202610_BIOL_2102_5C1

LAMAR INSTITUTE OF TECHNOLOGY

CREDIT
1 Semester Credit Hours (Lec hours lecture, 2 hours lab)

MODE OF INSTRUCTION
Face to face, web enhanced

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, cardiovascular, lymphatic, immune, digestive, urinary, reproductive, respiratory systems. Content may be virtual, integrated or specialized.

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

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

INSTRUCTOR CONTACT INFORMATION

Instructor: Harry L. Morgan

Email: hlmorgan@lit.edu

Office Phone: 409-880-8845

Office Location: MPC 237

OFFICE HOURS:

Office and Hours: MPC 337

Monday : 12:30 AM – 2:00 PM

Tuesday: 12:30 PM – 2:00 PM

Wednesday: By appointment only

Thursday: 9:30 AM – 10:00 AM, 12:00 PM – 1:00 PM

Friday: Makeup labs, quizzes, tests, and tutorials. Students must make an appointment through Starfish.

Course Outline

A. Chap 15 Endocrine
   1. Structures
   2. Functions

3. Diagnose different diseases

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

C. 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

D. 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

E. Chap 19 The Lymphatic System
   1. Structures
   2. Functions
   3. Diseases

F. Chap 21 The Respiratory System
   1. Structures
   2. Functions
   3. Use a spirometer to measure your lung capacity

G. Chap 22 The Digestive System
   1. Structures
   2. Functions
   3. Analyze a victim's last meal by running forensic tests

H. Chap 23 Nutrition, Metabolism, and Body Temperature Regulation
   1. Current nutritional trends
   2. Problems
   3. Reading labels

I. Chap 24 The Urinary System
   1. Structures
   2. Functions
   3. Diagnose what is wrong with various patient's by their urine samples

J. Chap 25Fluid, Electrolyte, and Acid-Base Balance
   1. Fluid balance
   2. Role of the brain
   3. Are all sports drinks the same

K. Chap 26 The Reproductive System
   1. Structures
   2. Functions

Tentative Course Schedule

WEEK	**ASSIGNMENTS BY THE WEEK**	**DUE DATE**

Week 1	Introduction, Syllabus Review, Naming Endocrine Organs, Hormonal Actions, negative and positive feedback mechanisms	Jan 26
Week 2	Endocrine Organs, Tissues, Cells and hormones, Quiz-Naming Endocrine Organs	Feb 2
Week 3	Blood, Blood Functions, Blood Cells, Blood Typing, Quiz-blood cells	Feb 9
Week 4	Cardiovascular system, Heart Structures, Cardiac Conduction System, EKGs, coronary Circulation, Quizzes – Heart Structures and Coronary Circulation	Feb 16
Week 5	Practicum I – Endocrine system: organs and hormones, cells and tissues, blood and blood cells, blood typing, heart structures and functions, EKGs, coronary circulation	Feb 23
Week 6	Blood Vessel Structure, Blood Pressure, Naming Blood Vessels Quiz – Blood vessels of the face, head and neck	**March 2**
Week 7	Naming Blood Vessels and Blood Pressure Quiz – Types of Capillaries	**March 16**
Week 8	Lymphatic System: lymphatic organs, tissues and vessels The Immune System: innate and adaptive immune systems, immune system cells Quiz – Naming virus caused diseases.	**March 23**
Week 9	Practicum II – Blood vessel structure, naming blood vessels, blood pressure, lymphatic system organs and tissues, and immunity	**March 30**
Week 10	Respiration, lung structure, gas exchanges, and mechanisms of breathing and nervous control of respiration Quiz – General respiration – exchange of gases	**April 6**
Week 11	The digestive system, organs, tissues, cells and secretions, accessory organs: liver and pancreas- cells and functions Quiz – Major digestive system organs and their functions. Metabolism and nutrition	**April 13**
Week 12	Practicum III – respiration and digestion	**April 20**
Week 13	Quiz – Important minerals, vitamins and enzymes	**April 27**

	Urinary System, organs and structures, urinalysis	
Week 14	The human reproductive system- male and female reproductive tracts	**May 4**
Week 15	Practicum IV – urinary and reproductive systems Group Presentations: Infectious Diseases	**May 4**
Week 16	No labs – Finals week	

COURSE OBJECTIVES

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

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

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

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

REQUIRED TEXTBOOK AND MATERIALS

- Both of these books are free resources: you may purchase a hard copy if you wish.

1. (Lab Manual) for BIOL 2101 & BIOL 2102: **BIOL_2102_5A1_202090: BIOL_2102_5A1 Fall 2020**
2. (Lecture Book) for BIOL 2301 & BIOL 2302 https://openstax.org/details/books/anatomy-and-physiology?Book%20details
3. Regular (non-mechanical) #2 pencils.
4. Calendar for recording assignment due dates, tests, projects, etc.
5. Small 0.5' - 1" spine notebook with pocket (three ring for binding lab quizzes, laboratory exercises and extra notes)
6. Pens, colored pencils and/or highlighters of various colors

ATTENDANCE POLICY 1. You must log into Blackboard and access this course a minimum of 3 times per week.
2. Late assignments will be accepted with a deduction as a late penalty. Students will receive a zero for assignments not completed.
3. 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.
DROP POLICY
If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the Academic Calendar. If you stop completing class assignments and fail to drop the course, you will earn an "F" in the course.
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

ATTENDANCE POLICY

- **If you miss a lab or basic quiz, you have 1 week to make it up.** After that, a zero will be assigned. So, get with your instructor right away – DO NOT WAIT!!!

1. **You Must Be Present to Take the practicums. (this is non-negotiable because they are 'live', hands-on tests).** Roll will be taken daily and a grade for attendance will be posted in the gradebook.
2. You are expected to be present at class times. *(NOTE: Absences place you*
3. *at an academic disadvantage because it is difficult to learn from just class*
4. *notes).* Absences should be reserved for severe illness, hospitalization, and
5. funerals.

Please be prompt! You are expected to be in your seat, on time, when roll is taken. Do not make coming in late a habit or noticeable pattern. If you do find yourself in the position of arriving late due to unavoidable circumstances, enter the classroom with the **least** amount of disruption possible.

1. **If you miss on a test day be prepared to present documentation for the absence to be able to make up the test.**

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the Academic Calendar. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

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 EVALUATION

Final grades will be calculated according to the following criteria:

1. Quizzes = 25%

2. Interactive Lab Activities = 25%

3. Mandatory Group Lab Project = 20%

4. Exams: 4 Practicums = 30%

-

GRADING SCALE

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

LIT does not use +/- grading scales

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

- **Cell phone use should be to facilitate students learning and participation during lab.**