

# Syllabus: Biology 05 – Human Biology

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## Course Information

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Semester: Fall 2021

Section: 55030

Class: (Lecture and Lab): Asynchronous

## Introduction

The field of human biology is among the most exciting in modern science. The purpose of this course is to help you develop an understanding of fundamental processes that form the basis of biological life. Primarily for students majoring in health-related professions, this course is a prerequisite for the Biol 20 (Human Anatomy) and Biol 22 (Human Physiology). It is taught in a traditional lecture and laboratory format in combination with additional online content; however, due to the current pandemic, this will be taught fully online with asynchronised (Recorded) content. Lectures will utilize PowerPoint and a variety of multimedia presentations which will be uploaded when needed. Laboratory will be largely visual based, utilizing a variety of resources including PowerPoint, multimedia, prepared microscope slides, models, and human and animal specimens. The course outcomes are designed to help you understand and apply (not just memorize) cell biology concepts, and to help you think in an analytical and critical way.

## Course Description

Primarily for students majoring in health-related professions, this course is a prerequisite for the Nursing and Physical Therapy programs, satisfies a major requirement for those students majoring in Kinesiology or Public Health, and satisfies other major requirements for Biology majors.

Prerequisites: BIOL 20, grade of C or better OR BIOL 1A AND CHEM 1A/1AL (or 3A\*), grade of C or better.

## 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

## Course Requirements and Policies

### Prerequisites

None – Just the desire to learn.

### Required Course Materials

**Lecture:** There is no traditional textbook; you will need to purchase the access code for McGraw-Hill Connect to include the eBook. If you wish to have a traditional textbook you may contact McGraw-Hill and you will receive a discount on a hard copy of the text, but in order to complete this course you must have access to the eBook.

**Lab:** Lab Manual is available for on Canvas. All lab assignments will be submitted as a Word document, PDF, or high-quality scan. Photos of lab pages will not be accepted. If you do not have a scanner, there are apps that use your phone camera to create a scanned document (such as CamScanner.)

You are required to finish assignments and assessments online. In addition, there will be important information online. It is YOUR RESPONSIBILITY to come to both lecture and lab prepared with the content assigned.

## Apps

McGraw-Hill Connect: Your access code will allow you to access the textbook and assignments. Although I have the assurance from the publisher that the content in your online assignments works for all electronics, this may not be the case. It is your responsibility to find out if the content works with your electronic device. Below is the link our connect Purchase URL for Connect online

<https://connect.mheducation.com/class/e-munoz-ruiz-fall-2021-55030>

Connect contains homework, available only at certain times of the course, which is required. If you bought a used book or did not buy the bundle through the bookstore there may be an additional cost to access Connect.

You are required to use your student ID code to register for Connect in case there are other students with your same name. This “homework” IS REQUIRED for the course but is available for increased understanding of the material. It is YOUR RESPONSIBILITY to check online to see when the “homework” is due and TURN IT IN ON TIME. I WILL NOT CHANGE THE DUE DATES or give individual student’s work special consideration. At the end of the course, I will take your overall percentage for all the homework and apply it to the total credit points.

Canvas: All lecture and lab handouts, lecture notes, course schedules, and announcements are available at <https://scccd.instructure.com/login/ldap>. Canvas is fully functional on many types of smartphones and tablets. Compatible devices include platforms such as iPhone/iPad/iPod Touch, and Android. **However, it is recommended that you do not solely rely on one of these devices to complete your online course work. Access to a computer is still needed for many online activities: Several critical items are available on Canvas for this course.** Within “Syllabus” you will find this syllabus and schedule. You will find announcements, supplement readings, additional videos, power-points, study lists, and (possibly) Lecture Exam Reviews.

## Class Policies

### Communication Expectations

Identify yourself by your real name. Be mindful of your language, and avoid including personal information, such as phone numbers or addresses, in discussion forums. All online communications should be transmitted with the intent to inform, inspire, etc. and not to offend or breach personal privacy.

Use humor, joking, or sarcasm with caution. We often rely on non-verbal cues such as facial expressions to communicate joking or sarcasm, but these cues are not always clear in an online environment. These cues can be simulated with emoticons to reduce misunderstandings.

Be Professional, Clear and Respectful. Clear and effective writing translates to clear and effective communication. Writing the way, you would speak is a good rule of thumb, use a positive tone and adhere to the same rules you would follow in face- to-face communications.

Remember This Course is Online. Your instructor and fellow students may be located around the world or have very different schedules than you do. You may not always receive an immediate response.

### Course Structure

This course is **FULLY ASYNCHRONOUS**, which means it is self-paced with readings and videos to be completed each week. Between classroom sessions you will be required to do the assigned readings, view the online videos, complete your outlines, and post questions during the week.

