to the class, points will be deducted from your scores on assignments and you may be asked to leave.

ATTENDANCE AND DROP/ADD POLICY

You are required to attend **ALL** class sessions. There are NO excused absences except as defined in the Reedley College Catalog. If you are absent more than FIVE hours during the semester, you MAY be dropped from the class. If you are absent more than TEN hours before the drop deadline, you **WILL** be dropped from class.

If you miss more than TEN hours of course time in the semester, your final grade will be lowered by one letter grade. For example, if you earned an A but missed 11 hours of class, your final grade will be a B. If you miss more than TWENTY hours of course time in the semester, your grade will be lowered by two letter grades. For example, if you earned an A but missed 21 hours of class, your final grade will be a C. If you miss more than THIRTY hours of course time in the semester you will fail the class, no questions asked.

I reserve the right to drop students (both enrolled and waitlisted) based on the following policy:

1. Student does not attend the first lecture.
2. Student does not attend the first lab.
3. Student misses a cumulative 3 hours (lecture or lab) in the first week.
4. Student misses a cumulative 4 hours (lecture or lab) in the first three weeks.
5. Student misses 6 hours (lecture or lab) up to drop date without providing a valid excuse (determined by me).

LATE ASSIGNMENTS, CHEATING, AND MAKE-UP POLICY

Late assignments (such as lab reports) will not be accepted **EVER**. **After one week any missed grade may not be made up** unless prior written arrangements have been made. This is to ensure fairness both to the other students and to me. Any student caught cheating will be subject to the Reedley College disciplinary procedures (see the catalog). Be aware that the procedures require a written notification to the dean that will become a part of your permanent record.

Lab practical exams can NOT be made up. Period. Lecture exams can not be made up, unless extreme circumstances, documented in writing, are provided. The instructor holds final decision on what constitutes an acceptable circumstance.

TESTS AND EVALUATION

Assignment Description	Points Possible
4 Lecture Exams (75 points each)	300
1 Case Study Presentation	100
10 Quizzes (10 points each)	100
Connect Readings	100
8 Drawings (5 points each)	40
Lab Review Sheets/Activities	120
2 Lab Practical Exams (50 points each)	100
1 Lecture Final	140
Total Points Possible	1000
Extra Credit (See below for details)	Maximum of 25

To calculate your grade, total all points earned and divide that number by the total points available (1,000). **Course grades are non-negotiable**; **Instructor reserves the right to curve individual tests and/or assignments. FINAL GRADES WILL NOT BE CURVED… ALSO, I DO NOT round up your grades to the next letter grade.**
The final course grade is based on:

Percent Range	Grade
90-100	A
80-89.99	B
70-79.99	C
60-69.99	D
Less than 60	F

Lecture exams may be any combination of multiple-choice, true-false, matching, short-answer and essay questions based on the main objectives of each chapter. Please note that I require correct spelling and grammar. If I can't read it, I can't grade it! Write neatly!

Lab exams will be practical based on the work done in the laboratory. They may include multiple choice, true-false, matching, and short answer questions.

Lecture final exam will be comprehensive. Since this course is a prerequisite for all other Biology classes, it is important that you retain as much knowledge as possible from this course to ease your way in the following semesters.

Quizzes will occur on dates specified on the course schedule. Quizzes are given at the very start of the class period and last for 20 minutes, if you are late your quiz will still be collected 20 minutes from when the class period began. Material may include and combination of multiple-choice, true-false, matching, and short answer questions.

Lab reviews will be collected at the end of each laboratory period where a laboratory exercise was conducted. These must be complete before you leave the lab period. **Lab drawings** are due 1 week after being assigned.

Case Study will be assigned in the 5th week of class. At this time, the class will be broken up into groups of between 3-4 students. Each group of students will be assigned a 'patient' with an example disease. At the conclusion of the semester, each group will give a 10-15 presentation to the class describing their

patient's disease, and the appropriate courses of treatment. Specific directions will be handed out in class.

