

# Anatomy & Physiology I

## BIOL-2401

Summer II 2021 Section N01 CRN-40729 4 Credits 07/12/2021 to 08/09/2021 Modified 05/31/2021

### Meeting Times

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This is a fully online class. There are deadlines for assignments and exams, but there are no set meeting times.

OPTIONAL: I will be teaching a blended course at the same time. I will provide you links so that you can join the live lab sessions via Zoom. This is not required, but would allow you to ask questions and hear questions from other students.

### Optional Lab Sessions

Monday, Tuesday, Wednesday, Thursday, 12:10 PM to 2:40 PM, Zoom

### Contact Information

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#### Instructor: Melissa K. Layton M.S.

Email: via eCampus

Office: H-275

Phone: 979-209-8886 (office)

936-681-0159 (call or text)

#### Live Q&A Sessions

Days: Sunday through Friday

Times: 5:30-6:00pm

### Description

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**3 lecture hours and 3 lab hours per week; 96 total contact hours. Credit: 4 semester hours.**

Study of the structure and function of human anatomy, including the neuroendocrine, integumentary, musculoskeletal, digestive, urinary, reproductive, respiratory, and circulatory systems. Content may be either integrated or specialized. Biology 2401 is the first course in a two semester sequence which examines the systems of the human body using an integrated approach. Lab activities reinforce lecture topics.

#### Requisites

**Prerequisites:** A student must be college ready in reading according to TSI college-ready standards.

**Recommendation:** BIOL 1406 is recommended.

# ★ Core Curriculum Statement

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Through the Texas Core Curriculum, students will gain a foundation of knowledge in human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning. For details relating to this core course, please see:

<http://www.blinn.edu/academics/core-curriculum.html> (<http://www.blinn.edu/academics/core-curriculum.html>)

## ▮ Outcomes

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### Lecture Based Outcomes

Use anatomical terminology to identify and describe locations of major organs of each system covered.

Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.

Describe the interdependency and interactions of the systems.

Explain contributions of organs and systems to the maintenance of homeostasis.

Identify causes and effects of homeostatic imbalances.

Describe modern technology and tools used to study anatomy and physiology.

### Lab Based Outcomes

Apply appropriate safety and ethical standards.

Locate and identify anatomical structures.

Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.

Work collaboratively to perform experiments.

Demonstrate the steps involved in the scientific method.

Communicate results of scientific investigations, analyze data and formulate conclusions.

Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations, and predictions.

## 📖 Materials

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**Textbook:** *Anatomy Physiology-The Unity of Form and Function*, 9<sup>th</sup> Edition, 2021, Saladin, McGraw-Hill. Packaged with Connect access code

**Lab Manual:** Biology 2401 Lab Access Code. Available at both Bryan and Brenham Bookstore. Top Hat Publishing.

## ☰ Course Requirements

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### Daily Work

- **SmartBook assignments** - These are intended to help introduce the students to the lecture material for that module.
- **Top Hat assignments** - These are intended to help introduce the students to the lab material for that module.
- **Homework assignments** - These activities are designed to help students (1) practice answering questions over the material and (2) identify information that they don't understand.
- **Mock Exams and Mock Practicals** - These are practice exams. NO they are not the same questions that you will see on the real exam or practical. They have the same number of questions, the set up is similar to what you will experience on the exams (1

question per page and no going back), and they are timed. You will need to complete the mock exam and the mock practical three (3) times each before you will be allowed access to the real exam or practical. These activities are due on the weekend of the unit exam (Sunday by 11:59pm).

- **Make up points** - There are make up activities available for each unit. They are designed to help you practice answering questions about over the material. These can be completed to replace any points missed on daily work for that unit. Your daily score cannot go above 100%.

### Lecture Exams

- There will be four lecture exams. These exams cover the material covered in that unit and consist of multiple choice questions.
- The lecture exams will consist of 70-80 questions.
- A review will be posted to help you prepare for the exam.

### Lab Exams (Practicals)

- There will be four lab practicals. The lab practicals will cover the material from the labs, including identifying structures, parts of experiments, and ordering sequences of events.
- The lab practicals will consist of 50-55 questions.
- A review checklist will be posted to help you prepare for the practical.

