COURSE SYLLABUS

Anatomy and Physiology I

BIOL 2401 (lecture + lab)

Spring 2017

3 — 1 — 4
Lecture—Lab—Credit

Prerequisites/Co-Requisites: None

This syllabus has been reviewed and is current on the date indicated below.

Prepared By: Miranda Thomas
Instructor/Course Designer

Submitted On: November 14, 2016
Date

Reviewed By: Carlyn Kahl
General Education Department Lead Instructor

Approved On: November 18, 2016
Date
I. INSTRUCTOR INFORMATION

TSTC West Texas | Abilene Campus | 650 Hwy 80 E, Abilene, TX 79601 | 325-672-7091

Instructor: Miranda Thomas  
Phone: 254-307-1145  
Email: miranda.thomas@tstc.edu

Department: General Education  
Lead Instructor: Carlyn Kahl  
Email: carly.kahl@tstc.edu

Email is the most effective way to reach me; please remember to identify yourself and the course you are referring to. Emails can be sent at any time; responses can be expected, within reason, during weekday hours of 7:00 am–9:00 pm. Likewise, I expect to be able to reach you reliably by TSTC email throughout the semester, and this serves as our official notification pathway should there be any updates or changes to the course information, activities, or assignments.

II. CLASS TIMES, LOCATION

This is an online class, but that does not mean the class is ‘self-paced.’ There are lecture assignments corresponding to each instructional unit to be completed weekly, weekly laboratory assignments, and scheduled quizzes, exams, and reports. The entirety of the class will be conducted through TSTC’s Moodle learning management system and the resources and links found therein. You can access our Moodle site through the TSTC portal (https://portal.tstc.edu/), or by going directly to https://mycourses.tstc.edu. If you have difficulty with this site, technical support is available by phone at 800-592-8784, by email at tstchelpdesk@tstc.edu, or via YahooMessenger @tstchelpdesk.

Please note that a portion of each examination may be proctored, meaning you must take it in person at a testing location. Specific information will be provided regarding the examination proctoring requirements. Students are responsible for securing an appropriate testing facility, showing up at the correct time, and paying any fees incurred in the process. (No fees will be required of students who choose to complete their testing at one of the TSTC locations.) Should inclement weather interrupt any in-person testing schedules, students will be notified of alternative testing options via Moodle and/or email by 5:00 pm on the date of the cancellation.

III. CORE CURRICULUM OBJECTIVES

The Texas Higher Education Coordinating Board has established six Core Curriculum Objectives that apply to general academic courses. These objectives are:

1. Critical Thinking Skills (including creative thinking, innovation, inquiry, and the analysis, evaluation, and synthesis of information)
2. Communication Skills (including the effective development, interpretation, and expression of ideas through written, oral, and visual communication)
3. Empirical and Quantitative Skills (including the manipulation and analysis of numerical data or observable facts, resulting in informed conclusions)
4. Teamwork (including the ability to consider different points of view and to work effectively with others to support a shared purpose or goal)
5. Social Responsibility (including intercultural competency, a knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities)
6. Personal Responsibility (including the ability to connect choices, actions, and consequences to ethical decision-making)

In keeping with the guidelines established by the Texas Higher Education Coordinating Board, this course (BIOL 2401) will address the following Core Curriculum Objectives: **Critical Thinking, Communication, Empirical and Quantitative**, and **Teamwork**. You should also be aware of social and personal responsibility as they pertain to biological ethics.

IV. COURSE DESCRIPTION & INTRODUCTION

**Lecture:** Anatomy and Physiology I is the first part of a two-course sequence. It is a study of the structure and function of the human body including cells, tissues and organs of the following systems: integumentary, skeletal, muscular, nervous and special senses. Emphasis is on interrelationships among systems and regulation of physiological functions involved in maintaining homeostasis.

**Laboratory:** The lab provides a hands-on learning experience for exploration of human system components and basic physiology. Systems to be studied include integumentary, skeletal, muscular, nervous, and special senses.

V. LEARNING OUTCOMES

The following learning outcomes are found in the *Lower-Division Academic Course Guide Manual*, published by the Texas Higher Education Coordinating Board. These are required for all programs that award transferrable course credit.

