202310.BIOL2102.2A1
Anatomy & Physiology II (Lec)
Spring 2023

INSTRUCTOR CONTACT INFORMATION

Instructor: Dr. Connie Grass, DC, BSHB, BSN
Email: cjgrass@lit.edu
Office Phone: 409-247-4863
Office Location: MPC 217
Office Hours: Monday-Friday 10:00 AM-12:00 PM (by appointment)

CREDIT: 1 Credit Hour (2 hour lab)

MODE OF INSTRUCTION

Online

PREREQUISITE/CO-REQUISITE:

Pre-requisite Biol 2101. And passed the Reading/Writing Sections of THEA or any other accepted test/ Co-requisite Biol 2302.

COURSE DESCRIPTION

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.

LEARNING OUTCOMES

Upon successful completion of this course, students will:

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.

COURSE OBJECTIVES

Upon completion of this course, the student will be able to

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1. Know and identify the parts of the endocrine system.
2. Know and identify the parts of the circulatory system.
3. Know and identify the parts of the lymphatic system.
4. Know and identify the organs important in the immune system.
5. Know and identify the parts of the respiratory system.
6. Know and identify the parts of the digestive system.
7. Identify items important in nutrition and metabolism.
8. Know and identify the parts of the urinary system.
9. Identify what is important in fluid electrolyte and acid-base balance.
10. Know and identify the parts of the reproductive system

CORE OBJECTIVES

1. Critical Thinking Skills: To include creative thinking, innovation, inquiry, and analysis, evaluation, and synthesis of information
2. Communication Skills: To include effective development, interpretation, and expression of ideas through written, oral, and visual communication
3. Empirical & Quantitative Skills: To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusion
4. Teamwork: To include the ability to connect choices, actions, and consequences to ethical decision-making
5. Personal Responsibility: To include ability to connect choices, actions, and consequences to ethical decision-making

COURSE OUTLINE

Chap 15 Endocrine

1. Structures
2. Functions
3. Diagnose different diseases

A. Chap 16 Blood
   1. Types of blood cells
   2. Solve a crime based on a blood type

B. Chap 17 The Cardiovascular System: The Heart
   1. Structures
   2. Functions
   3. Blood Flow
   4. Electrical Conduction
   5. Deduce what is wrong with a patient's heart by the ECG strip

C. Chap 18 The Cardiovascular System: Blood Vessels
   1. Name the major arteries on a model
   2. Name the major veins on a model
   3. Demonstrate how to take blood pressure with a sphygmomanometer

D. Chap 19 The Lymphatic System
   1. Structures

2. Functions
3. Diseases

E. Chap 21 The Respiratory System
   1. Structures
   2. Functions
   3. Use a spirometer to measure your lung capacity
F. Chap 22 The Digestive System
   1. Structures
   2. Functions
   3. Analyze a victim's last meal by running forensic tests
G. Chap 23 Nutrition, Metabolism, and Body Temperature Regulation
   1. Current nutritional trends
   2. Problems
   3. Reading labels
H. Chap 24 The Urinary System
   1. Structures
   2. Functions
   3. Diagnose what is wrong with various patients by their urine samples
I. Chap 25Fluid, Electrolyte, and Acid-Base Balance
   1. Fluid balance
   2. Role of the brain
   3. Are all sports drinks the same
J. Chap 26 The Reproductive System
   1. Structures
   2. Functions

REQUIRED TEXTBOOK AND MATERIALS

REQUIRED = Textbook - OpexStax Anatomy & Physiology Levels I and II - https://openstax.org/details/books/anatomy-and-physiology?Book%20details REQUIRED = WILK-BLASZCZAK https://shsu.blackboard.com/bbcswebdav/pid-5055087-dtcontent-rid-107840795_1/xid-107840795_1 Your textbook for this class is available for free online. If you prefer, you can also get a print version at a very low cost. Your book is available in web view and PDF for free. You can also choose to purchase on iBooks or get a print version via the campus bookstore or from OpenStax on Amazon.com.

You can use whichever format you want. Web view is recommended -- the responsive design works seamlessly on any device. If you buy on Amazon, make sure you use the link on your book page on openstax.org so you get the official OpenStax print version. (Simple printouts sold by third parties on Amazon are not verifiable and not as high-quality.) Anatomy and Physiology from OpenStax, Print ISBN 1938168135, Digital ISBN 1947172042, www.openstax.org/details/anatomy-and-physiology.

