



Syllabus: BIO160N: Introduction to Anatomy and Physiology I

Course Information

Course Title: Introduction to Anatomy and Physiology I

Course Prefix/Number: BIO160N

Semester: Spring 2022

Class Days/Times: Online Asynchronous

Credit Hours: 4

Instructor Information

Name: Joshua S. Hoskinson, M.S., M.A.

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Office location: Online

Office hours: By Appointment

Course Description

Structure and dynamics of the human body. Includes foundations such as chemical, cellular and tissue levels of organization. Also includes major structures and functions of the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive systems.

Student Learning Outcomes

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

1. Perform activities to demonstrate improvement in the general education goals of communication and critical thinking.
2. Identify key components of the scientific method and apply the scientific process.
3. List and describe the levels of organization.
4. Discuss the chemical and cellular foundations of anatomy and physiology.
5. Describe and identify the primary human tissues and give examples of when each is used and where each can be found.
6. Identify the major selected structures of the integumentary, skeletal, muscular, nervous, endocrine, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive system.
7. Describe the functions of each significant organ and explain how these structures work together to accomplish the primary task(s) of the system

Course Structure

This course is an integrated lecture/laboratory course where the labs are integrated into the regular class periods. This semester will be delivered in an **online asynchronous** format. Given the course delivery format, students are expected to regularly check Canvas for course updates and completion of assignments. ***Students are also expected to have exceptional time management and independent learning skills given the nature of the course.*** Concerns about these aspects of the course must be communicated with the instructor immediately.

BIO160N is also structured around two themes: (1) anatomy, which will be the focus of laboratory exercises, and (2) physiology, which will be the focus of the lectures and homework assignments. Students will be learning both simultaneously.

Course Learning Materials and Textbook Information

The following texts are **required**:

Modified MasteringA&P for *Essentials of Human Anatomy and Physiology*, 12th edition (Elaine N. Marieb and Suzanne M. Keller)

*This includes an electronic version of the textbook as well as laboratory exercises. All assignments will be based out of MasteringA&P.

***This is ONLY available in Canvas. Do NOT go to Pearson to sign up for MasteringA&P; you will run into technological issues due to how this course is set up. Also, make sure you select the version WITH the eText (it's the more expensive option when presented with purchasing options). The eText is your textbook.**

The following texts are **optional**:

Marieb, Elaine N., & Suzanne M. Keller. (2018). *Essentials of Human Anatomy and Physiology, 12th Edition*. (Text)

Marieb, Elaine N., & Suzanne M. Keller. (2018). *Essentials of Human Anatomy and Physiology Laboratory Manual, 12th Edition*. (Text)

*These are the physical textbook versions of the eText provided in the Modified Mastering. If you prefer reading a physical textbook instead of an eText, these are the books we will be using. The physical version of the textbooks is not required for the course.

Course Outline

- I. Scientific Process
 - A. Scientific experimentation

- B. Analyzing and reporting results
- II. Introduction to Anatomy and Physiology
 - A. Levels of organization
 - B. Organ systems overview
 - C. Homeostasis and disease
- III. Chemical Foundations of Anatomy and Physiology
 - A. General chemistry
 - B. Introduction to biochemistry and macromolecules
 - C. Introduction to reactions, enzymes, and catalysis
- IV. Cellular and Histological Foundations of Anatomy and Physiology
 - A. Structure and function of cellular organelles
 - B. Introduction to the gene and protein synthesis
 - C. Structure and functions of selected human tissues
- V. The Integumentary System
 - A. Functions of the integumentary system
 - B. Structures of the epidermis, dermis, and hypodermis
- VI. The Skeletal System
 - A. Identification of selected human bones
 - B. Bone tissue
- VII. The Muscular System
 - A. Skeletal, cardiac, and smooth muscle tissue
 - B. Physiology of muscle contraction including glucose energy needs and oxygen demand
 - C. Identification of major muscle groups and selected superficial muscles
- VIII. The Nervous System and Sensory Organs
 - A. Organization of the nervous system
 - B. Identification of selected nerves
 - C. Nervous tissue and the action potential
 - D. Conduction of the signal to other neurons and effector organs
 - E. Structure and function of selected special senses
- IX. The Endocrine System
 - A. Hormone production and function
 - B. Structure and function of selected endocrine organs
- X. The Cardiovascular System and Blood
 - A. Structure of arteries, veins, capillaries, and the heart
 - B. The circulatory pathway including identification of major arteries and veins
 - C. The heart beat and blood flow through the cardiovascular system
 - D. Components of blood
- XI. The Lymphatic System and Body Defenses
 - A. Lymph vessels and lymph nodes
 - B. The immune response
- XII. The Respiratory System
 - A. Functional anatomy of the respiratory system
 - B. Respiratory physiology
- XIII. The Digestive System
 - A. Structure of the digestive organs
 - B. Chemical and mechanical digestion
- XIV. The Urinary System

- A. Organs of the urinary system
- B. Structure of the nephron and urine formation
- XV. The Reproductive System
 - A. Anatomy of the male and female reproductive systems
 - B. Sperm production
 - C. Egg production and the menstrual cycle
 - D. Fertilization

Course Schedule

For the course schedule, please reference the *BIO160N Course Schedule* and Canvas.