Extra Credit I strongly recommend doing extra credit if you feel you have a borderline grade. You earn up to a maximum of 25 points by doing one or more of the following items:

A. Participating in the lecture summaries.
B. Outstanding case study presentation.
C. Attendance quiz.
D. Submit article review (bi-weekly) for a maximum of 2 points per article.

***** I reserve the right to make changes in this syllabus with notification *****

CANVAS

All lecture and lab handouts, lecture notes, course schedules, and announcements are available at https://scccd.instructure.com/login/ldap. Your user name and password will be discussed in class.

Professional Behavior is expected at ALL TIMES

Please respect other student, the laboratory materials, and me. No food, cellular phones, pagers, or profanity at any time! I am aware that emergencies arise, but place your electronics on silent or "manner" mode. Disruptive behavior that interferes with the teaching and learning processes will be cause for appropriate penalties as described under "University Policies" below.

Food and/or liquids in the laboratory may result in deduction of points.

You will be given a Safety Rules sheet to sign in the lab, which delineates further safety procedures that you MUST follow. OTHER COURSES USE THE MODELS AND THE LAB. PLEASE BE RESPONSIBLE. Do not use pencils to point out structures on the models. Please remember to clean up the lab after every exercise, as areas left dirty or messy at the end of the period will result in those student groups being **docked 5 points** for every offense.

No food or beverages allowed. Cell phone use will not be tolerated in this class; turn off your cell phones prior to class. Students are allowed to do audio recordings of lectures but not video. Web or internet posting of recorded lecture materials are not allowed. Laptops may be used in this class; laptop users should sit in the back row to avoid distracting others.

Children In Class: In order to promote a positive learning environment, please make arrangements for your child's care while class is in session. Do not bring children to class.

Cell Phones: Cell phones that are used or go off in class will be confiscated until the end of the class hour. No iPods are allowed in class.

No food, open beverages are allowed in the class at anytime. No profanities are allowed in class.

Dress code: In order to participate in lab activities, wearing shoes with closed toes is required.

Drops: You have until the end of the 9th week to drop the class. If you elect to do so, drop yourself. Do not assume you have automatically been dropped. After the 9th week you must be assigned a grade by state law, whether you attend class or not.

Tutoring: Tutors are available in the tutorial center. If you have not had a biology class since high school, working with a tutor will get you up to speed. The tutors are former students who know how to study for the class. "With this statement on my course syllabus, I am referring each of my enrolled students in need of academic support to tutorial services. Referral reason: Mastering the content, study skills, and basic skills of this course is aided by the use of trained peer tutors".

College Policies

The university has several policies that you will be expected to adhere to in my course. The **Policy on Students with Disabilities, the University Honor Code, the Policy on Cheating and Plagiarism**, a **statement on copyright**, and the **university computer requirement**, portions of which are below, can all be found in the University Catalog (Policies and Regulations) and Class Schedule.

Cheating and Plagiarism:

I DO NOT TOLERATE CHEATING. PERIOD. Most of you are entering into the health care field and could harm or seriously injure other human beings if you do not know the basic information in this course. The University policy reads, "Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit; such acts also include assisting another student to do so. Typically, such acts occur in relation to examinations. However, it is the intent of this definition that the term 'cheating' not be limited to examination situations only, but that it include any and all actions by a student that are intended to gain an unearned academic advantage by fraudulent or deceptive means.

Any student caught cheating or plagiarizing will be subject to the Reedley College disciplinary procedures (review the Reedley College catalog section on academic dishonesty). Electronics of any kind are not permitted during exams and will result in an automatic zero for that exam.

Students with diagnosed disabilities should contact the Disabled Students Programs and Services' (DSP&S). Please give me a copy of the letter you receive from DSP&S detailing class accommodations you may need. If you require accommodation for test-taking please make sure I have the letter no less than three days before the test. If you have a need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, please contact me as soon as possible.

