**Anatomy & Physiology Lab II (Biol 2102) **

**Credit:** 1 semester credit hour (1 hour lab)

**Prerequisite/Co-requisite:** Pre-requisite Biol 2101. And passed the Reading/Writing Sections of accepted entrance tests/ 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.

# Required Textbook and Materials

1. *Human Anatomy & Physiology Laboratory Exercises, Level 2 by Stephanie Lanoue, ISBN* **978-0-7575-7810-6**
2. Regular (non-mechanical) #2 pencils – No PENS please
3. Calendar for recording assignment due dates, tests, projects, etc.
4. Small 0.5’ - 1” spine notebook with pocket (three ring for binding lab quizzes, laboratory exercises and extra notes)
5. 3-hole punch
6. Colored pencils
7. Digital or cell phone camera (access to a color printer)

# Course Objectives

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

1. Know and identify the parts of the endocrine, circulatory, lymphatic,

respiratory, digestive, urinary and reproductive systems.

2. Know and explain the physiology of the endocrine, circulatory, lymphatic,

respiratory, digestive, urinary and reproductive systems.

3. Identify items important in nutrition and metabolism.

**Core Objectives**

1. Critical Thinking Skills: To include creative thinking, innovation, inquiry, and

analysis, evaluation and synthesis of information

1. Communication Skills: To include effective development, interpretation and

expression of ideas through written, oral, and visual communication

1. Empirical & Quantitative Skills: To include the manipulation and analysis of

numerical data or observable facts resulting in informed conclusion

1. Teamwork: To include the ability to connect choices, actions, and consequences to ethical decision-making
2. Personal Responsibility: To include ability to connect choices, actions and

consequences to ethical decision-making

**Course Outline**

1. Endocrine
2. Structures
3. Functions
4. Diagnose different diseases
5. Blood
6. Types of blood cells
7. Solve a crime based on a blood type
8. The Cardiovascular System: The Heart
9. Structures
10. Functions
11. Blood Flow
12. Electrical Conduction
13. Deduce what is wrong with a patient’s heart by the ECG strip
14. The Cardiovascular System: Blood Vessels
15. Name the major arteries on a model
16. Name the major veins on a model
17. Demonstrate how to take blood pressure with a sphygmomanometer
18. The Lymphatic & Immune Systems
19. Structures
20. Functions
21. Diseases
22. The Respiratory System
23. Structures
24. Functions
25. Use a spirometer to measure your lung capacity
26. The Digestive System
27. Structures
28. Functions
29. Analyze a victim’s last meal by running forensic tests
30. Nutrition, Metabolism, and Body Temperature Regulation
31. Current nutritional trends
32. Problems
33. Reading labels
34. The Urinary System
35. Structures
36. Functions
37. Diagnose what is wrong with various patient’s by their urine samples
38. Fluid, Electrolyte, and Acid-Base Balance
39. Fluid balance
40. Role of the brain
41. Are all sports drinks the same
42. The Reproductive System
43. Structures
44. Functions

**Grading Scale**

|  |  |
| --- | --- |
| A | 900 – 1000 points |
| B | 800 – 899 points |
| C | 700 – 799 points |
| D | 600 – 699 points |
| F | 599 points or less |

**Course Evaluation**

Semester grades will be calculated according to the following criteria:

1. 5 quizzes given (drop one with the lowest grade) = 4 quizzes at 100 points each or 400 points possible. If you are absent for a quiz, it is automatically your dropped quiz. You may not miss more than 1 quiz per semester.
2. Mid-Term Practicum (hands-on comprehensive test) = 200 points- REQUIRED ATTENDANCE – you must take it on day specified (test is set up, you take it as a class and it then comes down). This grade cannot be dropped.
3. Completed Laboratory Notebook (all assigned laboratory exercises in the lab manual) = 150 points. This grade cannot be dropped. This grade represents your weekly work throughout the semester. And the lab manual will be turned in and graded at the end of the semester.
4. Final Exam Practicum (hands-on comprehensive test) = 200 points – REQUIRED ATTENDANCE – you must take it on day specified (test is set up, you take it as a class and it then comes down). Everyone takes the lab Final Exam. Sorry no exceptions from this test. And this grade cannot be dropped.
5. Core Curriculum Group Assignment – 50 pts (required by the State of Texas. Everyone must participate). This grade cannot be dropped.

TOTAL: 1000 possible points

**Course Requirements**

1. Five quizzes given with four grades recorded. 40% of grade
2. Mid-Term worth 20% of grade
3. Completed Laboratory Notebook worth 15% of grade
4. Final Practicum worth 20% of grade
5. Group assignment worth 5% of grade

Everyone must take the Mid-Term and Final Exam (no exceptions)!

**Course Policies**

1. Cell phones may only be used as a camera in lab.
2. **No pens used in lab!** (We do not want pen marks on the models)
3. **If you miss a lab 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!!!

