



You will learn so much about your life and living organisms. Do you know how the brain works? How memory works? Why the bones can break? How muscles work? How the heart sends blood to all the body structures with the oxygen the lungs bring in? The course will look at how and why the body works the way it does. What happens? Anatomy and physiology is the study of life and living organisms. But what exactly does being ALIVE mean? What qualities make one a living organism? How do we stay alive? Anatomy and Physiology are the opposite sides of the same biological coin.

**Anatomy**, provides a map of how a body is put together, human or animals.

**Physiology** is the instruction manual that explains how this miraculous machine works.

The information in this course will enable you to understand the life and living plus diseases and effects, as well as develop new habits to increase your personal success. You will use what you learn in this course; your knowledge will come in handy later in the course of your professional career.

## My Personal Welcome

Welcome to Anatomy and Physiology—I'm delighted that you have chosen this course! I am very passionate about the human body and how it works, and I can hardly wait to pass that knowledge and passion on. I will present the information in the most exciting way I know, so that you can grasp the concepts and apply them now and hopefully throughout your life.

As you read and wrestle with new ideas and facts that may challenge you, I am available to support you. The fastest way to reach me is by my HCC email. The best way to really discuss issues is in person and I'm available during posted office hours to tackle the questions. My goal is for you to walk out of the course with a better understanding of the subject matter and its relationship to illnesses and health. So please visit me or contact me by email whenever you have a question.

### nextLearning - Our class learning modality and environment

**Online on a Schedule** – Students can take classes online at the scheduled class time that they select when enrolling. Students never come to campus, but log into their class on the scheduled dates and times using our learning management system (Canvas).

## Prerequisites and/or Co-Requisites

**Anatomy and Physiology requires** Math 0106 or higher placement by testing, must be placed in college level reading.

**Co-requisites:** None.

The recommendations for this course include College Level Reading as determined by SAT, ACT, TASP or successfully passing ENGL0305 with "C" or better. Biology 1406 (General Biology) is strongly recommended.

If you have enrolled in this course having satisfied these prerequisites and recommendations, you have a higher chance of success than students who have not done so. Please carefully read the repeater policy in the [HCCS Student Handbook](#).

### **Canvas Learning Management System**

All Biology sections utilize [Canvas \(https://eagleonline.hccs.edu\)](https://eagleonline.hccs.edu) to supplement in-class assignments, exams, and activities.

### **Open Lab Locations**

[HCCS Open Computer Lab locations](#) may be used to access the Internet and Canvas. **USE FIREFOX OR CHROME AS THE INTERNET BROWSER.**

### **HCC Online Information and Policies**

For online/hybrid students. As an online /hybrid student, you are responsible for all information/requirements provided by the online college. Here is the link to information about HCC Online classes <http://www.hccs.edu/online/>. This includes the mandatory online course prior to start of class.

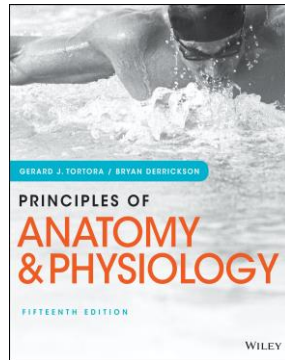
### **Scoring Rubrics, Sample Assignments, etc.**

When applicable, look in Canvas for the scoring rubrics for assignments, samples of class assignments, and other information to assist you in the course.

<https://eagleonline.hccs.edu/login/ldap>

## Instructional Materials

### Required Resources



**Title:** Principles of Anatomy & Physiology 15th Edition

**Print:** Loose Leaf (full title)

**Publishers:** Wiley

**ISBN: 9781119642275**

- *Please note that you do not need to purchase book or access code for this course as you have paid for your course materials including etextbook access during registration. The cost of digital course materials for this class were included in your student bill and are guaranteed to be the lowest cost available to purchase your required materials.*
- *Students have the option to opt out of the program **prior to the Official day of Record**. Students who withdraw prior to the official day of record will have their course materials fee refunded within two day - two weeks after withdrawing.*
- *It is **NOT** recommended that you Opt-Out, as these materials are required to complete the course. If you do however choose to opt-out of these materials, you will not have access to the etextbook through Canvas and you will be responsible for purchasing the course materials at the full retail price. You can choose to Opt-Out on the first day of class, but you will be responsible for purchasing your course materials at the full retail price and access to your materials may be suspended. To Opt out, click on the First Day Inclusive Access LTI Link on your canvas shell, then click on the opt-out button and confirm. The HCC Bursars/Finance Department will credit your account in 2-14 days.*
- *If you withdraw prior to the official day of record, please opt out first so your account will be credited faster.*
- *Faculty, for more information about the HCC Textbook Savings program, contact our bookstore [sm515@bncollege.com](mailto:sm515@bncollege.com) or 713-528-0872.*

**ELECTRONIC RESOURCES FOR EXAMS:** To maintain the rigor and the integrity of the classes, Biology department **requires** all students attending online classes to use a **Lockdown Browser with Webcam for all exams**. You need a desktop or a Laptop with webcam for your exams. Smartphones and tablets will not work.