### Final Exam

- A comprehensive final exam will be administered during the finals period. It will cover the lecture material.
- The final exam consists of 100 questions.
- A modified version of the lecture exam reviews will be posted to help you prepare for the final exam.
- The final exam will be used to replace your lowest lecture exam or lab practical, provided that the final exam grade is higher than the lowest score.

### Make up Exams or Practicals

- Make ups will only be given with a valid excuse. If you have a potential scheduling conflict, please contact your professor as soon as possible. If the makeup exam cannot be rescheduled within a reasonable time frame, the final exam grade will be used to replace the missing exam or practical grade.

## ✓ Evaluation

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### Criteria for grading

Evaluation Methods	Points
Comprehensive Final Exam	20%
Lecture Exams (4)	40%
Lab Practical (4)	20%
Daily Work (Homework / Labs)	20%

<b>Total Points</b>	<b>100%</b>
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**Grade distribution**

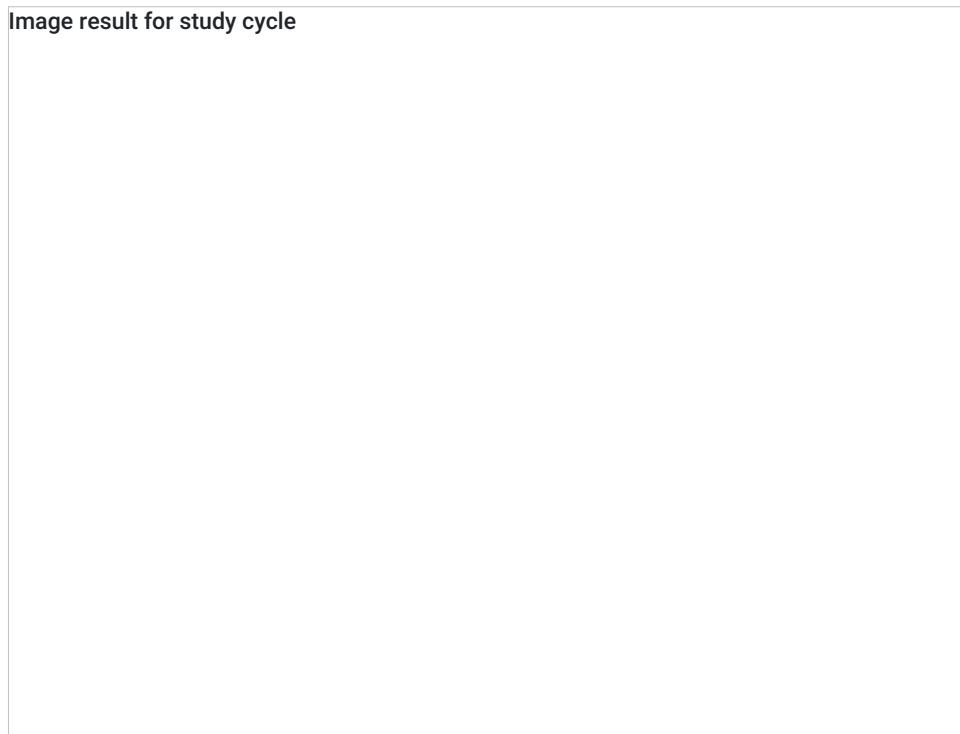
<b>Letter Grade</b>	<b>Percent Total</b>
A	90 to 100 %
B	80 to 89.9%
C	70 to 79.9 %
D	60 to 69.9 %
F	Below 59.9 %

**Rounding:**

In order to be considered for rounding, your final grade must be within 0.5% of the next letter grade. (Ex. 79.4% is a C).

Rounding is not automatic. I will look to see if a student has watched the lecture videos, done the homework, made good use of make up points, etc. before considering if I will round up their grade.

**How to earn the grade that you want:**



### How to Succeed in this Course

Science courses may be challenging and difficult. Most successful students spend two to four hours studying per week for each credit hour of the course.

### Key Points

- Have access to all the materials and technology required for this course (webcam, microphone, computer, reliable internet, etc).
- Attend all classes. Each lecture builds on the previous lecture. Stay ahead of the material.
- Come to class prepared by reading the textbook and/or lab manual beforehand and taking notes before class to improve success.
- If you have a question during lecture, go ahead and ask it. Chances are that at least three other students have this same question.
- Know your deadlines and course policies by looking at the syllabus, instructor announcements, and eCampus dates, schedules, and news items.
- Work through lots of practice problems in addition to your homework.
- Form study groups with your peers.
- Ask your professors for help, visit office hours, and, if needed, request an appointment to see your instructor one-on-one.
  - Be prepared when you visit with your instructor and have questions related to content ready.
- Seek help from Blinn College's tutoring services, if needed.
- Be responsible for your own learning by actively engaging in the course.