TENTATIVE SCHEDULE

Please bring your textbook to lecture and your textbook and lab manual to every lab. This is very important!
LR means lab review sheets (Required)

Week	Dates	Lecture (Book Chapter)	Lab (Manual Chapter)
1	Monday	Introduction/Syllabus Exploring Life and Science (1)	**Laboratory Safety and Lab 3** : Light Microscopy **LR 1 pg 33** **Drawing 1: Cheek/Cell Structure**
1	Wednesday	Exploring Life and Science (1) Chemistry of Life (2)	
2	Monday	Cell Structure and Function (3) **Quiz 1**	**Lab 4:** Chemical Composition of Cells **LR 2 pg 48**
2	Wednesday	Cell Structure and Function (3) Organization and Regulation of Body System Organ Systems (4)	
3	Monday	Cardiovascular : Heart and Blood Vessel (5) **Quiz 2**	**Lab 5:** Cell Structure and Function **LR 3 pg 60** **Drawing 2: Epithelial/Connective Tissue**
3	Wednesday	Cardiovascular System: Blood (6)	
4	Monday	**LABOR DAY NO CLASS**	**Lab 6 : Body Tissues** **LR 4**
4	Wednesday	**Lecture Exam 1 (1-5)**	
5	Monday	Lymphatic System and Immunity (7) **Quiz 3**	**Lab 8: Cardiovascular System** **LR 4 pg 104** **Drawing 3: Heart Structure (Internal and External)**
5	Wednesday	Biology of Infectious Disease (8)	
6	Monday	Digestive System (9) **Quiz 4**	**Lab 11:** Homeostasis **LR 6 pg 148** **Drawing 4: Nephron and Tubules**
6	Wednesday	Respiratory System (10)	
7	Monday	Urinary System (11)	**Lab Exam 1**
7	Wednesday	**Lecture Exam 2 (6-10)**	
8	Monday	Skeletal System (12) **Quiz 5**	**Lab 12:** Musculoskeletal System **LR 8 pg 165-166** **Drawing 5: Muscle fiber/tissue**
8	Wednesday	Muscular System (13)	
9	Monday	Muscular System (13) Nervous System (14) **Quiz 6**	**Lab 13:** Nervous System and Senses **LR 9 pg 181** **Drawing 6: Eye/Ear**
9	Wednesday	Nervous System (14)	

10	Monday	Nervous System (14) Senses (15) **Quiz 7**	**Lab 14:** Reproduction and Development **LR 10 pg 198**
10	Wednesday	Senses (15)	
11	Monday	Endocrine System (16)	**Lab 7:** Organization of the Body Virtual Pig Dissection **LR 7 pg**
11	Wednesday	**Lecture Exam 3 (11-15)**	
12	Monday	Reproductive System (17)	**Lab 15:** Mitosis and Meiosis **LR 11 pg 215** **Drawing 7: Mitosis/Meiosis**
12	Wednesday	Development and Aging (18)	
13	Monday	Chromosome Inheritance (19) **Quiz 8**	**Lab 16:** Patterns of Genetic Inheritance **LR 12 pg 230** **FRIDAY LAB OFF**
13	Wednesday	Cancer (20)	
14	Monday	Genetic Inheritance (21)	**Lab 17:** DNA and Biotechnology **LR 13 pg 245-246** **Drawing 8: DNA/RNA Molecule**
14	Wednesday	**Lecture Exam 4 (16-20)**	
15	Monday	Genetic Inheritance (21) DNA Biology and Technology (22) **Quiz 9**	**Lab 18:** Human Evolution **LR 14 pg 264**
15	Wednesday	DNA Biology and Technology (22)	
16	Monday	Human Evolution (23) **Quiz 10**	**Lab Exam 2**
16	Wednesday	Human Evolution (23)	
17	Monday	**Exam Review**	**Case Study Presentations**
17	Wednesday	**Exam Review**	
18	Friday	**Final Exam (Cumulative)**	

Important Dates

- September 1 Last day to add/drop a class (no “W” on transcript)
- September 15 Last day to declare pass/no pass (P/NP) grade option
- October 13 Last day to be dropped with a “W”
- FINAL EXAMINATION: