



Division of Earth, Life & Natural Sciences Biology Department

[https://www.hccs.edu/programs/areas-of-study/science-technology-engineering-- math/biology/](https://www.hccs.edu/programs/areas-of-study/science-technology-engineering--math/biology/)

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**BIOL 2102: Human Anatomy & Physiology II | Laboratory |  
#10472**

Fall 2019 SS | 12 Weeks (9.24.2019-12.15.2019)

In-Person | CE-Learning Hub Sci Room 316 | M/W 6 pm – 7:50 pm

1 Credit Hour | 48 hours per semester

**Instructor Contact Information**

Instructor:	Roberto M. Aguilar, Ph.D.	Office Phone:	N/A
Office:	Before/After class	Office Hours:	Before/After class
HCC Email:	roberto.aguilar@hccs.edu	Office Location:	Before/After class

Please feel free to contact me concerning any problems that you are experiencing in this course. Your performance in my class is very important to me. I am here to help you achieve your academic goals. Please let me know how I can help you achieve this.

**Instructor's Preferred Method of Contact**

Email is the best way to communicate with me. I will respond to emails within 24-48 hours Monday through Friday; I will reply to weekend messages during the following week.

## What's Exciting About This Course

You will learn so much about your life and living organisms. Do you know how the heart works? Are you male or female? What makes you male or female? How does your blood flow? How do you breathe? How do your kidneys eliminate waste? 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? What processes help us stay alive? We will understand that 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! One of my passions is to know as much as I can about the human body, and I can hardly wait to pass that 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 the world of Human Anatomy and Physiology. So please visit me or contact me by email whenever you have a question.

## Prerequisites and/or Co-Requisites

Biol. 2102 requires Anatomy and Physiology I (Biol 2401). If you have enrolled in this course having satisfied this prerequisite, 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.  
**[FIREFOX](#) OR [CHROME](#) AS THE INTERNET BROWSER.**

**USE**

## 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

The lab manual required for this course, depends on your college of enrollment and the list is provided below:

### **Central, Coleman & Southwest:**

“Human Anatomy and Physiology II Laboratory Manual”, Sixth Edition. Authors: Jyoti Wagle, Susan Grigsby, Renu Jain, Mahtash Moussavi and DaeJan Grigsby. Publisher: Hayden-McNeil Lab Solutions. Package for Houston Community College. ISBN: 978-1-5339-0310-5

### **Northeast, Northwest & Southwest:**

“Human Anatomy and Physiology II Laboratory Manual”, Bluedoor Publishing 2018.  
ISBN# 978-68135-906-9 [bluedoorpublishing.com](http://bluedoorpublishing.com)

## Suggested Resources

Lecture material and lecture textbook, as well as any additional material on the canvas website.

## 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 Lab II is the lab component that correlates with the Anatomy and Physiology II lecture class (Biol 2302). This lab class is built around the study of structure and function of the human body including the endocrine, cardiovascular, immune, lymphatic, respiratory, digestive, urinary, and reproductive systems. Emphasis is on the interrelationships among the systems and regulation of physiological functions involved in maintaining homeostasis.

## Core Curriculum Objectives (CCOs)

Biol 2302 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 explore the scientific research methods that are used in the study of biology. They will learn to interpret numerical data in charts, graphs, and tables that are in their textbooks and other resources. Students should be able to carry out basic mathematical operations including calculating percentages and frequencies. In addition, students will complete textbook reading assignments and answer questions on quizzes and exams that pertain to Course Student Learning Outcome #2
- **Social Responsibility:** Students will demonstrate the ability to engage effectively in class activities and discussions, complete textbook reading assignments, and answer questions on quizzes and exams that pertain to Course Student Learning Outcome #4 below.

## **Program Student Learning Outcomes (PSLOs)**

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)**

BIOL 2102 Anatomy & Physiology II (lab) provides a hands-on learning experience for exploration of human system components and basic physiology. Systems to be studied include endocrine, cardiovascular, immune, lymphatic, respiratory, digestive (including nutrition), urinary (including fluid and electrolyte balance), and reproductive (including human development and genetics).

Upon successful completion of this course, students will:

1. Apply appropriate safety and ethical standards.
2. Locate and identify anatomical structures.
3. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general lab ware, physiology data acquisition systems, and virtual simulations.
4. Work collaboratively to perform experiments.
5. Demonstrate the steps involved in the scientific method.
6. Communicate results of scientific investigations, analyze data and formulate conclusions.
7. Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations, and predictions.

## 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
- Attain a raw score of at least 50% on the departmental final exam
- Be aware of and comply with academic honesty policies in the [HCCS Student Handbook](#)

## Assignments, Exams, and Activities

### Laboratory Exams (80%)

There will be 4 practical laboratory exams. Exams will be 80% of your grade. All exams will be primarily fill in the blank/short answer...but may contain a combination of Multiple Choice and/or True/False. Each exam will have a bonus section of 5 possible points. The lowest exam will be dropped for grade calculation. You will be provided with a piece of paper to annotate all answers. No lab exam make-ups.