Evaluations, Grading & Assignments:

90 and above is an A
80 – 89.9* is a B
70 – 79.9* is a C
60 – 69.9* is a D
Under 60 is Failing

*Rounding of grades to the next grade level is at the sole discretion of the instructor.

Your grade will be determined by the following:

Weekly Lecture Quizzes	25%
Weekly Lab Practicals	25%
Mastering Assignments	25%
Lab Assignments	25%
Total	100%

Weekly Lecture Quizzes. 25% of your final grade will be determined by weekly lecture quizzes on the material presented that week *only*. These weekly lecture quizzes will focus on the *physiology* concepts presented, with reference to anatomy as deemed appropriate. These quizzes will be due Sunday night at 11:59PM each week. There will be no final cumulative quiz for the course.

Weekly Lab Practicals. 25% of your final grade will be determined by weekly lab practicals and medical terminology quizzes on the material presented that week *only*. These weekly lab practicals will focus on the *anatomy* concepts presented, with reference to physiology as deemed appropriate. These practicals will be due Sunday night at 11:59PM each week. There will be no final cumulative practical for the course.

Mastering Assignments. 25% of your final grade will be determined by weekly homework assignments in the MasteringA&P software. These assignments are aimed at practicing both the anatomy and physiology material learned each week. These MasteringA&P assignments will be due Sunday night at 11:59PM each week.

Lab Assignments. 25% of your final grade will be determined by weekly lab assignments that are designed to prepare the student for the weekly lab practicals, which will mostly take the form of 'lab reports' which will allow the student to practice their anatomy lessons. There will also be additional lab assignments as deemed appropriate. These lab assignments will be due Sunday night at 11:59PM each week.

Himdag Cultural Component

Tohono O'odham traditions and cultural beliefs will be discussed as relevant course topics, and only as appropriate to the Tohono O'odham Nation's traditional standards for sharing information as determined by the Himdag Committee.

Policies and Expectations

Course Policies:

- 1) Students are expected to attend each class, arriving on time, except in the case of an excused emergency.
- 2) Students are expected to contact instructor prior to absences, coming late to class or leaving early.
- 3) Unexcused late arrivals or early departures will count against attendance record.
- 4) Class participation and preparation are essential to student success. Students must read textual material, prepare for projects, complete required research as stated on the course schedule.
- 5) Students are expected to come to class prepared for class and having done any preliminary work required as per the course schedule.
- 6) Students are expected to stay in class and work diligently throughout the whole time. Sleeping, frequent/continued exiting from the class during the class period will constitute one (1) absence.
- 7) No cell phone use is allowed during class. Use of cell phones during class, unless permitted by instructor, is a violation of the T-So:son.
- 8) **Late work is not accepted without prior approval of the instructor.**
- 9) Failure to submit assignments results in a grade of zero (0).
- 10) No work accepted after the last class.

Classroom Behavior

- Visitors may be only allowed at class sessions or on field trips with instructor approval, visitor's safety and behavior are the responsibility of the student.
- Possession of drugs, alcohol or firearms on college property is illegal.
- Food and beverages are allowed in classrooms at discretion of the instructor.
- Cellphones should be turned off during class, unless the instructor is allowing students to use their tools (calculator, internet access).
- Students creating disturbances that interfere with the conduct of the class or the learning of others will be asked to leave.
- Student behavior is also detailed in student handbook under Student Code of Conduct Violations

Make-up policy:

Late assignments that can be made up will be accepted but will be penalized 25%, but these are **only with prior approval of the instructor**. Laboratories cannot be made up except in the case of college closure. At the instructor's discretion, extra credit opportunities and optional activities may be provided.

Academic Integrity:

Violations of scholastic ethics are considered serious offenses by Tohono O'odham Community College, the Student Services Department, and by your instructor. Students may consult the TOCC Student Handbook sections on student code of conduct, on scholastic ethics and on the grade appeal procedure. Copies are available at Tohono O'odham Community College.

