McLennan COMMUNITY COLLEGE

WACO, TEXAS

COURSE SYLLABUS

AND

INSTRUCTOR PLAN

Anatomy and Physiology

MDCA 1409.01

David Choate

NOTE: This is a 16-week course.

COVID 19 Notice:

McLennan Community College is committed to providing you with every resource you need to reach your academic goals including your safety. We will continue to monitor the evolving situation with COVID 19 and adjust our safety guidelines to make sure we offer a safe environment for you and our faculty. Please make sure to consult your faculty and the MCC website on any changes to these guidelines.

Course Description:

Emphasis on structure and function for human tissues, organs, and systems with correlated physiologic processes, location and associated terminology.

Prerequisites and/or Corequisites:

BIOL 2404 Introduction to Anatomy and Physiology

Course Notes and Instructor Recommendations:

The A & P course is a college-level course and requires that the student do work outside of the classroom. The Tentative Schedule contains all of the reading and work assignments for the semester along with dates due.

Time outside of class. Students need to realize that time is required outside of class to read the reading assignments and to complete the various other assignments. Each unit should be read prior to the class in which it is discussed.

Deadlines are important. Deadlines are just that "deadlines." Therefore, the students need to make sure that they read the tentative schedule to know when deadlines are. The students need to organize their time to meet those deadlines.

Study for tests. Students need to set aside a certain time of the day to study for the exams given in this class. It is also important to advise family and friends when this time is to avoid distractions from becoming a problem.

Instructor Information:

Instructor Name: David Choate
MCC Email: dchoate@mclennan.edu
Office Phone Number: 254-299-8262
Office Location: HP 130
Office/Teacher Conference Hours: 2-4pm M-Th

Other Instruction Information:

Required Text & Materials:

Text Title: Body Structures & Functions
Author: Ann Sensi Scott and Elizabeth Fong Edition: 13th

Publisher: Delmar Cengage Learning ISBN-13: 978-1-305-51136-1

MCC Bookstore Website: http://www.mclennan.edu/bookstore/

Methods of Teaching and Learning:

Lecture, discussion groups, group projects, lab exercises, projects, student performances, exams, tutorial software

Course Objectives and/or Competencies:

Ch. 1 Introduction to the structural units.

Identify and discuss the different branches of anatomy.

Identify terms referring to location, planes, and sections of the body.

Identify the body cavities and the organs they contain.

Identify and discuss homeostasis and metabolism.

Identify the units of measure used in health care.

Define the key words that relate to this chapter.

Ch.2 Chemistry of living things

Relate the importance of chemistry and biochemistry to health care.

Define matter and energy.

Explain the structure of an atom, an element, and a compound.

Explain the importance of water to our body.

Describe the four main group of organic compounds: carbohydrates, fats, proteins, and nucleic acids.

Explain the difference between the DNA molecule and the RNA molecule.

Explain the difference between an acid, a base, and a salt.

Explain the acid-base balance.

Describe why homeostasis is necessary for good health.

Define the key words that relate to this chapter.

Ch. 3 Cells

Identify the structure of a typical cell.

Describe the function of each component of a typical cell.

Relate the function of cells to the functions of the body.

Describe the process that transports materials in and out of a cell.

Describe a tumor and define cancer.

Define the key words that relate to this chapter.

Ch. 4 Tissues and Membranes.

List the four main types of tissues.

Define the function and location of tissues.

Define the function and locations of membranes.

Define an organ and organ system.

Relate various organs to their respective systems.

Describe the process involved in the two types of tissue repair.

Define the key words that relate to this chapter.

Ch. 5 Integumentary system

Define the functions of the skin.

Describe the structures found in the two layers of skin.

Explain how the skin serves as a channel of excretion.

Describe the function of the appendages of the skin.

Describe some common skin, hair, and nail disorders.

Define the key words that relate to this chapter.

Ch. 6 Skeletal system

List the main functions of the skeletal system.