## **Suggested Resources**

### **OER – Open Educational Resource**

<https://openstax.org/books/anatomy-and-physiology/pages/1-introduction>

The above link will take you to a free human anatomy and physiology textbook. This textbook is an excellent resource to utilize in addition to the required course materials.

### **Other Instructional Resources**

#### **Tutoring**

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](#) website for services provided.

#### **Libraries**

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <http://library.hccs.edu>.

#### **Supplementary Instruction**

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <http://www.hccs.edu/resources-for/current-students/supplemental-instruction/>.

## Course Overview

Anatomy and Physiology I is the first part of a two course sequence. It is a study of the structure and function of the human body including cells, tissues and organs of the following systems: integumentary, skeletal, muscular, nervous and special senses. The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.

### Core Curriculum Objectives (CCOs)

BIOL. 2101 satisfies the Life science requirement in the HCCS core curriculum. The HCCS Biology Discipline Committee has specified that the course address the following core objectives:

- **Critical Thinking:** Students will demonstrate the ability to engage in inquiry and analysis, evaluation and synthesis of information, and creative thinking by completing a written assignment such as a book report, research paper, or essay.
- **Communication Skills:** Students will demonstrate effective development, interpretation and expression of ideas through written, oral, and visual communication by completing a written assignment such as a book report, research paper, or essay.
- **Quantitative and Empirical Literacy:** Students will demonstrate the ability to draw conclusions based on the systematic analysis of topics using observation, experiment, and/or numerical skills by completing textbook reading assignments, completing assignments, and answering questions on quizzes and exams that pertain to Course Student Learning Outcome #2 below.
- **Social Responsibility:** Students will demonstrate cultural self-awareness, intercultural competency, civil knowledge, and the ability to engage effectively in regional, national, and global communities by completing textbook reading assignments, completing assignments, and answering questions on quizzes and exams that pertain to Course Student Learning Outcome #4 below.

### Program Student Learning Outcomes (PSLOs)

#### **Program Student Learning Outcomes (PSLOs) for the Biology Discipline**

1. Will display an understanding of biological systems and evolutionary processes spanning all ranges of biological complexity, including atoms, molecules, genes, cells, and organisms.
2. Will integrate factual and conceptual information into an understanding of scientific data by written, oral and/or visual communication. (This may include successful completion of a course-specific research project or a case study module).
3. Will demonstrate proficiency and safe practices in the use of laboratory equipment and basic laboratory techniques.
4. Will apply principles of the scientific method to problems in biology in the collection, recording, quantitative measurement, analysis and reporting of scientific data.

## **Course Student Learning Outcomes (CSLOs)**

Completion of the specific course Student Learning Outcomes listed below does NOT and will NOT guarantee the student any specific final course grade at the end of the semester!

- 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.

## **Learning Objectives**

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## **Student Success**

Academic standards require a minimum of 3 study hours for every contact hour; meaning for a class that meets 3 hours per week, you need to budget and set aside a minimum of 9 hours each week to study and prep for your course success. Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online
- Timely completion of assignments
- Participating in class activities
- Successful exam performance, including the mandatory final

There is no short cut for success in this course; it requires reading and studying the material using the course objectives as a guide.

### **Instructor and Student Responsibilities**

As your Instructor, it is my responsibility to:

- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar that will include a description of any special projects or assignments
- Arrange to meet with individual students before and after class as required

As a student, it is your responsibility to:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](#)



## Assignments, Exams, and Activities

### Written Assignments

In this course, we will have 4 regular exams, 1 comprehensive final and combined quizzes will count for 1 additional test grade. That makes for a grand total of 6 test grades. Each exam (except the final exam) will consist of 50 multiple choice questions, each question will be worth 2 points each. You will have 1 hour and 20 minutes to complete the exam.

**Exams will be available only during our class period time.**

Once the deadline has passed, no late students will be allowed to complete the exam.

### In-Class Activities

Class discussions regarding the material and the impact of scientific discovery will be examined in class. Students will get a chance to relate information from current events to what we are studying in class. In order to be well prepared for class activities and discussions, students are encouraged to examine information DAILY.