All work done for this class must be your own, or the original work of your group. While you may discuss assignments with other class members, the final written project must clearly be original. You may use work from books and other materials if it is properly cited. Copying from a book without proper reference or from a person under any circumstances will result in an "F" for the assignment, and at the instructor's discretion, possibly an "F" for the course. If you are uncertain about proper citations ask your instructor or the librarian.

Course Feedback:

All assignments will be graded and returned to the students promptly, typically within a week after the assignment is closed for handing in. E-mail and phone messages will be returned within two days. A student or the instructor may request a student conference at any time during the semester. Quarterly grade reports will be provided to each student, either in person, by email or via the electronic system of Canvas.

Attendance Policy (Re: asynchronous online classes)

You are expected to complete all learning activities, participation in class, assignments and quiz by the due dates listed in the course syllabus. Four consecutive missed due dates may result in a letter grade of "F" or an instructor withdrawal "FW" (see 45th-Day Instructor Withdrawal policy). You may request to be excused from class for religious observances and practices, for illness, for school or work-related travel or for personal or family emergency. If you will be absent, please notify the instructor as soon as possible.

COVID-19 Related Incomplete Policy

A student may be considered for an incomplete (I) if:

- The student must complete 50% of the course. (Note: Students who have emergencies before 50% of the course is complete should withdraw "W" from the course).
- While completing the course the student was in "good standing" (i.e., had a grade of "C" or better and had good attendance).
- The reason for not completing the course was COVID related (ex: the student contracted COVID, student had to care for someone with COVID or had to take on major care taking roles, had change in job, etc.)

For the incomplete, the instructor must develop a plan with student and obtain permission from the student to grant an Incomplete. The student has until the end of FALL 2022 to complete the course. Failure to complete the required plan will result in the incomplete (I) being replaced by a grade of F.

45th-Day Instructor Withdrawal Policy "FW" (Re: asynchronous online classes)

Students who have missed four (4) consecutive course due dates for learning activities, participation, assignments, quizzes, exams, by the 45th - day census report, due on **March 4th, 2022**, are assumed NOT to be participating in the class and may be withdrawn at the faculty member's discretion. After the 45th - day census, if a student needs to stop attending a course, they must withdraw from the course (see Student Withdrawal Policy).

Student Withdrawal Policy "W"

Students may withdraw from class at any time during the first two-third of the semester without instructor permission and without incurring any grade penalty. Please be sure to withdraw yourself by **March 30th, 2022**, if you do not expect to complete the class, otherwise you may receive an "F" letter grade for the course. For more information on the student withdraw process email admissions@tocc.edu.

Special Withdrawals (Y) Grade

The "Y" grade is an administrative withdrawal given at the instructor's option when no other grade is deemed appropriate. Your instructor must file a form stating the specific rationale for awarding this grade. "Y" grades are discouraged since they often affect students negatively. Your instructor will not award a "Y" grade without a strong reason.

Equal Access Statement/Disability Accommodations

Tohono O'odham Community College seeks to provide reasonable accommodations for qualified individuals with disabilities. The College will comply with all applicable regulations, and guidelines with respect to providing reasonable accommodations as required to ensure an equal educational opportunity. This process includes self-identifying as a student with a disability, providing supporting documentation of their disability, and being approved for services through the Disability Resources Office (DRO). It is the student's responsibility to make known to their instructor(s) the student's specific needs within the context of each class in order to receive appropriate accommodations. We will work together in order to develop an accommodation plan specifically designed to meet the individual student's requirements.

For more information or to request academic accommodations, please contact: Anthony Osborn, TOCC Disabilities Resource Coordinator, aosborn@tocc.edu, or 520-383-0033 for additional information and assistance.

Title IX

Tohono O'odham Community College encourages each student to have the knowledge and skills to be an active bystander who intervenes when anyone is observed or being harassed or endangered by sexual violence. Sexual discrimination and sexual violence can undermine students' academic success and quality of life on campus and beyond. We encourage students who have experienced or witnessed any form of sexual misconduct to talk about their experience and seek the support they need.

Confidential support and academic advocacy can be found with: Student Services Title IX Coordinator/Counselor, Alberta Espinoza, M.Ed. located in I-We:mta Ki: Room 18. Phone 520-383-0033 email: aespinoza@tocc.edu.

Conduct: Bias, Bullying, Discrimination and Harassment

Tohono O'odham Community College faculty and staff are dedicated to creating a safe and supportive campus environment as a core value. Harassment based on age, class, color, culture, disability and ability, ethnicity, gender, gender identity and expression, immigration status, marital status, political ideology, race, religion/spirituality, sex, sexual orientation, and tribal sovereign status will not be tolerated.

DISCLAIMER: This syllabus is designed to evolve and change throughout the semester based on class progress and interests. You will be notified of any changes as they occur.