**Anatomy & Physiology II (BIOL 2302) **

**Credit:** 3 semester credit hours (3 hours lecture)

**Prerequisite:** BIOL 2301 and BIOL 2101 (lab)

**Co-requisite:** BIOL 2102 (lab).

**Course Description**

Study of the structure and function of human anatomy, including the neuroendocrine, respiratory, lymphatic, digestive, urinary, reproductive, and circulatory systems.

**Textbooks and Materials**

1. The spiral bound workbook, “The Anatomy Assignment, Level 2, **revised printing** by

 Stephanie Lanoue, Kendall Hunt Publishing, 2014. ISBN-13: 978-1465250384

2. *Anatomy & Physiology* by E. Marieb, ISBN 9780321615879

2. Seven #882 scantrons and regular (non-mechanical) #2 pencils.

3. Calendar for recording assignment due dates, tests, projects, etc.

4. Notebook with pocket (three-ring for binding class notes, activities, and returned tests)

5. Pens, colored pencils and/or highlighters of various colors

6. Materials necessary to create a visual aid for a group project/ presentation such as a USB (Flash) drive

7. Computer internet access to class website: <http://lanoue.webstarts.com>

**Course Objectives**

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

1. Use anatomical terminology to identify and describe locations of major organs of each system covered.

2. Explain interrelationships among molecular, cellular, tissue, and organ functions in each system.

3. Describe the interdependency and interactions of the systems.

4. Explain contributions of organs and systems to the maintenance of homeostasis.

5. Identify causes and effects of homeostatic imbalances.

6. Describe modern technology and tools used to study anatomy and physiology.

**Core Outcomes**

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

3. Empirical &amp; 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**

I. Endocrine System

A. Organs of the endocrine system

B. Functions of the endocrine organs

C. Hormones and target tissues

D. Endocrine disorders

II. Blood

A. Red Blood Cells

B. White Blood Cells

C. Platelets and blood clotting

D. Blood Groups and compatibility

E. Diseases

III. Heart

A. Structure and function

B. Blood flow through the heart

C. Electrical conduction system and ECG interpretation

IV. Circulatory System

A. Types of blood vessels and characteristics

B. Anatomy of the major arteries (anterior and posterior)

C. Anatomy of the major veins (anterior and posterior)

V. Lymphatic and Immune Systems

A. Organs of the lymphatic system

B. Functions of those organs

C. Immunity and disease

VI. Respiratory System

A. Structural anatomy

B. Physiology

C. Diseases

VII. Digestive System

A. Organs and structures

B. Functions of organs

C. Enzymes and the digestive process

D. Diseases

VIII. Nutrition

A. Proper nutrition (problems with N. American diet)

B. Metabolism and Kreb’s cycle

IX. Urinary System

A. Structural anatomy

B. Electrolytes and Fluid Balance

 1. Fluid

 2. Electrolyte balance

X. Reproductive System

A. Male anatomy

B. Female anatomy

C. Function

D. Meiosis

**Grades/ Grading Scale**

A= 900-1000 points

B= 800-899 points

C= 700-799 points

D= 600-699 points

F= 599 points or below

**Course Evaluation/ Grades**

The final grade is based upon grades earned on tests, a group research project with presentation, a reading assignment with brief commentary paper, and a participation grade for oral class discussions.

1. Four major tests are given (200 points each/ 600 points total or 60%). The best 3 tests of the 4 are recorded (total =600 points from tests). One major test grade must be dropped. Level 2 (Biol 2302) students may be eligible to drop the Final Exam if (and only if) you have 3 other tests taken with an “A” achieved on each of those 3 previous exams and 900 or more accumulated points (this may be calculated with the addition of documented extra points prior to the Final Exam and requires the instructor’s approval).

 2. Group Research Project with Presentation (200 points/20%)

 3. Reading assignment (1 chapter excerpt from *Anti-Cancer: The New Way of Life)* with 1-2

 page commentary paper (50 points or 5%).

 4. One current event with 2-3 minute presentation (50 pts or 5%)

 5. Three quizzes (best 2 quiz grades are kept and recorded). 50 pts each = total 100 pts or

 10%.