### Learning Environment

This fully online course is designed using asynchronous activities, assignments, discussions, and assessments. The course will make use of many common LMS (learning management system) tools, e.g., Canvas. Please be sure to read all the lessons and documents in the course so that you have the necessary information to complete the required activities. If your campus uses a different LMS than Canvas, we recommend you watch the "*Navigating this Course*" Video before getting started.

### Learner Expectation

- This is a fast-paced course that requires regular engagement throughout the semester.
- Ensure you have approximately 10 hours per week to spend on this course
- Review the assignments on the Course Schedule and print it out for easy reference as you complete each task.
- You are expected to plan your study time around the course schedule and recommended completion dates.
- While the due dates for the course are just suggestions, it is expected that all assignments will be submitted based on due dates located on McGraw-Hill Connect website.
- Check your email account regularly for updated information. Use e-mail for private messages to the instructor and other students. The discussion forum is for public messages.
- If you have questions or confusion about an assignment, act promptly! Check the Question Cafe to see if your concern has been addressed already and post your question there if you don't see an answer.
- We are human and sometimes links or other pages need updating or become inactive.
- Read directions carefully.

## Course Exams and Major Assignments

### Point Breakdown

Assignment Description	Points
LearnSmart (20@5pt) via Connect	100 points
IRAT Quizzes (20@10pt) via Connect	200 points
Final Exam via Connect	150 points
Lecture Exams (4@75pt) via Connect	300 points
Writing Assignment via Canvas	50 points
Lab Exams (1@25pt, 2@50pt) via Canvas	125 points
Lab Reports (14@15pt) via Canvas	210 points
Case Study Presentations via Canvas	50 points
VR Labs (20@2pt) via Connect	40 points
<b>Total</b>	<b>1,225 points</b>

### Grading Policy

To calculate your grade, total all points earned and divide that number by the total points available (1,225). 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 the following scale:

- A: 90.00% and above
- B: 80.00% to 89.99999%
- C: 70.00% to 79.99999%
- D: 60.00% to 69.99999%
- F: 59.99999% and below

### LATE ASSIGNMENTS, CHEATING, AND MAKE-UP POLICY

Late assignments (such as lab reports) will not be accepted EVER. There will be NO EXTENSIONS, NO EXCEPTIONS. 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 CANNOT be made up. Period. Lecture exams cannot be made up, unless extreme circumstances, documented in writing, are provided. The instructor holds final decision on what constitutes an acceptable circumstance.

### Lecture Exams

Four midterms and one comprehensive final will cover the topics listed in the schedule below. The questions are multiple-choice, true/false, or matching with some essay questions. The comprehensive portion of the final will only be 20% of that exam; the other 80% will cover the final topics in last unit. Study guides will be posted (or not) at my discretion and should ONLY be used as a study guide, not as an indication of the exact questions on the tests.

### **LearnSmart and Connect IRAT Quizzes**

What you already know about cell biology will be assessed prior to the lecture. Scores for these will be based on how much content and critical thinking you learn from lecture will be formatively assessed using McGraw-Hill Connect, accessed through Canvas. McGraw-Hill Connect scores will be based on performance, converted to a common scale, and posted in the Canvas gradebook. IRAT quizzes will occur on dates specified on the course schedule. These are given through Connect website and will only be open for a set period. If you are late your quiz will still be collected automatically when the time is up. Material may include and combination of multiple-choice, true-false, matching, fill in the blank, and short answer questions. Learn Smart assignments are organized in Units and each set will be due weekly on the Sunday of the week.

### **Lab Exams**

Lab exams must be taken on the day that they are scheduled. There are no make-ups, no exceptions. There will be 3 lab exams (see the Tentative Schedule for exam dates). These exams will be given online via Canvas and utilize images of models, slides, diagrams, and experimental set up. Questions will be a variety of fill-in, multiple choice, and matching questions.

### **Lab Reports**

Lab reports consist of activities and visuals to guide you through the various human body systems. Given the online nature of this lab, some reports contain links to videos demonstrating an experiment or require you to draw various tissues or body parts. For these parts of the lab report, you will be given a lab guide containing the necessary images for you to use as references. Links to videos are embedded in the lab report itself.

Lab reports may be typed up or handwritten. If you choose to hand write your lab report, DO NOT submit photos of your report. Photos of lab reports are often too small, blurry, and illegible. If you choose to hand write it, you must scan your report and submit it as a PDF. There are phone apps that can utilize you phone camera to create a high-quality PDF scan such as CamScanner. Scans must be quality, legible, and be a single document. Do not submit each page individually. Make sure every page is included in order on your scan.

### **Case Study Presentation**

Each student will be responsible for working with a group of students (3-4) in this course to complete a case study presentation. Each group of students will be assigned a 'patient' with an example disease. At the conclusion of the semester, each group will submit a written outline and visual infographic describing their patient's disease, and the appropriate courses of diagnosis, treatment, and prognosis. Detailed instructions (including topics, formatting requirements, rubrics, due dates, etc.) for the assignment are available on Canvas. If you do not fulfill the requirements of this presentation assignment in its entirety, you cannot pass Biol 5.