Explain the process of skin formation.

Name and locate the bones of the skeleton.

Name and define the main types of joint movement.

Identify common bone and joint disorders.

Define the key words that relate to this chapter.

Ch. 7 Muscular system.

Describe the function of muscle.

Describe each of the muscle groups.

List the characteristics of muscles.

Describe how pairs of muscles work together.

Explain origin and insertion of muscle.

Locate the important skeletal body muscles.

Describe the function of these skeletal muscles.

Discuss how sports training affects muscles.

Identify some common muscle disorders.

Define the key words that relate to this chapter.

Ch. 8 Central nervous system.

Describe the function of the central nervous system.

List the main divisions of the central nervous system.

Describe the neuron.

Describe the structure of the brain and spinal cord.

Describe the function of the parts of the brain.

Describe the function of the spinal cord.

Describe disorders of the brain and spinal cord.

Define the key words that relate to this chapter.

Ch. 9 Peripheral and autonomic nervous system.

Describe a mixed nerve.

Describe the functions of the cranial and spinal nerves.

Relate the functions of the sympathetic and parasympathetic nervous systems.

Explain the simple reflex arc pattern.

Describe common disorders of the peripheral nervous system.

Define the key words that relate to this chapter.

Ch. 10 Special senses

Describe the functions of the sensory receptors in the body.

Identify the parts of the eye and describe their functions.

Trace the pathway of light from outside to the occipital lobe.

Identify parts of the ear and describe their function.

Trace the pathway of sound from pinna to temporal lobe.

Describe the process involved with the sense of smell.

Describe common disorders of the eye, ear, nose, and tongue.

Define the key words that relate to this chapter.

Ch. 11 Endocrine system

List the glands that make up the endocrine system.

Describe hormones and their classification.

Describe negative feedback hormonal control.

Name the hormones of the endocrine system and their function.

Describe the role of prostaglandins.

Describe some disorders of the endocrine system.

Describe key words that relate to this chapter.

Ch. 12 Blood

List the important components of blood and their function

Describe the process of inflammation.

Describe the process in blood clotting.

Recognize the significance of the various blood types.

Describe some disorders of the blood.

Describe the key words that relate to this chapter.

Ch. 13 Heart

Describe the function of the circulatory system.

Describe the structure of the heart.

Describe the functions of the various structures of the heart.

Describe how blood is circulated through the heart to the lungs and body.

Describe the conduction system of the heart.

Discuss the diseases of the heart.

Define the key words that relate to this chapter.

Ch. 14 Circulation and blood vessels.

Trace the path of cardiopulmonary circulation.

Name and describe the specialized circulatory systems.

Trace the blood in fetal circulation.

List the types of blood vessels.

Identify the principal arteries and veins of the body.

Describe some disorders of the circulation and blood vessels.

Define the key words that relate to this chapter.

Ch. 15 The lymphatic and immune system.

Describe the lymphatic system and its function.

Describe the function of interstitial fluid and lymph.

Describe the organs of the lymphatic system and their function.

Describe the disorders of the lymphatic system.

Describe immunity and the defense mechanisms of the body.

Describe autoimmune diseases.

Describe the cause, symptoms, and treatment of AIDS.

Define the key words that relate to this chapter.

Ch. 16 Infection control and standard precautions.

Describe the six types of pathogenic microorganisms.

Explain the infectious process and the chain of infection.

Describe methods to break the chain of infection.

Describe the stages of infection.

Explain standard precautions.

Define the key words that relate to this chapter.

Ch. 17 Respiratory system

Describe the function of the respiratory system.

Describe the structure and functions of the organs of respirations.

Explain the breathing and respiratory process.

Discuss how breathing is controlled by neural and chemical factors.

Discuss respiratory disorders.

Define the key words that relate to this chapter.

Ch. 18 Digestive system.

Describe the general function of the digestive system.