**Course Policies**

1. **No Outside Cell Phone Calls or Texting**. Students are not to use their cell phones during class for personal use or text messaging. We will use the technology at times to google and conduct research during class. This is when the technology is permitted.

2. **Late work is not accepted**. Students will receive a zero for assignments not completed on time.

3. **No makeup exams.** If you miss an exam, it is your dropped grade for the semester. Only one major test grade may be dropped per semester. Only one test may be missed per semester. This applies to quizzes as well.

4. **Discipline Policy**. In the case of disruptive behavior, the instructor reserves the right to ask you to leave the classroom. Examples include excessive talking in class that is off-topic, chatting on cell phones or text messaging, loud gum popping, etc.

5. **Food and/or Drinks are not allowed in the classroom.** LIT Policy prohibits food and drinks in the Multi Purpose Building classrooms.

6. **Attendance Policy.** Roll will be taken daily. Your attendance is documented by signing your initials on the class roll every day. Do not initial/sign the roll for another student.

7. **Class Arrival / Departure Times**

1. Tardy.Please be prompt! Students are expected to be in your seat, on time, when roll is

 taken. **On test days, the instructor reserves the right not to administer a test to a**

 **student who arrives more than 15 minutes late.**

 b. 4 tardies = 1 absence

1. **Class Departure Time.** Students are required to stay the entire length of each lecture

 class unless dismissed, as a class, by the instructor. 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. Students are expected to be in class the entire class period.

1. **Class Absence**. It is the student’s responsibility to obtain missed lecture notes on video and class handouts.
2. **Absence on a Test Day.** One test may be excused and/or dropped per semester (NO

EXCEPTIONS!) If you miss a test for any reason, that is your dropped test for the semester.Please do not ask for special favors.

**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 the office located in the Cecil Beeson Building, room 116B.

**Course Schedule (Tentative) \*Students are expected to read and complete questions in your spiral workbooks AND watch video lectures/complete PowerPoint notes BEFORE coming to class. During class in level 2, we will be busy with discussions, activities and related group work – if you have not prepared for class, you will be LOST this semester and it will show so BE READY! Be proactive!**