## Blinn College Policies

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All policies, guidelines, and procedures in the [Blinn College Catalog \(http://catalog.blinn.edu/\)](http://catalog.blinn.edu/), [Blinn College Board Policies \(http://pol.tasb.org/Home/Index/1204\)](http://pol.tasb.org/Home/Index/1204), and the [Blinn College Administrative Regulations \(https://www.blinn.edu/administrative-regulations/\)](https://www.blinn.edu/administrative-regulations/) are applicable to this course.

[Specific information on civility, attendance, add/drop, scholastic integrity, students with disabilities, final grade appeal, alternative retailers, campus carry and proctoring arrangements and cost. \(http://www.blinn.edu/syllabus-policies/\)](http://www.blinn.edu/syllabus-policies/)

Notice of any action taken under these protocol and procedures, by Blinn College or its employees, may be delivered by hand, through the U.S. Postal Service, or electronically to the student's Blinn Buc e-mail account. Notice shall be deemed received upon actual receipt, on deposit in the U.S. Mail, or upon entering the information processing system used by Blinn College for Blinn Buc e-mail accounts, whichever first occurs.

Information about the changes Blinn has made to the May Minimester, Summer I, and Summer II semesters: [Back with Blinn \(https://www.blinn.edu/back-with-blinn/index.html\)](https://www.blinn.edu/back-with-blinn/index.html).

## \* Course Policies

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[Please read: May Minimester, Summer I, and Summer II 2021 General Classroom Procedures. \(http://www.blinn.edu/back-with-blinn/course-policies.html\)](http://www.blinn.edu/back-with-blinn/course-policies.html)

### Problem Resolution

If you have a complaint about your class, you should first request a conference with your instructor to try and resolve the problems or issues. If the problems or issues cannot be resolved at the instructor level, you should request a conference with the Biology Department Head or Assistant Dean.

Dr. Michelle McGehee  
Office: D-201  
Phone: 979-209-7378  
Email: michelle.mcgehee@blinn.edu

## Attendance Policy

Lecture and lab attendance will be taken using online activities that must be completed within a set window of time. There will be four of these assignments due each week. Failure to complete an assignment will count as an absence.

Students are allowed two weeks (= 4 days) of unexcused absences and will be dropped after their fifth unexcused absence.

Excused absences are limited to (1) military service (2) representing a school (i.e. Blinn College, Texas A&M, or High School) in an official capacity, or (3) religious holiday with written notice given by the 15th day of the semester.

Unexcused absences include, but are not limited to: **personal issues, doctor's appointments, funerals, work schedule, technology issues, illness, arriving late, leaving early, dropping out for an extended period of time, etc.** You have 4 days of unexcused absences, use them wisely.

## Make up Policy

### Daily Work

- If you miss an assignment or miss points on an assignment, you can replace the missed points with "make up points."
- **Make up points** - There are make up activities available (see Connect) for each unit. These can be completed to replace any points missed on daily work for that unit. Your daily score cannot go above 100%.

### Exams or Practicals

- Make ups will only be given with a valid excuse. If you have a potential scheduling conflict, please contact your professor as soon as possible. If the makeup exam cannot be rescheduled within a reasonable time frame, the final exam grade will be used to replace the missing exam or practical grade.

## HonorLock

All exams and practicals are taken using HonorLock. You must have a computer (not tablet or smartphone), working webcam and access to a mirror (handheld, bathroom, etc.).

Before the exam starts you will be asked to perform a room, work space, and phone checks. During the practical you will be asked to perform additional scan of your room, work space, computer, and phone location. Students who fail to complete these tasks will receive a zero on their practical.

During your exam, you are being recorded (audio and video). I will go back and review your test session. I must be able to see your face during the entirety of your exam. If a student is found to have used outside resources (notes, cheat sheet, phone, earbuds, websites, roommate, etc.), it will result in an automatic zero on his or her exam or practical. If your video gets "shut off" or I cannot see your face during the entire video, it may result in a zero on your exam or practical.

Exams and practicals are set up so that students can only see one question at a time and so that you cannot go back to previous questions.