*NOTE: The Mid-Term and the Final are set up ‘custom’ (models out on tables with stickers) and are very time-consuming for instructors to set up. These tests have to be taken down by the instructors after they are administered because the lab has other students taking classes (not just Anatomy) and they need the table space. Therefore, it is advisable that you absolutely do not miss the Mid-Term or Final. You may not be allowed to make it up.*

1. **You Must Be Present to Take the Mid-Term and the Final. (this is non-negotiable because they are ‘live’, hands-on tests)**
2. **Final Grade at Semester’s End.** Final grades are non-negotiable. The grade you earn equals the grade you receive. (There are limited extra credit opportunities in this lab course).
3. **Personal Disposition and Behavior in Class** – you are now in a higher education environment; your mature behavior is expected
4. **Discipline Policy.** In the case of disruptive behavior, the instructor reserves the right to ask you to leave the classroom. The instructor also reserves the right not to allow you back in the class if you continue with further disruptive behavior.

Participate in class discussions when appropriate and indicate your desire to ask questions or make comments to the instructor/class by raising your hand.

1. **No food or Drinks in Class**. Per LIT, no food or drinks in the Multi-Purpose Building classrooms.
2. **Attendance Policy.** Roll will be taken weekly. Be sure to initial the roll each and every class period. NOTE: You are NOT allowed to initial/sign roll for another student.

Students with perfect attendance (**no absences whatsoever whether**

**excused or unexcused**) will be awarded 10 points added to your semester

average. *NOTE: This does not mean you can miss your regularly schedule class and catch another one of my classes at a different time! It means*

*PERFECT attendance!*

You are expected to be present at class times. *(NOTE: Absences place you*

*at an academic disadvantage because it is difficult to learn from just class*

*notes).* Absences should be reserved for severe illness, hospitalization, and

funerals. Especially with lab class, remember you only meet once a week so

attendance is vital.

**Class Arrival Time:**

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. Tardy is

more than 10 minutes late.

Summary of Class Arrival Time

4 tardies = 1 absence.

IMPORTANT: On test days, the instructor reserves the right not to administer

a test to a student who arrives more than 15 minutes late.

**Class Departure Time:**

You are required to stay until you finish each lab every week.

Do not ask to “leave class early” for doctor’s appointments, picking up

children from day care/ school, etc. Pre-arrange for these things ahead of

time. You are expected to be in class the entire time.

**Missing Class:**

If you miss a general class day, I typically do not need to know why.

However, it is your responsibility to obtain missed material and complete it

within one week.

**Missing Tests:**

Both major tests (the mid-term and the Final) must be taken and not missed.

1. **Drop/Add/Withdraw.** It is the student’s responsibility to make sure you are

officially enrolled or dropped from this course. If at any point, you decide to

drop the class, it is your responsibility to officially drop (i.e., using proper

administrative offices/ paperwork). Any student who stops attending class and

does not officially drop the course will be given an “F” as the semester grade.

**Disabilities Statement**

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit her office located in the Cecil Beeson Building, room 116B.

**Course Schedule (Tentative)**

|  |  |  |
| --- | --- | --- |
| **Friday** | **Topic** | **Reference** |
| Jan 19 | Go over syllabus;  Begin Lab 1 Endocrine Disorders | Lab manual & lecture notes |
| Jan 26 | Continue Lab 1 Endocrine, complete pages 6 – 10 and 12-13 | Lab manual |
| Feb 2 | **Quiz 1** (over Lab 1 Endocrine System)  Complete Lab 2 -“Blood: Using CSI Techniques to Solve Crimes” | Lab manual |
| Feb 9 | Lab 3 -“The Case of the Unhappy Heart” | Lab manual |
| Feb 16 | **Quiz 2** (over Lab 3 Heart)  Lab 4-“Circulatory System: I’m Under Pressure!” | Lab manual |
| Feb 23 | **Quiz 3** (over Lab 4 Circulatory)  Lab 5 -“Lymphatic System and New Diseases That Threaten Our Society” | Lab manual |
| March 2 | Lab 6- “Respiratory System: Take a Deep Breath!” | Lab manual |
| March 9 | **Mid-Term Exam**  **(over labs 1 – 6)** | REQUIRED ATTENDANCE EVERYONE – NO ABSENCES |
| **March 16** | **Spring Break** | **NO CLASS** |
| March 23 | Lab 7 Digestion  Part 1 pages 83-86 | Lab manual |
| **March 30** | **HOLIDAY** | **NO CLASS** |
| April 6 | Lab 7 continued, Part 2  Pages 87-93 | Lab manual |
| April 13 | **Quiz 4** (over Lab 7 Digestion)  Omit Lab 8. Begin Lab 9 Urinary | Lab manual |
| April 20 | Finish Lab 9 Urinary & Complete Group Assignment over this lab topic | Lab manual |
| April 27 | **Quiz 5** (over Urinary).  Omit Lab 10. Begin Lab 11 - Reproduction | Lab manual |
| May 4 | **Final Exam**  (over labs 7, 9 and 11)  **Lab Manuals Due** | REQUIRED ATTENDANCE EVERYONE – NO ABSENCES |
| May 7 - 9 | Finished with lab course | No more class |

**Contact Information**

**Instructor’s Name**: Ms. Stephanie Lanoue

**Office Location:** 204, D Multi-Purpose Center

**Email:** salanoue@lit.edu

**Office Hours:**

Mon – Fri 10:20 – 10:50am