List the structures and functions of the digestive system.

Describe the action of the enzymes on carbohydrates, fats, and proteins.

Trace food from the beginning of the digestive process to the end.

Describe common disorders of the digestive system.

Define the key words that relate to this chapter.

Ch. 19 Nutrition.

Describe the terms nutrients.

Describe the function (s) of the different types of nutrients.

Differentiate between the fats soluble and water soluble vitamins.

List the recommendations of the Dietary Guidelines for Americans.

Explain BMR and BMI.

Define the key words that relate to this chapter.

Ch. 20 Urinary system.

Explain the function of the urinary system.

Describe the structure and function of the organs in the urinary system.

Explain how the kidneys regulate water balance.

List and describe some common disorders of the urinary system.

Define the key words that relate to this chapter.

Ch. 21 Reproductive system.

Compare somatic cell division (mitosis) with germ cell division (meiosis).

Explain the process of fertilization.

Identify the organs of the female reproductive system and explain their functions.

Describe the stages and changes that occur during the menstrual cycle.

Explain menopause and the changes that occur during this time.

Identify the organs of the male reproductive system and explain their function.

List some common disorders of the reproductive system.

Define the key words that relate to this chapter.

Ch. 22 Genetics and genetically linked diseases.

Define mutation.

Differentiate between the two basic types of mutations.

Name three human genetic disorders and describe the cause and symptoms of each.

Explain genetic counseling

Define the key words that relate to this chapter.

Course Outline or Schedule:

Week One: Roll, Syllabus, Introductions, Overview of Course. Cover Unit One, "Introduction to the Structural Units"; Cover Unit Four "Tissues and Membranes"; Lab

Week Two: Unit One and Unit Four Exam. Cover Unit Five, "Integumentary System"; Lab

Week Three: Unit Five Exam. Cover Unit Six, "The Skeletal System"; Cover Unit Seven "The Muscular System"; Lab

Week Four: Unit Six and Unit Seven Exam Part One Continue Unit Six, "The Skeletal System"; Continue Unit Seven "The Muscular System"; Lab

Week Five: Unit Six and Unit Seven Exam Part Two. Cover Unit Eight, "The Central Nervous System"; Lab

Week Six: Unit Eight Exam. Cover Unit Nine, "The Peripheral and Autonomic Nervous System"; Cover Unit Ten "The Special Senses"; Lab

Week Seven: Unit Nine and Unit Ten Exam. Cover Unit Eleven "The Endocrine System"; Lab

Week Eight: Unit Eleven Exam. Cover Unit Twelve, "The Blood"; Cover Unit Fifteen "The Lymphatic System and Immunity"; Lab

Week Nine: Unit Twelve and Unit Fifteen Exam. Cover Unit Thirteen "The Heart"; Cover Unit Fourteen "The Circulation and Blood Vessels"; Lab

Week Ten: Unit Thirteen and Unit Fourteen Exam. Cover Unit Seventeen, "The Respiratory System";

Week Eleven: Unit Seventeen Exam. Cover Unit Eighteen, "The Digestive System"; Lab

Week Twelve: Unit Eighteen Exam. Cover Unit Twenty, "The Urinary/Excretory System"; Lab

Week Thirteen: Unit Twenty Exam. Cover Unit Twenty-one, "The reproductive System"; Cover Unit Twenty-two "Genetics and Genetically Linked Diseases"; Lab

Week Fourteen: Unit Twenty-one and Unit Twenty-two Exam. Lab Review

Week Fifteen: Skeletal Laboratory Exam, Muscular Laboratory Exam and Neurological Laboratory Exam

Week Sixteen Review and Comprehensive Examination

This schedule is tentative and may be changed throughout the semester. Students will be notified in advance of any necessary changes.