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| **Week**  | **Topic** | **Reference/ Required Action**  |
| 1 | Go over syllabus; Begin Ch 1 Endocrine Reminders: Bring spiral workbook with Ch 1 completed to receive extra credit during first quiz next week. | Class website & spiral workbookAction Items: (1) Print out syllabus from lanoue.webstarts.com and place in personal 3-ring notebook (2) Get spiral workbook and read Ch 1 Endocrine system and complete all questions in that chapter (3) Watch all Ch 1 Endocrine videos and complete Ch 1 PowerPoint templates from Ch 1videos & place in your personal notebook |
| 2 | Ch 1 Endocrine; **Quiz 1** Endocrine on scantron Reminder: Bring spiral workbook to class; it will be checked during Quiz 1 | Class website & spiral workbookAction Items: (1) continue and finish everything listed from last week (2) Prepare for Endocrine quiz  |
| 3 | Ch 2 BloodReminder: Bring spiral workbook to class (always!). Complete the questions in your spiral associated with Ch 2. | Class website & spiral workbookAction Items: (1) Read Ch 2 in spiral workbook and answer questions (2) Watch Ch 2 videos and complete PowerPoint notes and print out for 3-ring personal notebook (3) Prepare for first major test over Ch 1 & 2 next week |
| 4 | **Test 1** (Ch 1 – 2); start Ch 3 HeartReminder: bring **scantron** to class for test 1 | Class website & spiral workbookAction Items (1) prepare for Test 1 using Test Review found under “Get Class Notes” link and scroll underneath all PowerPoints to “Final Exam Review” and complete the first two chapters only (2) Read Ch 3 in spiral workbook and complete questions (3) Watch Ch 3 videos and complete PowerPoints & place in personal notebook |
| 5 | Ch 3 Heart; start Ch 4 Circulatory | Class website & spiral workbookAction Items: (1) Read Ch 4 in spiral and complete questions (2) Watch all Ch 4 videos and complete PowerPoint notes for notebook (3) prep for upcoming quiz |
| 6 | Finish Ch 4 Circulatory; **Quiz 2** over Ch 4 then Start Ch 5 LymphaticReminder: bring scantron for quiz 2 | Class website & spiral workbookAction Items: (1) continue from last week & prep for upcoming quiz (know all arteries and veins) (2) Read Ch 5 and complete questions in spiral (3) Watch Ch 5 videos and complete Powerpoints for notebook |
| 7 | Finish Ch 5 Lymphatic System; **Test 2** (Ch 3 – 5);Reminder: bring **scantron** for test 2 | Class website & spiral workbookAction Items: (1) Study for upcoming test / use Test Review Guide online  |
| 8 | Ch 6 Respiratory | Class website & Spiral workbookAction Items (1) Read Ch 6 Respiratory and complete all questions (2) Watch Ch 6 videos and complete PowerPoint notes (3) Prep current event for when you return to school |
| 9 | Spring Break – No classes |  |
| 10 | **Current Events**; Start Ch 7 DigestionReminder: Bring completed current event title page stapled to your current event to first class of this week; be ready to present 2-3 minutes and remember to bring a prop! | Class website & spiral w.b.Action Items: (1) First class meeting this week deliver your current event. Instructions and cover sheet under “assignments” link on course website. (2) Watch Digestion videos and complete notes (3) Read digestion chapter and complete questions (4) work on your upcoming paper due next week |
| 11 | Finish Ch 7; Start Ch 8 Nutrition \***papers due**Reminder: Bring paper to second class meeting this week | Class website & spiral w.b.Action Items: (1) Read Ch 8 Nutrition and complete questions in spiral (2) Watch nutrition videos and complete PowerPoints (3) Paper due second class meeting of this week – Be ready! |
| 12 | Finish Ch 8 | Class website & spiral W.B.Action Items: (1) continue from last week (2) Prep for upcoming test next week – use online Test Review Guide for the 3 chapters you are testing over |
| 13 | **Test 3** (Ch 6-8); second class meeting of week begin Ch 9 UrinaryReminder: bring scantron for test 3 | Class website & spiral w.b.Action Items: (1) bring scantron (2) Read chapter over Urinary and complete questions (3) Watch all videos related to Urinary and kidneys/ complete PowerPoints |
| 14 | Finish Urinary chapter; **Quiz 3** over Urinary/ start ElectrolytesReminder: bring scantron for quiz 3 | continueAction Items: (1) Prep for Quiz 3 (2) Bring scantron for quiz (2) Watch videos related to Electrolyes and complete PowerPoints |
| 15 |  Ch 10 (Reproduction), Part 1 only - content ends hereReminder: bring scantron for Final Exam & bring your spiral workbook to be checked during your final exam! Be ready!! | Class website & spiral w.bookAction Items: (1) make sure your spiral workbooks are complete… push to finish everything up! They are due! (2) Watch Ch 10, Part 1 videos and complete PowerPoints (3) Finish final group presentation details and practice! |
| 16 | **Group Presentations**. We will go in order of the spiral workbook chapters.Reminder: bring one copy of presentation, meeting log and self-eval sheet completed per group | Instructions for Group Presentation online under “Assignments” linkAction Items: Bring one copy of your PowerPoint presentation printed out, a completed Self-Evaluation Point sheet and one completed meeting log to class when you present. Give to Ms Lanoue BEFORE your group presents. |
| Final Exam – To be Announced | **Test 4** - Final Exam (50 questions over last 3 chapters) | If you have less than 900 pts, you MUST take the Final Exam to complete the course. Instructor permission is required to exempt from the Final Exam. |

**Contact Information**

salanoue@lit.edu

**Office Location: MPC 237**

**Office Hours (for student consultation):** please let me know if you are stopping by

Mon & Weds 11:15am – 12:15pm

Tues & Thurs 10:30 – 10:50am and 3:20-3:30pm

Friday – by appointment only