## 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 includes 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.

## Diversity Statement:

"Respect for Diversity: It is my intent that students from all diverse backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture. Your suggestions are encouraged and appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups. In addition, if any of our class meetings conflict with your religious events, please let me know so that we can make arrangements for you.

## \*Subject to Change Statement

This syllabus and tentative schedule are subject to change with notification. It is your responsibility to check on announcements made for up-to-date assignments.



## Tentative Course Schedule\*

Week	Dates	Lecture	Lecture Exams	Assignment Due	Lab
1	8/9-8/13	Syllabus Introduction, and Exploring Life and Science (1)	<b>Lecture Exam #1</b> (8/31)	IRAT & LearnSmart Ch.1 (8/23)	<b>Lab 1:</b> Lab 1: Introduction to Microscopy (8/21)
2	8/16-8/20	Chemistry of Life (2) Cell Structure and Function (3)		IRAT & LearnSmart Ch.2 (8/23) IRAT & LearnSmart Ch.3 (8/23)	<b>Lab 2:</b> Biological Macromolecule (8/21)
3	8/23-8/27	DNA Biology and Technology (22) Chromosome Inheritance (19)		IRAT & LearnSmart Ch.22 (8/30) IRAT & LearnSmart Ch.19 (8/30)	<b>Lab 3:</b> Cell Structure and Function (8/28)
4	8/30-9/3	Organization and Regulation of Body System Organ Systems (4)  Cardiovascular: Heart and Blood Vessel (5)	<b>Lecture Exam #2</b> (9/14)	IRAT & LearnSmart Ch.4 (9/6) IRAT & LearnSmart Ch.5 (9/6)	<b>Lab 4:</b> DNA: Transcription and Translation (9/4)  <b>Picking Patient for Case Study</b>
5	9/6-9/10	Lymphatic System and Immunity (7) <b>9/6: Labor Day</b>		IRAT & LearnSmart Ch.7 (9/13)	<b>Lab Practical #1</b> (9/11)
6	9/13-9/17	Digestive System (9)		IRAT & LearnSmart Ch.9 (9/20)	<b>Lab 5:</b> Mitosis and Meiosis (9/18)
7	9/20-9/24	Respiratory System (10)	<b>Lecture Exam #3</b> (10/05)	IRAT & LearnSmart Ch.10 (9/27)	<b>Lab 6:</b> Genetics and inheritance (9/25)
8	9/27-10/1	Urinary System (11)		IRAT & LearnSmart Ch.11 (10/4)	<b>Lab 7:</b> Histology (10/2)
9	10/4-10/8	Skeletal System (12)		IRAT & LearnSmart Ch.12 (10/11)	<b>Lab 8:</b> Cardiovascular system (10/9) <b>Case Study Outline Due</b>
10	10/11-10/15	Muscular System (13)	<b>Lecture Exam #4</b> (10/19)	IRAT & LearnSmart Ch.13 (10/18)	<b>Lab 9:</b> Homeostasis: Digestion, Respiration and Urinary Systems (10/16)
11	10/18-10/22	Nervous System (14)	<b>Final Exam</b> (12/8)	IRAT & LearnSmart Ch.14 (10/25)  <b>Writing Assignment Draft Due</b> (10/20)	<b>Lab Practical #2</b> (10/23)
12	10/25-10/29	Senses (15) Endocrine System (16)		IRAT & LearnSmart Ch.15 (11/1) IRAT & LearnSmart Ch.16 (11/1)	<b>Lab 10:</b> Musculoskeletal System (10/30)
13	11/1-11/5	Reproductive System (17)		IRAT & LearnSmart Ch.17 (11/8)	<b>Lab 11:</b> Nervous System and Senses (11/6)
14	11/8-11/12	Development and Aging (18) <b>11/11: Veterans Day</b>		IRAT & LearnSmart Ch.18 (11/15)	<b>Lab 12:</b> Digital Dissection Activity (11/13)  <b>Lab 13:</b> Reproduction and Development Human Evolution (11/13)
15	11/15-11/19	Biology of Infectious Disease (8)		IRAT & LearnSmart Ch.8 (11/22)	<b>Lab 14:</b> Human Evolution (11/20)
16	11/22-11/26	Ecology and Nature of Ecosystems (24) <b>11/25-11/26: Thanksgiving Day</b>		IRAT & LearnSmart Ch.24 (11/29)	<b>Lab Practical #3</b> (11/27)
17	11/29-12/3	Review Week		<b>Writing Assignment Final Draft Due</b> (12/1)	Case study due
<b>Final</b>	<b>12/6-12/10</b>	<b>Final Exam (12/8)</b>			