### The Final

Students who are absent from the final exam without discussing their absence with the instructor in advance or within 24 hours afterward will receive a course grade of Incomplete. Any student who does not take a makeup exam by the end of the following long semester will receive a final exam grade of zero and a course grade of F.

### Grading Formula

Chapter Exams (4) and cumulative chapter quizzes (1 test grade) = 5 @18% each =90%

Cumulative Departmental Final Exam = 10%

Grade	Total Points
A	90-100
B	80-89
C	70-79
D	60-69
F	<60

### Incomplete and Withdrawal Policy:

In this course, the purposes of the "I" (incomplete) grade is for students who are caught up and passing at the student withdrawal deadline, and then have a medical or other problem that prevents them from completing the course. The drop date for the course is: **April 6, 2021 by 4:30 PM**, you are strongly encouraged to speak directly with the instructor to discuss options, study techniques tutoring options etc, or you will likely earn an "F."

An incomplete "I" grade will be given only if all of the following conditions are met:

- ✓ You have earned at least 85% of the available points by the date that the "I" grade is requested.
- ✓ You can provide documentation showing why you should earn an incomplete, such as a doctor's note, etc.
- ✓ You must be passing with a grade of "C" or better, this is a numerical value of 70%.
- ✓ You must request the incomplete in writing BEFORE **April 16, 2021**
- ✓ In all cases, the instructor reserves the right to decline a student's request to receive a grade of Incomplete.

**HCC Grading Scale can be found on this site under Academic Information:**

**<http://www.hccs.edu/resources-for/current-students/student-handbook/>**

## Course Calendar

<b>Week/day</b>	<b>Chapter</b>	<b>/Lab Description</b>
1/1	Chap 1	Concept of structure and function Anatomical terms General organization of the body Concept of homeostasis
1/2	Lab 1	Anatomical terminology using models and students as human subject
2/1	Chap 2	Explain the importance of basic chemical and biochemical concepts Explain pH, solutions, oxidation-reduction
2/2	Lab 2	The microscopes General structure of a cell using prepared slides or a cheek smear slide
3/1	Chap 3 & 4	Cells: morphology and physiology Membrane Transport, Genetics, Cell cycle
3/2	Lab 3 & 4	Cell division: Use models and slides
4/1	Chap 4 & 5	Tissues, glands and membranes
4/2	Lab 4	Microscopic study of the four tissue types and glands. Finding glands on torso model
5/1	Chap 6	Identification of components of the skin Explain the functions of the skin and relate them to different structures of the skin as well as to homeostasis
5/2	Lab 5	Macro and microscopic examination of the skin
6/1	Chap 7	Structure, organization and function of Bone tissue.
6/2	Lab 6	Histology, anatomy and identification of bones.
7/1	Chap 8	The appendicular skeleton, Articulations
7/2	Lab 6	Make students comfortable with bones
8/1	Chap 9	Joints
8/2	Lab	Let students work with models to get used to organization and functioning of joints
9/1	Chap 10	Muscular System: Structure, function, types
9/2	Lab 7	Muscle structure, Nomenclature
10/1	Chap 11	Muscular tissue: Types, structure & metabolism
10/2	Chap 11 & Lab 8	Lecture to continue Lab: Muscle physiology
11/1	Chap 12	Nervous tissue: Structure & functioning
11/2	Lab 9	Movement
12/1	Chap 13	Spinal cord, spinal nerve, Somatic reflexes
12/2	Lab 10	Spinal cord and spinal nerves
13/1	Chap 14	Brain and cranial nerves: structure and organization
13/2	Lab 11	Brain structure and cranial nerves
14/1	Chap 15	Autonomic Nervous System
14/2	Lab 12	Human Reflexes

15/1	Chap 16	Sense organs: Structure and function
15/2	Lab 13, 14	General somatic senses and special senses

### Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

## Instructor's Practices and Procedures

### Missed Assignments

**Chapter quizzes, which combined will count for an additional test grade, are to be completed at your own pace. As long as these chapter quizzes are completed by May 7, 2021 you will receive credit. Exams must be completed within your designated class time. If you cannot take the exam during your required time, you are to notify the instructor immediately prior to the exam, not after. During situations of emergency, proper documentation is required to be considered to take the exam. The professor reserves the right to refuse any requests for exam completion outside of the pre specified time.**

### Academic Integrity

Plagiarism, cheating, and other forms of academic dishonesty are not only violations of the college system and the rules of this class, but are unethical and unprofessional. Students engaging in any form of academic dishonesty are subject to immediate dismissal from the program. You are expected to be familiar with the College's Policy on Academic Honesty, found in the catalog and student handbook. Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Penalties and/or disciplinary proceedings may be initiated by College System officials against a student accused of scholastic dishonesty. "Scholastic dishonesty": includes, but is not limited to, cheating on a test, plagiarism, and collusion.