### In-Class Activities/class participation (5%)

There will be multiple in-class activities throughout the class. Attendance is heavily affected by this category. For each 2 classes missed, 1 point will be deducted from this section. Class activities include but are not limited to games (rapid fire questions, etc.) and other group activities.

### Quizzes (5%)

There will be multiple quizzes throughout the class. Attendance is heavily affected by this category. The lowest 2 quizzes will be dropped. Quizzes will be given based primarily on material covered in the previous class but may also include new material that should have been read before coming to class.

### Optional Extra Credit (5 points)

**The extra credit is optional.** However, if you decide to do the extra credit, here are the rules. For 5 extra credit points that can be added to your lowest test grade (not the one you are going to be dropping), you will have to take 5 minutes to use your talents (sing, draw, poetry, etc.) to tell us something about Anatomy and physiology. Please visit Canvas for more details on this section.

### Laboratory Manual (10%)

All students will be required to take read and prepare for all the upcoming laboratory assignments. All pre-labs and post-labs write-ups/questions will be assessed for completion at the end of the semester for final grade calculation of the section.

### Grading Formula

CATEGORY	PERCENT	DESCRIPTION
TEST	80	4 tests; Dropping the lowest one
IN CLASS ACTIVITIES	5	
QUIZZES	5	
LAB MANUAL	10	
TOTAL	100	

Grade	Total Points
A	90-100
B	80-89.9
C	70-79.9
D	60-69.9
F	<60

### Incomplete 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. If you are not passing at the student withdrawal deadline, you should drop yourself from the course, 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.
- ✓ You must request the incomplete in writing BEFORE **December 5, 2019**
- ✓ 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/](http://www.hccs.edu/resources-for/current-students/student-handbook/)



### Course Calendar

Week	LECTURE	DATES
1.	<b>Chapter 1</b> Introduction, lab safety <b>Chapter 2</b> Human body organization and terminology	9/23 9/25
2.	<b>Chapter 3</b> Review of microscope and tissues <b>Chapter 4</b> The Endocrine System	9/30 10/2
3.	<b>LAB EXAM #1 (Chapters 1-4)</b> <b>Chapter 5</b> The Blood	10/7 10/9
4.	<b>Chapter 6</b> The Heart	10/14 10/16
5.	<b>Chapter 7</b> Electrocardiography <b>Chapter 8</b> Blood vessels	10/21 10/23
6.	<b>LAB EXAM #2 (Chapters 5-8)</b> <b>Chapter 9</b> The Lymphatic System	10/28 10/30
7.	<b>Chapter 10</b> The Respiratory System	11/4 11/6
8.	<b>Chapter 11</b> The Urinary System <b>Chapter 12:</b> Urinalysis	11/11 11/13
9.	<b>LAB EXAM #3 (Chapters 9-12)</b> <b>Chapter 13</b> The Digestive System	11/18 11/20
10.	<b>Chapter 13</b> The Digestive System, continued <b>Chapter 14</b> The Reproductive System	11/25 11/27
11.	<b>Chapter 15</b> The Female Reproductive System & Development	12/2 12/4
12.	<b>LAB EXAM #4 (Chapters 13-15)</b> <b>Extra credit presentations</b>	12/9 12/11

## **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**

The lowest laboratory exam will be dropped. There will be **NO Make-up laboratory exams**.

### **Academic Integrity**

Academic integrity is of highest importance. Academic dishonesty (cheating, plagiarism, collusion, etc.) will not be tolerated. If you are caught cheating, plagiarizing, colluding in any exams or classwork, you will be given a zero for the test/assignment and sent to the Dean of Student Services for further evaluation. See the link below for details.

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**

This class is heavily dependent on attendance. There is not substitution for not being present. For every 2 absences, there will be 1 point deducted from the class participation grade. On or before the withdraw date, students are encouraged to drop the course if needed. Your professor may drop you for not attending classes on or before the withdraw date.

### **Student Conduct**

Students are expected to conduct themselves in a professional manner and with respect to the professor and each other. Consequences will be implemented for disruptive behavior according to the school's policy on student conduct.

### **Instructor's Course-Specific Information (As Needed)**

All examinations will be graded and returned for proper review within an appropriate amount of time (2-5 calendar days or next class period; whichever is first). All grades will be uploaded into the canvas class site for each to student to view.

### **Electronic Devices**

Electronic devices can be used in the instruction component of the class, except during examination/quizzes, etc. Any electronic device not being used for instruction needs to be put away and stored so others are not distracted from class instruction. Absolutely not headphones, ear buds or similar ear device will be permitted during class.

## **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. EGLS<sup>3</sup> 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. DeaJan Grigsby  
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Phone: 713 718 7775