## Schedule

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Week One	Meeting Details	Testing	Lecture Hours	Lab Hours	Contact Hours

Monday, July 12, 2021	<b>Module 1 - Introduction to Major Themes in Anatomy and Physiology</b>  Lecture: Introduction to major themes in anatomy and physiology (Ch. 1.1, 1.5, 1.6, 1.8; Atlas A.1-A.4)  Lab 1: Safety/Ethics/Teamwork  Lab 4: Body Organization		120	120	4.8
Tuesday, July 13, 2021	<b>Module 2: Chemistry</b>  Lecture: General Chemistry (Ch. 2.1-3)  Lab: Organic Chemistry (Ch. 2.4)		120	120	4.8
Wednesday, July 14, 2021	<b>Module 3: Cell Anatomy &amp; Physiology</b>  Lecture: Cell Structure (Ch. 3.1-3.2; 3.4)  Cell Functions (Ch. 3.3; Ch. 4.2-4.3)  Lab 2: Microscopy  Lab 3: Cell Structures and Cell Cycle  Lab 5: Measurements and Mechanisms of Transport		120	120	4.8
Thursday, July 15, 2021	<b>Module 4: Histology</b>  Lecture: Tissue basics and Epithelial tissue (Ch. 5.1-5.2; 5.5-5.6)  Connective, muscle, and nervous tissues (Ch. 5.3-5.4)  Lab 6: Epithelial Tissue  Lab 7: Connective Tissue  Lab 8: Nervous and Muscle Tissue		120	120	4.8
Friday, July 16, 2021	<b>Module 5: Integumentary System</b>  Lecture: Integumentary System (Ch. 6.1-6.4)  Lab 9: Integumentary System		120	120	4.8
	<b>Lecture Exam 1 and Lab Practical 1:</b>  <b>Opens: 12:00pm Friday, July 16</b>  <b>Closes: 11:59pm Sunday, July 18</b>  Exam 1 (Chapters 1-5)  Lab Practical 1 (Labs 2-9)	75			3
		75			

	<b>Unit 1 - Homework and Labs</b> <b>Due: 11:59pm Sunday, July 18</b>				
<b>Week Two</b>		<b>Testing</b>	<b>LEC.</b>	<b>LAB</b>	<b>Weekly</b>
<b>Monday, July 19, 2021</b>	<b>Module 6: Bone Anatomy and Physiology</b>  Lecture: Bone Anatomy and Physiology (Ch. 7.1-7.5)  Lab 10: The Skeleton, its tissues and its cells		120	120	4.8
<b>Tuesday, July 20, 2021</b>	<b>Module 7: Skeletal System (Bone ID)</b>  Lecture: Bone shapes, features and Axial skeleton (Ch. 8.1-8.3)  Appendicular skeleton (Ch. 8.4-8.5)  Lab 11: Skull  Lab 12: Vertebral column and thoracic cage  Lab 13: Pectoral girdle and upper limb  Lab 14: Pelvic girdle and lower limb		120	120	4.8
<b>Wednesday, July 21, 2021</b>	<b>Module 8: Joints</b>  Lecture: Joints (Ch. 9.1-9.3)  Lab 15: Joint anatomy and function		120	120	4.8
<b>Thursday, July 22, 2021</b>	<b>Module 9: Muscle Anatomy and Physiology</b>  Lecture: Muscle anatomy and histology (Ch. 11.1-11.3; 11.7)  Muscle physiology (Ch. 11.3-11.6)  Lab: Review skeletal system		120	120	4.8
<b>Friday, July 23, 2021</b>	<b>Module 10: Muscular System (Muscle ID)</b>  Lecture: Muscular system (Ch. 10.1-10.2; 10.4)  Lab 16: Head and neck muscles  Lab 17: Upper body pt. 1		120	120	4.8
	<b>Lecture Exam 2 and Lab Practical 2:</b>	75			3
	<b>Opens: 12:00pm Friday, July 23</b>	75			
	<b>Closes: 11:59pm Sunday, July 25</b>				
	<b>Exam 2 (Chapters 7, 9, 11)</b>				
	<b>Lab Practical 2 (Labs 10-15)</b>				



