Anatomy

SCI2100

Course Description
This class will explore the structures of the human body and the terminology associated with the structures. Emphasis will be placed on orientation, organization, and body systems. Body systems covered will include integumentary, skeletal, cardiovascular, muscular, lymphatic, respiratory, urinary, reproductive, and nervous. Further explanation will cover the special senses and how the student will be able to apply the anatomical knowledge to a future career.

Rationale
The study of anatomy allows students the opportunity to see first-hand how complex systems and structures of the human body support the existence of a divine creator. By developing an understanding of how the human body has been created, students can better understand how the body is made of interrelated systems used to sustain the body as a whole. Understanding the parts of the human body also allows the student to apply their knowledge to real world situations.

Prerequisite
Course waiver signed by the student if the student is over 18 years of age. If the student is under 18 years old the waiver will be signed by a parent or legal guardian.
SCI1000 Biology; minimum grade of 75%

Biblical Integration Outcomes
A. The student will demonstrate an understanding of a biblical worldview as it relates to the human anatomy.
B. The student will investigate and understand biblical interpretation of the sanctity of life.
C. The student will compare anatomical teachings to metaphors found in Scripture.

Measurable Learning Outcomes
A. Students will analyze the relationship between structure and function within the human body at a variety of organizational levels.
B. Students will accurately communicate information about human anatomy and the human body.
C. Students will recognize and explain the interrelationships between the anatomical systems of the human body.
D. Students will summarize the basic chemistry of the human body.
E. Students will classify the different types and functions of cells of the human body.
F. Students will classify the different types and functions of tissues of the human body.
G. Students will recognize and classify the different parts and functions of the systems of the human body.
H. Students will produce assignments that provide real life applications to anatomy and careers that are influenced by anatomy.

Course Materials
See LUOA’s Systems Requirements for computer specifications necessary to operate LUOA curriculum. Also view Digital Literacy Requirements for LUOA’s expectation of users’ digital literacy.

This course makes use of third-party digital resources to enhance the learning experience. LUOA staff and faculty have curated these resources. Students can safely access them to complete coursework. Please ensure that internet browser settings, pop-up blockers, and other filtering tools allow for these resources to be accessed. See Technologies and Resources Used in this Course below for a specific list.

- Note: Embedded YouTube videos may be utilized to supplement LUOA curriculum. YouTube videos are the property of the respective content creator, licensed to YouTube for distribution and user access. As a non-profit educational institution, LUOA is able to use YouTube video content under the YouTube Terms of Service. For additional information on copyright, please contact the Jerry Falwell Library.

Technologies and Resources Used in this Course
The following resource(s) are used throughout this course:

- Embedded LUOA lab videos

Course Grading Policies
The student’s grades will be determined according to the following grading scale and assignment weights. The final letter grade for the course is determined by a 10-point scale. Assignments are weighted according to a tier system, which can be referenced on the Grades Page in Canvas. Each tier is weighted according to the table below. Items that do not affect the student’s grade are found in Tier 0.
Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>90-100%</td>
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<tr>
<td>B</td>
<td>80-89%</td>
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<tr>
<td>C</td>
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<tr>
<td>D</td>
<td>60-69%</td>
</tr>
<tr>
<td>F</td>
<td>0-59%</td>
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Assignment Weights

<table>
<thead>
<tr>
<th>Tier</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
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<tr>
<td>Tier 2</td>
<td>35%</td>
</tr>
<tr>
<td>Tier 3</td>
<td>40%</td>
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Course Policies

Students are accountable for all information in the Student Handbook. Below are a few policies that have been highlighted from the Student Handbook.

Types of Assessments

To simplify and clearly identify which policies apply to which assessment, each assessment has been categorized into one of four categories: Lesson, Assignment, Quiz, or Test. Each applicable item on the course Modules page has been designated with an identifier chosen from among these categories. Thus, a Quiz on the American Revolution may be designated by the title, “1.2.W Quiz: The American Revolution.” These identifiers were placed on the Modules page to help students understand which Honor Code and Resubmission policies apply to that assessment (see the Honor Code and Resubmission policies on the pages that follow for further details).

- **Lesson**: Any item on the Modules page designated as a “Lesson”
  These include instructional content and sometimes an assessment of that content. Typically, a Lesson will be the day-to-day work that a student completes.