Supplemental = Textbook - WikiBooks – Human Physiology https://en.wikibooks.org/wiki/Human_Physiology

ATTENDANCE POLICY

1. You must log into Blackboard and access this course a minimum of 3 times per week.
2. Cheating of any type will not be tolerated.
3. Late assignments will not be accepted. Students will receive a zero for assignments not completed.
4. If you wish to drop this course, you must drop it administratively. If you do not drop you will receive

an F for the course.
5. Internet usage- students are to use proper netiquette when participating in course email, assignment submissions and online discussions. Arizona State University = https://asuonline.asu.edu/newsroom/online-learningtips/netiquette-online-students/ Seth Ross = http://www.albion.com/netiquette/corerules.html
The University of Texas at El Paso = https://www.utep.edu/extendeduniversity/utepconnect/blog/october-2017/10-rules-ofnetiquette-for-students.htm l

DROP POLICY
If you wish to drop a course, you are responsible for initiating and completing the drop process. Academic Calendar . **If you stop coming to class and fail to drop the course, you will earn an "F" in the course.**
February 1, 2023. Last day for students to drop or withdraw classes and receive a full refund.
February 17, 2023. Last day for students to drop or withdraw **WITHOUT** academic penalty.
April 3, 2023. Last day for students to drop or withdraw **WITH** academic penalty.

STUDENT EXPECTED TIME REQUIREMENT
For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16-week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

COURSE CALENDAR/WEEKLY CHECKLIST – BIOL 2102 2A1

Week:	To Do:	Due Dates
Week 1 Jan 17th – Jan 20th **Module 4:** ~Introduction ~Endocrine System	☐ Discussion Board 1: Introduction ☐ Syllabus Quiz ☐ Join a group for Group Project – Pathogen Presentation due 04.21.23 ☐ Complete McGraw Hill Orientation/Introductory Materials - Click on the "McGraw Hill Virtual Labs" folder in "Modules" to register and start labs	☐ **01.22.23**
Week 2 Jan 23rd – 27th **Module 4:** ~Endocrine System	☐ McGraw Hill Labs: Endocrine System 1. Endocrine System Overview 2. Effects of Blood Glucose Level 3. Thyroid Hormone & Temperature Regulation 4. Endocrine System Lab Quiz ☐ Start working with group members on Group Project – Pathogen Presentation due 04.21.23	☐ **02.03.23**
Week 3 Jan 30th – Feb 3rd **Module 4:** ~Endocrine System	☐ McGraw Hill Labs: Endocrine System 1. Endocrine System Overview 2. Effects of Blood Glucose Level 3. Thyroid Hormone & Temperature Regulation 4. Endocrine System Lab Quiz	☐ **02.03.23**

	☐ Work with group members on Group Project – Pathogen Presentation due due 04.21.23	
Week 4 Feb 6th – 10th **Module 4:** ~Cardiovascular (Heart)	☐ MGH Labs: Cardiovascular 1. Blood Typing 2. Blood Pressure Overview 3. Blood Pressure Physiology 4. Cardiac Cycle Overview 5. Cardiovascular Quiz ☐ Work with group members on Group Project – Pathogen Presentation due 04.21.23	☐ **02.17.23**
Week 5 Sep 19th – 23rd ~Cardiovascular (Heart & Blood Vessels)	☐ MGH Labs: Cardiovascular 1. Blood Typing 2. Blood Pressure Overview 3. Blood Pressure Physiology 4. Cardiac Cycle Overview 5. Cardiovascular Quiz ☐ Work with group members on Group Project – Pathogen Presentation *due* due 04.21.23	☐ **02.17.23**
Week 6 Feb 20th – 24th **Module 5:** ~Immune System	☐ MH Labs: Immune/Lymphatic 1. Innate Immunity Overview 2. Adaptive Immunity Overview 3. Differential Blood Cell Count ☐ Work with group members on Group Project – Pathogen Presentation due due 04.21.23	☐ **02.17.23**
Week 7 Oct 3rd – 7th **Module 5:** ~Respiratory System	☐ MH Labs: Respiratory 1. Respiratory System Overview 2. Mechanism of Breathing 3. Pulmonary Function Tests 4. Respiratory System Lab Quiz ☐ Work with group members on Group Project – Pathogen Presentation *due* due 04.21.23	☐ **03.02.23**
Week 8 Mar 6th – 10th ~Midterm Exam	☐ MIDTERM EXAM ***Opens 03.08.23 and Closes 03.10.23 (Chapters 17 – 22)*** ☐ Work with group members on Group Project – Pathogen Presentation *due* due 04.21.23	☐ **03.10.23**
Week 9 Mar 13th – 17th **Spring Break**	☐ Sleep, rest, relax. ☐ Enjoy time with family and friends. ☐ Netflix, etc. ☐ Exercise ☐ Read a good book. ☐ Do something nice for someone.	
Week 10 Mar 10th – 24th **Module 5:** ~Digestive System	☐ MH Labs: Digestive and Metabolism 1. Enzymes & Digestion 2. Digestion Lab Quiz 3. Metabolism & Nutrition ☐ Work with group members on Group Project – Pathogen Presentation *due 04.21.23*	☐ **03.31.23**