**Upon successful completion of this course, students will be able to:**

**Lecture:**
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

**Laboratory:**
1. Apply appropriate safety and ethical standards
2. Locate and identify anatomical structures
3. Appropriately utilize laboratory equipment, such as microscopes, dissection tools, general labware, physiology data acquisition systems, and virtual simulations
4. Work collaboratively to perform experiments
5. Demonstrate the steps involved in the scientific method
6. Communicate results of scientific investigations, analyze data and formulate conclusions.
7. Use critical thinking and scientific problem-solving skills, including, but not limited to, inferring, integrating, synthesizing, and summarizing, to make decisions, recommendations and predictions

VI. ASSESSMENT METHODS & GRADING POLICY

Exams may consist of several types of questions, including true/false, multiple choice, fill-in-the-blanks, short answer, and essay. Laboratory exams may also include a practical (specimens, experimental steps, images, and slides). Any content that has been addressed in the reading, lecture notes, an assignment, or other course materials is fair game for an assessment. You will be not only required to know the information, but to understand it, think critically using it as a basis, apply it, and build upon its foundation. I believe that conceptual comprehension is much more valuable than ungrounded memorization, and my questions will reflect this standard.

Overall Course Evaluation:

- Lecture: 66% of overall course grade = 660 points
  - Two unit examinations worth 100 points each for 200 points
  - Three article evaluations/discussions worth 20 points each for 60 points
  - Three quizzes worth 35 points each for 105 points
  - Twelve weekly assignments totaling 145 points
  - Comprehensive final examination worth 150 points
- Lab: 34% of overall course grade = 340 points
  - Three unit practicals worth 50 points each for 150 points
  - Weekly exercises totaling 190 points

TOTAL: 100% overall course average = 1000 points

A = ≥895 pts, ≥89.5% | B = 795-894 pts, ≥79.5% | C = 695-794 pts, ≥69.5%

D = 595-694 pts, ≥59.5% | F = ≤594 pts, ≤59.4%

Deadlines

⚠️ All work must be completed during the scheduled time period or a grade of zero (or an incomplete average) will result. Late assignments are not available. Communicate any issues with assignments as early as possible (do not wait until the due date) to avoid missing the deadline.

⚠️ No extra credit or make-up opportunities will be offered. By choosing to miss an assignment, you voluntarily choose to forgo any grade given. You are an adult, it is your decision, and I will respect your judgment. If you know in advance of a scheduling conflict due to an officially recognized circumstance, please notify me as soon as possible. In extreme circumstances, accommodations may be discussed, provided you have appropriate documentation.

⚠️ This is a fully online course, and as such, enrolled students are expected to have access to the computer hardware and software necessary to be successful. No extensions or exceptions will be granted based on technical difficulties, unless the issue can be verified as originating from Moodle, Mastering, Connect, or another course-related website, and the relevant technical support team has independently confirmed that user error or computer issues did not play a role in the inability to complete an
Midterm Grades
TSTC has adopted a mandatory midterm grade posting policy. Midterm grades will be calculated during week 8, and posted in WebAdvisor (https://webadvisor.tstc.edu/). The grade is calculated by dividing the student’s total number of earned points to date by the overall total of points available to date, then multiplying by 100 to find an equivalent letter average. Please note that this grade is simply an indicator of progress to-date, and has no predictive power regarding the student's final score in the course.

Perceived Grading Errors and Other Issues
Never be afraid to ask if you are uncertain. The process of learning is just as important as the content. You are welcome to ask for suggestions to alternative solutions to any problem, or a different angle from which to understand any topic. If there is a problem with an activity, bring it to the instructor's attention for review. The “Grading Standards,” published in the 2016-17 TSTC College Catalog and Student Handbook, can be found online at http://www.tstc.edu/student_life/catalog.

VII. TEXTBOOK/REFERENCE MATERIALS
The textbook, in hardcopy and/or virtual form, is required and necessary during the entirety of this course and should be acquired prior to class start date. Please consider your likeliness to resist the urge to switch between tabs or visit social media while trying to read before buying online versions. Required materials can be reserved and purchased through the TSTC West Texas Bookstore; go to http://bookstores.tstc.edu/tstcabilene/ for more information.

  Recommended with MasteringA&P online resources from Pearson. This is an optional resource, but will be an invaluable study tool! You can also purchase Mastering individually if you opt for a used textbook.