- **Assignment**: Any item on the Modules page designated as an “Assignment”
  Typical examples of Assignments include, but are not limited to, papers, book reports, projects, labs, and speeches. Assignments are usually something that the student should do his or her best work on the first time.

- **Quiz**: Any item on the Modules page designated as a “Quiz”
  This usually takes the form of a traditional assessment where the student will answer questions to demonstrate knowledge of the subject. Quizzes cover a smaller amount of material than Tests.

- **Test**: Any item on the Modules page designated as a “Test”
  This usually takes the form of a traditional assessment where the student will answer questions to demonstrate knowledge of the subject. Tests cover a larger amount of material than Quizzes.

Resubmission Policy

Students are expected to submit their best work on the first submission for every Lesson, Assignment, Quiz, and Test. However, resubmissions may be permitted in the following circumstances:

- **Lesson**: Students are automatically permitted two attempts on a Lesson. The student may freely resubmit for their first two attempts without the need for teacher approval.
• **Assignment:** Students are intended to do their best work the first time on all Assignments. However, any resubmissions must be completed before the student moves more than one module ahead of that Assignment. For example, a student may resubmit an Assignment from Module 3 while in Module 4 but not an Assignment from Modules 1 or 2. High School students may not resubmit an Assignment without expressed written permission from the teacher in a comment.

• **Quiz:** Students may NOT resubmit for an increased grade.

• **Test:** Students may NOT resubmit for an increased grade.

If a student feels that he or she deserves a resubmission on a Lesson, Assignment, Quiz, or Test due to a technical issue such as a computer malfunction, the student should message his or her teacher to make the request, and that request will need to be approved by a Department Chair.

**Consequences for Violations to the Honor Code**

Every time a student violates the Honor Code, the teacher will submit an Honor Code Incident Report. The Student Support Coordinator will review the incident and allocate the appropriate consequences. Consequences, which are determined by the number of student offenses, are outlined below:

• **Warning:** This ONLY applies to high school Lessons and elementary/middle school Assignments and Lessons. Students should view these actions as learning opportunities.
  • **Lessons:** A zero will be assigned for the question only.
  • **Elementary/Middle School Assignment:** The student must redo his or her work; however, the student may retain his or her original grade.

• **1st Offense:**
  • **Lesson, Quiz, or Test:** The student will receive a 0% on the entire assessment.
  • **Assignment:** The student will either:
    • Receive a 0% on the original assignment
    • Complete the Plagiarism Workshop
    • Retry the assignment for a maximum grade of 80%

• **2nd Offense:** The student will receive a 0% and be placed on academic probation.

• **3rd Offense:** The student will receive a 0% and the Faculty Chair will determine the consequences that should follow, possibly including withdrawal from the course or expulsion from the academy.
## Scope and Sequence

### Module 1: Introduction and Body Orientation
Week 1: Class Expectations and Overview of Anatomy
Week 2: Anatomical Terminology

### Module 2: Cells and Tissues
Week 3: Introduction to Cells
Week 4: Cellular Division
Week 5: Types of Tissue

### Module 3: Skeletal System
Week 6: Introduction to Skeletal System
Week 7: Skull and Spine
Week 8: Upper Limb Bones
Week 9: Lower Limb Bones
Week 10: Module Review and Exam

### Module 4: Muscular System
Week 11: Introduction to the Muscular System
Week 12: Muscle Physiology
Week 13: Lower Body Muscles
Week 14: Upper Body Muscles
Week 15: Module Review and Exam

### Module 5: Digestive System
Week 16: GI Tract
Week 17: Accessory Organs
Week 18: Semester Review and Exam

### Module 6: Nervous System
Week 19: Introduction to Second Semester
Week 20: Nervous System Introduction
Week 21: CNS and PNS
Week 22: Module Review and Exam

### Module 7: Circulatory System
Week 23: Blood
Week 24: The Heart
Week 25: Blood Vessels

### Module 8: Respiratory System
Week 26: Breathing
Week 27: Lungs

### Module 9: Special Senses
Week 28: Taste and Smell
Week 29: Sight and Hearing
Week 30: Module Review and Exam

### Module 10: Endocrine and Lymphatic
Week 31: Endocrine System
Week 32: Lymphatic System

### Module 11: Urinary System and Basic Reproductive System
Week 33: Urinary System
Week 34: Reproductive System
Week 35: Module Review and Exam
Week 36: Semester Review and Exam