Course Grading Information:

1) UNIT EXAMINATIONS AND FINAL EXAMINATION: There will be 10 unit examinations worth 25% and a final examination worth 25% of your final grade. The examinations are to be taken as scheduled. Failure to take the examinations as scheduled may result in receiving a zero for a grade. Students are responsible for assuring all examinations have been taken and that grades are posted in instructors' grade books. Any exam that has not been taken by the end of the semester will be assigned a grade of zero. No grade will be recorded of any exam of any student caught cheating. The final exam must be taken as scheduled in order to receive a course grade.

2) LABORATORY EXAMINATIONS: In addition to the unit examinations and final examination, the lab exams must be taken as scheduled and will be worth 25% of your final grade. Any lab exam that is not taken will be assigned a zero for a grade.

3) QUIZZES AND OTHER ASSIGNMENTS/ HOME WORK: There will be quizzes and textbook assignments given and worth 25% of your final grade. Quizzes may not be made up.

4) HOW THE COURSE GRADE WILL BE DETERMINED:
A = 90-100%, B = 80-89%, C = 70-79%, D = 60-69%, F = 60%

NOTE: Passing grade for this class is a semester average of 70%

Late Work, Attendance, and Make Up Work Policies:

You are expected to be present for all class meetings of this course and all assigned work. If you are absent when an assignment is done in class, you will need to see your instructor immediately. You will have one week to complete missed exercises or exams. Ten points will be deducted from the grade when taken late. No work will be accepted after the one-week grace time.

Student Behavioral Expectations or Conduct Policy:

Student Behavioral Expectations or Conduct Policy:
The following are the behavioral expectations which will provide a more conducive learning environment for all students in the classroom and will provide opportunities for successful completion of this course.

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- All cell phones are to be put on mute and put out of sight. If you are expecting an emergency call, take the call outside of class.
- All other electronic devices must be turned off and placed out of sight. If the student does not turn off the device, the student will be asked to leave the classroom.
- The use of alcohol, drugs or tobacco products is not allowed in the classroom.
- Students should not attend class with the smell of or under the influence of drugs or alcohol.
- Take care of your personal business before class starts. Leaving and entering the classroom disrupts the learning environment. Exceptions for sickness will be

made.

- Expressions of opinions and questions on classroom discussions are encouraged.
- Mutual respect of others opinions is expected.
- Loud, raucous behavior in the classroom is not acceptable. If after being asked to be quiet the student does not, he/she will be asked to leave the room. Repeated occurrences will require visits to Student Development for disciplinary action.

Click Here for the MCC Attendance/Absences Policy
(https://www.mclennan.edu/highlander-guide/policies.html)
Click on the link above for the college policies on attendance and absences. Your instructor may have additional guidelines specific to this course.

McLennan COMMUNITY COLLEGE

ACADEMIC RESOURCES/POLICIES

Student Support/Resources:
MCC provides a variety of services to support student success in the classroom and in your academic pursuits to include counseling, tutors, technology help desk, advising, financial aid, etc. A listing of these and the many other services available to our students is available at http://www.mclennan.edu/campus-resource-guide/

College personnel recognize that food, housing, and transportation are essential for student success. If you are having trouble securing these resources or want to explore strategies for balancing life and school, we encourage you to contact a Success Coach by calling (254) 299-8226 or emailing SuccessCoach@mclennan.edu. Students may visit the Completion Center Monday-Friday from 8 a.m.-5 p.m. to schedule a meeting with a Success Coach and receive additional resources and support to help reach academic and personal goals. Paulanne's Pantry (MCC's food pantry) provides free food by appointment to students, faculty and staff based on household size. Text (254) 870-7573 to schedule a pantry appointment. The Completion Center and pantry are located on the Second Floor of the Student Services Center (SSC).

MCC Foundation Emergency Grant Fund:
Unanticipated expenses, such as car repairs, medical bills, housing, or job loss can affect us all. Should an unexpected expense arise, the MCC Foundation has an emergency grant fund that may be able to assist you. Please go to https://www.mclennan.edu/foundation/scholarships-and-resources/emergencygrant.html to find out more about the emergency grant. The application can be found at https://www.mclennan.edu/foundation/docs/Emergency_Grant_Application.pdf.