Week 11 Oct 31st – Nov 4th **Module 5:** ~Digestive System ~Metabolism	☐ MH Labs: Digestive and Metabolism 1. Enzymes & Digestion 2. Digestion Lab Quiz 3. Metabolism & Nutrition ☐ Work with group members on Group Project – Pathogen Presentation *due 04.21.23*	☐ **03.31.23**
Week 12 April 3rd – 6th **Module 5:** ~Urinary System	☐ MGH LABS: Urinary System 1. Glomerular Filtration 2. Tubular Reabsorption and Secretion 3. Urinalysis ☐ Work with group members on Group Project – Pathogen Presentation *due 04.21.23*	☐ **04.14.23**
Week 13 April 11th – 14th **Module 5:** ~Urinary System	☐ MGH LABS: Urinary System 1. Glomerular Filtration 2. Tubular Reabsorption and Secretion 3. Urinalysis ☐ Work with group members on Group Project – Pathogen Presentation *due 04.21.23*	☐ **04.14.23**
Week 14 April 17th – 21st **Module 6:** ~Reproductive System ~Development and inheritance)	☐ MGH Labs: Reproductive 1. Development & Inheritance 2. Reproductive System 3.Reproductive System Quiz ☐ ***DUE:*** **04.21.23 Group Project – Pathogen Project**	☐ **04.21.23**
Week 15 April 24th – 28th **~Final Exam Review**	☐ MGH Labs: Review of Systems 1. Fetal Pig Dissection Part 1 2. Fetal Pig Dissection Part 2	☐ **04.28.23**
Week 16 May 1st – 5th **~Final Exam Review**	☐ Review for Final Exams ☐ Complete missing assignments	
Week 17 May 8th – 10th **FINAL EXAM**	**FINAL EXAM Opens 05.08.23 and Closes 05.10.23. (Chapter 23-28)** **Breathe, you made it!** **CONGRATULATIONS!** 	☐ **05.10.23**

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

1. Mandatory Course Syllabus Quiz = 5%
2. Interactive Lab Activities (5) = 25%
3. Quizzes MGH = 20%
4. Mandatory Group Lab Project = 20%
5. Midterm and Final Exam = 30%

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Total = 100%

GRADING SCALE

90-100 = A
80-89 = B
70-79 = C
60-69 = D
0 – 59 = F

ACADEMIC DISHONESTY

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty.

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at https://lit.edu/online-learning/online-learning-minimum-computer-requirements. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of online technology and resources.

DISABILITIES STATEMENT

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)-951-5708 or email specialpopulations@lit.edu. You may also visit the online resource at Special Populations - Lamar Institute of Technology (lit.edu).

STUDENT CODE OF CONDUCT STATEMENT

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION

1. Cheating of any type will not be tolerated.
2. **Late assignments will not be accepted.** Students will receive a zero for assignments not completed.
3. Internet usage- students are to use proper netiquette when participating in course email, assignment submissions and online discussions.

    Arizona State University = https://asuonline.asu.edu/newsroom/online-learning-tips/netiquette-online-students/

    Seth Ross = http://www.albion.com/netiquette/corerules.html