Students will not need to purchase a laboratory manual for this course. Instead, this course uses the online McGraw-Hill Connect resource LearnSmart Labs to administer weekly laboratory exercises and practicals. Please note: There is a fee for this resource, but for students needing a grace period, there is a free two-week trial option upon sign-up. No material will be lost if this option is used, as long as the student transfers the account to full status within the trial period.

LabSmart course: Anatomy and Physiology with LearnSmart Labs, section Biol 2401 Spring 2017.
  Please register for Connect using the link: http://connect.mheducation.com/class/m-thomas-biol-2401-spring-2017
  If you have any trouble, please visit http://bit.ly/StudentRegistration for more information.

To purchase lab access through the bookstore, so you can use financial aid up-front, Connect has a listing of ISBN 9780077729721. The bookstore will provide you an access card containing a registration code. Alternately, you can purchase access directly during registration using the link above and in Moodle.
Weekly lab exercises will be graded in LabSmart - however, total laboratory points will be imported into Moodle, so students have a single grade for the course. **It is not possible to pass the class without participating in the laboratory.** Please note: per Texas state guidelines, you MUST complete the Week 1 Lab Safety module before being allowed to continue in this laboratory course. The Lab Safety module will also count as your ‘Show’ assignment, allowing for official census presence and financial aid distribution.

**VIII. ADDITIONAL RESOURCES & SUPPLIES**

This is an online course; efficient internet access and reliable communication are required. The entirety of the course content will be delivered through the college’s Moodle learning management system, references found therein, and McGraw-Hill’s Connect website.

It will be necessary to read and edit documents created in the Microsoft Office suite and using Adobe software products. If you do not have Microsoft Office (or Open Office) and Adobe, you will need to regularly commute to a TSTC campus location to view and edit our class activities. TSTC’s Moodle learning management system, McGraw-Hill’s Connect, and Pearson’s Mastering all require your browser to run Java and Flash, so it is important to ensure these programs are updated and running on your computer. **Access to only a mobile device or tablet is NOT enough to succeed in this fully online computer-based course.**

**IX. CLASS PARTICIPATION POLICY & STUDENT CONDUCT**

**Expected Student Contributions**

This class will require effort, organization, dedication, and critical thought; you will receive the grade you earn. Fully utilizing your resources will be crucial. If you feel you are struggling despite your efforts, do not be afraid to ask for help!

- No student will be discouraged from discussion, and no topic will be prohibited.
- Students are expected to maintain all necessary class materials as instructed.
- If a problem arises with an online assignment or module, the instructor and/or appropriate technical support service will be contacted immediately – any delay will result in loss of points for the assignment.

- **Students will spend a minimum of 3 hours per week on laboratory-related activities, plus an additional 9-12 hours each week on lecture-related activities** (studying, completing assignments, reading ahead, etc.). This minimum is the higher education standard for the general student to achieve a “C” average course grade. Higher grades will require greater expenditure of time and focus to earn.

**Dishonesty Policy**

Accountability and integrity are the sole two most important attributes a person can hold during academic evaluation and in the workplace. Do not do anything that may be perceived as questionable during the completion of this course. **Specifically, plagiarism is a serious offense that, even when not intentionally malicious in nature, is inexcusable and unacceptable.** Bamboozling, hoodwinking, defrauding, or any other form of impropriety will result in a zero on the assignment in question; no make-
ups will be allowed. New TSTC policy now requires instructors to document and report all situations in which a student has violated statewide academic honesty policies. To avoid this situation, please become familiar with TSTC’s official standards of academic honesty and definitions of cheating, found at https://portal.tstc.edu/student/student_life/Pages/Rights-and-Responsibilities.aspx. Do not do anything to disrespect others.

Students must abide by, and are encouraged to review, sections of the 2016-17 TSTC College Catalog and Student Handbook which pertain to student participation and conduct (“Student Participation”, “Scholastic Integrity”, and “Student Conduct”), which can be found at http://www.tstc.edu/student_life/catalog. Students are also encouraged to familiarize themselves with participation and conduct policies (“Student Behavior Policies”, “Appearance and Decorum, and “Class Participation”).

X. SAFETY

Because of its online nature, there are no course-specific safety requirements for this class. However, it is important students be aware of biological safety procedures, personal protective equipment, and laboratory safety guidelines during this course. A working knowledge of laboratory safety is an expected outcome of BIOL 2401.