	<b>Unit 2 - Homework and Labs</b> <b>Due: 11:59pm Sunday, July 25</b>				
<b>Week Three</b>		<b>Testing</b>	<b>LEC.</b>	<b>LAB</b>	<b>Weekly</b>
<b>Monday, July 26, 2021</b>	<b>Module 11: Muscular System (Muscle ID)</b>  Lecture: Muscular system (cont.) (Ch. 10.3; 10.5)  Lab 18: Upper body pt. 2  Lab 19: Lower body		120	120	4.8
<b>Tuesday, July 27, 2021</b>	<b>Module 12: Nervous System and Neuron Anatomy</b>  Lecture: Nervous system and Neuron structure (Ch. 12.1-12.3)  Lab 20 (part 1): Nervous tissue		120	120	4.8
<b>Wednesday, July 28, 2021</b>	<b>Module 13: Neuron Physiology</b>  Lecture: Neuron physiology (Ch. 12.4-12.6)  Lab 20 (part 2): Muscle fatigue		120	120	4.8
<b>Thursday, July 29, 2021</b>	<b>Module 14: Spinal Cord and Reflexes</b>  Lecture 14: Spinal cord and reflexes (Ch. 13.1-13.3)  Lab 21: Spinal cord, nerves, and reflexes		120	120	4.8
<b>Friday, July 30, 2021*</b>	<b>Module 15: Brain pt. 1</b>  Lecture: Brain Structures (Ch. 14.1-14.4)  Lab 22: Human brain and cranial nerves  Lab 23: Sheep brain		120	120	4.8
	<b>Lecture Exam 3 and Lab Practical 3:</b>	75			3
	<b>Opens: 12:00pm Friday, July 30</b>	75			
	<b>Closes: 11:59pm Sunday, Aug. 1</b>				
	<b>Exam 3 (Chapters 10; 12-13)</b>				
	<b>Lab Practical 3 (Labs 16-21)</b>				
	<b>Unit 3 - Homework and Labs</b> <b>Due: 11:59pm Sunday, Aug. 1</b>				
<b>Week Four</b>		<b>Testing</b>	<b>LEC.</b>	<b>LAB</b>	<b>Weekly</b>

<b>Monday, Aug. 2, 2021</b>	<b>Module 16: Brain pt. 2</b> Lecture: Brain Functions (Ch. 14.2-14.5) Lab 22: Human brain and cranial nerves Lab 23: Sheep brain		120	120	4.8
<b>Tuesday, Aug. 3, 2021</b>	<b>Module 17: Autonomic Nervous System</b> Lecture: Autonomic nervous system and the parasympathetic division (Ch. 15.1-15.2) Sympathetic division (Ch. 15.2-15.4) Lab 24: Understanding and using the scientific method (Ch. 1.3)		120	120	4.8
<b>Wednesday, Aug. 4, 2021</b>	<b>Module 18: Receptors and General Senses; Chemical Senses</b> Lecture: Receptors and general senses (Ch. 16.1-2) Chemical senses (Ch. 16.3) Lab 25: General and chemical senses		120	120	4.8
<b>Thursday, Aug. 5, 2021</b>	<b>Module 19: Hearing and Equilibrium</b> Lecture: Hearing and equilibrium (Ch. 16.4) Lab 26: Hearing and Equilibrium		120	120	4.8
<b>Friday, Aug. 6, 2021</b>	<b>Module 20: Vision</b> Lecture: Vision (Ch. 16.5) Lab 27: Vision		120	120	4.8
	<b>Lecture Exam 4 and Lab Practical 4:</b>	75			3
	<b>Opens: 12:00pm Friday, Aug. 6</b>	75			
	<b>Closes: 11:59pm Sunday, Aug. 8</b>				
	<b>Exam 4 (Chapters 14-16)</b>				
	<b>Lab Practical 4 (Labs 22-27)</b>				
	<b>Unit 4 - Homework and Labs</b>				
	<b>Due: 11:59pm Sunday, Aug. 8</b>				
<b>Week Five</b>		<b>Testing</b>	<b>LEC.</b>	<b>LAB</b>	<b>Weekly</b>

<b>Monday, Aug. 9, 2021</b>	<b>Final Exam (Chapters 1-16)</b> <b>Opens: 12:01am Mon., Aug. 9</b> <b>Closes: 11:59pm Mon., Aug. 9</b>	<b>135</b>			<b>2.7</b>
	<b>Total Contact Hours</b>				<b>96</b>
	<b>*Q Drop Date is Friday, July 30, 2021</b>				