**Cheating** on a test includes:

- Copying from another students' test paper;
- Using materials not authorized by the person giving the test;
- Collaborating with another student during a test without authorization;
- Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of a test that has not been administered;
- Bribing another person to obtain a test that is to be administered.

**Plagiarism** means the appropriation of another's work and the unacknowledged incorporation of that work in one's own written work offered for credit.

**Collusion** mean the unauthorized collaboration with another person in preparing written work offered for credit. Possible punishments for academic dishonesty may include a grade of 0 or F in the particular assignment, failure in the course, and/or recommendation for probation or dismissal from the College System. (See the Student Handbook).

**If you are found to be in violation of the academic policy; your exam grade nor your bonus points will be counted, a score of 0 will be recorded for that particular exam.**

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>

### **Attendance Procedures**

Attendance will be taken electronically during class meetings.

### **Student Conduct**

During exams, a webcam and lockdown browser are required. Cell phones should be silenced or on vibrate. Cell phones must be tucked away during exams. You will be required to perform a series of actions to ensure academic integrity.

HCC student code of conduct manual.

<https://www.hccs.edu/resources-for/current-students/student-handbook/#d.en.293830>

### **Instructor's Course-Specific Information**

You are embarking on quite an ambitious journey and as your instructor, I am here to guide you.

Please understand the following 6 points before diving into this course:

1. This course is rigorous, meaning it requires time, focus, energy and deep understanding of the material.
2. Allow yourself enough time to really understand the material. This means you cannot study the night before the exam, you must study daily.
3. Continually ask yourself questions about the material you are learning, apply reason and logic to the material in order to understand, not just memorize, the content.
4. Participate in the discussions and read your announcements, I will consistently post thought provoking questions to test your knowledge before the exam. Your announcements are a way that I will consistently communicate with you, check them at least daily.
5. Examine the material beforehand. Do not let the lecture be the first time you are hearing, seeing or thinking about the material.
6. Vocabulary is key in a course like this. Get the vocabulary down first, it will help you build understanding around the concepts.

Please understand, this class is in no way a challenge, but so much fun! You will learn and you will use what you learn as well. This class is intense, voluminous, moderately paced, demanding and intricate. Your absolute best is required.

### **Biology Program Information**

The Biology area of study here at HCC covers the smallest and simplest organisms (microbiology) to the largest and most complex organisms (human anatomy and physiology, zoology, botany).

AWARD TYPES: Associate in Science

AREA OF STUDY: Science, Technology, Engineering & Math

Please visit link: <https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/biology/>

## HCC Policies

Here's the link to the HCC Student Handbook <http://www.hccs.edu/resources-for/current-students/student-handbook/> In it you will find information about the following:

- Academic Information
- Academic Support
- Attendance, Repeating Courses, and Withdrawal
- Career Planning and Job Search
- Childcare
- disAbility Support Services
- Electronic Devices
- Equal Educational Opportunity
- Financial Aid TV (FATV)
- General Student Complaints
- Grade of FX
- Incomplete Grades
- International Student Services
- Health Awareness
- Libraries/Bookstore
- Police Services & Campus Safety
- Student Life at HCC
- Student Rights and Responsibilities
- Student Services
- Testing
- Transfer Planning
- Veteran Services

### EGLS<sup>3</sup>

The EGLS<sup>3</sup> (Evaluation for Greater Learning Student Survey System) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS<sup>3</sup> surveys are only available for the Fall and Spring semesters. -EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>

### Campus Carry Link

Here's the link to the HCC information about Campus Carry:

<http://www.hccs.edu/departments/police/campus-carry/>

### HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID](#) and activate it now. You may also use Canvas Inbox to communicate.

## **Housing and Food Assistance for Students**

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

## **Office of Institutional Equity**

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (<http://www.hccs.edu/departments/institutional-equity/>)

### **disAbility Services**

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including long and short term conditions, mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to <http://www.hccs.edu/support-services/disability-services/>

### **Title IX**

Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross  
 Director EEO/Compliance  
 Office of Institutional Equity & Diversity  
 3100 Main  
 (713) 718-8271  
 Houston, TX 77266-7517 or [Institutional.Equity@hccs.edu](mailto:Institutional.Equity@hccs.edu)  
<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>

### **Office of the Dean of Students**

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.



<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>

### **Department Chair Contact Information**

Dr. DaeJan Grigsby

Email: [daejan.grigsby@hccs.edu](mailto:daejan.grigsby@hccs.edu)

Phone: 713-718-7775