Additionally, students are expected to comply with all of the safety requirements and guidelines published in the 2016-17 TSTC College Catalog and Student Handbook (http://www.tstc.edu/student_life/catalog).

XI. SPECIAL NEEDS

If you have a documented disability that will impact your work in this class, please contact Misty Walden, Director of Student Support Services, so that appropriate arrangements for your accommodations can be made. In accordance with federal law, a student requesting accommodations must provide documentation of his/her disability. For more information call 325-236-8292 or email misty.walden@tstc.edu.

XII. COURSE SCHEDULE

The semester is divided into fifteen weeks, excluding spring break, and each week will be treated as a learning unit. Should any changes to the following schedule be made, the instructor will notify students via the course Moodle website and by TSTC email.

Each weekly module opens on Saturday morning at midnight. Once opened, each module will remain open for reference during the duration of the semester. The reading should be completed as soon as possible, and activities are spread throughout the coming week. Posted deadlines are the latest acceptance date, but students are encouraged to submit earlier. It is okay to submit everything at the same time. Easier/shorter assignments are due earlier in the week, while more time-consuming assignments are staggered throughout the remaining days. Do not wait until the last day to begin an assignment; those due later will take more time and focus to complete.
There will be continuous reading assignments, both from the textbook and outside reading, and students will be expected to apply this information on weekly activities, quizzes, and laboratory exercises. All instructions for scheduled activities will be posted in Moodle with submission guidelines. Consideration will be given for spelling, punctuation, and grammar as these elements are non-negotiable in the workplace and reflect strongly upon the author regardless of profession. Have your assignments proofread by a third party if unsure. Finally, there will be three lab practicals and three course exams. All major assessments are comprehensive.

All laboratory exercises are to be completed on the LabSmart course website, and each is due by 8:00 pm every Thursday. The grades will be available in the online LearnSmart gradebook and also imported into Moodle’s gradebook as a unit. The maximum points available for lab are 340; please note that it is not possible to pass the course without participating in the laboratory section. The labs are interactive, and because the material is relevant to lecture topics, it may be incorporated into course assignments and exams.

Gradebooks in both Moodle and Connect will be maintained throughout the semester, and updated after each assignment. Feedback and correct answers will be available after the class deadline as applicable, and remain open for studying reference throughout the remainder of the semester. Overall course progress is posted in the Moodle gradebook each week, showing a total score and current equivalent letter grade.

XIII. INSTRUCTOR CREDENTIALS (CV) – Miranda Thomas

<table>
<thead>
<tr>
<th>Name of Institution</th>
<th>Degree Earned</th>
<th>Date Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>The University of Texas at Arlington</td>
<td>Master of Science, Quantitative Biology</td>
<td>December 2009</td>
</tr>
<tr>
<td>The University of Texas at Arlington</td>
<td>Bachelor of Science, Microbiology, Chemistry</td>
<td>December 2006</td>
</tr>
<tr>
<td>Dallas County Community College Northlake</td>
<td>Associate of Science</td>
<td>May 2005</td>
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</table>

Industry, Teaching or Training, and Other (examples: publications and memberships)

<table>
<thead>
<tr>
<th>Description of Experience Related to the Course</th>
<th>Date Began–Ended</th>
</tr>
</thead>
<tbody>
<tr>
<td>Texas State Technical College West Texas, Abilene campus, Instructor of life sciences</td>
<td>2014-current</td>
</tr>
<tr>
<td>Tarrant County College District, Fort Worth, Northwest campus, Instructor of life sciences</td>
<td>2010-2013</td>
</tr>
<tr>
<td>The University of Texas at Arlington, Graduate teaching assistant: microbiology and cell biology</td>
<td>2007-2009</td>
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</table>
## Course Calendar

<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>LabSmart</th>
<th>Lecture</th>
<th>Deadlines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Jan 9-13</td>
<td>Laboratory Safety</td>
<td>Study of the Body, Ch 1</td>
<td>8pm Thu 12 Jan: Lab exercise due 3pm Fri 13 Jan: Embedded question assignment due in Moodle</td>
</tr>
<tr>
<td>2</td>
<td>Jan 17-20</td>
<td>Scientific Method</td>
<td>Chemical Context of Life, Ch 2</td>
<td>8pm Thu 19 Jan: Lab exercise due 3pm Fri 20 Jan: Embedded question assignment due in Moodle, Article Evaluation #1 due</td>
</tr>
<tr>
<td>3</td>
<td>Jan 23-27</td>
<td>Microscopy</td>
<td>Tour of the Cell, Ch 3</td>
<td>8pm Thu 26 Jan: Lab exercise due 3pm Fri 27 Jan: Quiz #1 due, Embedded question assignment due in Moodle</td>
</tr>
<tr>
<td>4</td>
<td>Jan 30 – Feb 3</td>
<td>Practical 1</td>
<td>Tour of Tissues, Ch 4</td>
<td>9pm Thu 2 Feb: Practical 1 3pm Fri 3 Feb: Embedded question assignment due in Moodle</td>
</tr>
<tr>
<td>5</td>
<td>Feb 6-10</td>
<td>Skills for the Scientific Laboratory</td>
<td>Exam 1</td>
<td>8pm Thu 9 Feb: Lab exercise due 3pm Fri 10 Feb: Exam 1</td>
</tr>
<tr>
<td>6</td>
<td>Feb 13-17</td>
<td>Diffusion, Osmosis</td>
<td>Integumentary System, Bones and Skeletal Tissue, Ch 5 and 6</td>
<td>8pm Thu 16 Feb: Lab exercise due 3pm Fri 17 Feb: Embedded question assignment due in Moodle</td>
</tr>
<tr>
<td>7</td>
<td>Feb 20-24</td>
<td>How Enzymes Function</td>
<td>The Skeleton, Joints, Ch 7 and 8</td>
<td>8pm Thu 23 Feb: Lab exercise due 3pm Fri 24 Feb: Embedded question assignment due in Moodle, Article Evaluation #2 due</td>
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<tr>
<td>8</td>
<td>Feb 27 – Mar 3</td>
<td>Skeletal Muscle Structure and Function</td>
<td>Muscles and Muscle Tissue, Ch 9</td>
<td>8pm Thu 2 Mar: Lab exercise due 3pm Fri 3 Mar: Quiz #2 due, Embedded question assignment due in Moodle</td>
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<tr>
<td>9</td>
<td>Mar 6-10</td>
<td>Practical 2</td>
<td>The Muscular System, Ch 10</td>
<td>9pm Thu 9 Mar: Practical 2 3pm Fri 10 Mar: Embedded question assignment due in Moodle</td>
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<td>Mar 13-17 → SPRING BREAK!! Have fun and be safe ☀</td>
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<td>11</td>
<td>Mar 27-31</td>
<td>Reflex Arc and Reflexes</td>
<td>Nervous System Overview and Tissues, Ch 11</td>
<td>8pm Thu 30 Mar: Lab exercise due 3pm Fri 31 Mar: Embedded question assignment due in Moodle</td>
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<tr>
<td>12</td>
<td>Apr 3-7</td>
<td>Eye and Vision</td>
<td>Central Nervous System, Ch 12</td>
<td>8pm Thu 6 Apr: Lab exercise due 3pm Fri 7 Apr: Article evaluation #3 due, Final exam scheduling assignment due</td>
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<tr>
<td>13</td>
<td>Apr 10-14</td>
<td>Eye Dissection</td>
<td>Peripheral System and Reflexes, Autonomic System, Ch 13 and 14</td>
<td>9pm Thu 13 Apr: Practical 3 3pm Fri 14 Apr: Quiz #3 due, Embedded question assignment due in Moodle</td>
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<tr>
<td>14</td>
<td>Apr 17-21</td>
<td>Practical 3</td>
<td>The Special Senses, Ch 15</td>
<td>8pm Thu 20 Apr: Lab exercise due 3pm Fri 21 Apr: Embedded question assignment due in Moodle</td>
</tr>
<tr>
<td>15</td>
<td>Apr 24-28</td>
<td>Fundamentals of Student Success</td>
<td>Final Exam (Begin working Monday!)</td>
<td>8pm Thu 27 Apr: Bonus lab exercise due Proctored by scheduled appointment Mon 24 Apr – Thu 27 Apr: Final exam</td>
</tr>
</tbody>
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