Minimum Technical Skills:
Students should have basic computer skills, knowledge of word processing software, and a basic understanding of how to use search engines and common web browsers.

Backup Plan for Technology:
In the event MCC's technology systems are down, you will be notified via your MCC student email address. Please note that all assignments and activities will be due on the date specified in the Instructor Plan, unless otherwise noted by the instructor.

Minimum System Rquirements to Utilize MCC's D2L|Brightspace:
Go to https://www.mclennan.edu/center-for-teaching-and-learning/Faculty%20and%20Staff%20Commons/requirements.html for information on the minimum system requirements needed to reliably access your courses in MCC's D2L|Brightspace learning management system.

Email Policy:
McLennan Community College would like to remind you of the policy (http://www.mclennan.edu/employees/policy-manual/docs/E-XXXI-B.pdf) regarding college email. All students, faculty, and staff are encouraged to use their McLennan email addresses when conducting college business.

A student's McLennan email address is the preferred email address that college employees should use for official college information or business. Students are expected to read and, if needed, respond in a timely manner to college emails.

Instructional Uses of Email:
Faculty members can determine classroom use of email or electronic communications. Faculty should expect and encourage students to check the college email on a regular basis. Faculty should inform students in the course syllabus if another communication method is to be used and of any special or unusual expectations for electronic communications.

If a faculty member prefers not to communicate by email with their students, it should be reflected in the course syllabus and information should be provided for the preferred form of communication.

Email on Mobile Devices:
The College recommends that you set up your mobile device to receive McLennan emails. If you need assistance with set-up, you may email Helpdesk@mclennan.edu for help.

Forwarding Emails:
You may forward emails that come to your McLennan address to alternate email addresses; however, the College will not be held responsible for emails forwarded to an alternate address that may be lost or placed in junk or spam filters.

MCC Academic Integrity Statement:
Go to www.mclennan.edu/academic-integrity for information about academic integrity, dishonesty, and cheating.

Accommodations/ADA Statement:
Any student who is a qualified individual with a disability may request reasonable accommodations to assist with providing equal access to educational opportunities. Students should contact the Accommodations Coordinator as soon as possible to provide documentation and make necessary arrangements. Once that process is completed, appropriate verification will be provided to the student and instructor. Please note that instructors are not required to provide classroom accommodations to students until appropriate verification has been provided by the Accommodations Coordinator. For additional information, please visit www.mclennan.edu/disability.

Students with questions or who require assistance with disabilities involving physical, classroom, or testing accommodations should contact:

disabilities@mclennan.edu
254-299-8122
Room 319, Student Services Center

Title IX:

We care about your safety, and value an environment where students and instructors can successfully teach and learn together. If you or someone you know experiences unwelcomed behavior, we are here to help. Individuals who would like to report an incident of sexual misconduct are encouraged to immediately contact the Title IX Coordinator at titleix@mclennan.edu or by calling Dr. Drew Canham (Chief of Staff for Diversity, Equity & Inclusion/Title IX) at (254) 299-8645. Individuals also may contact the MCC Police Department at 299-8911 or the MCC Student Counseling Center at MCC at (254) 299-8210. The MCC Student Counseling Center is a confidential resource for students. Any student or employee may report sexual harassment anonymously by visiting http://www.lighthouse-services.com/mclennan/.

Go to McLennan's Title IX webpage at www.mclennan.edu/titleix/. It contains more information about definitions, reporting, confidentiality, resources, and what to do if you or someone you know is a victim of sexual misconduct, gender-based violence or the crimes of rape, acquaintance rape, sexual assault, sexual harassment, stalking, dating violence, or domestic violence.

Disclaimer:

The resources and policies listed above are merely for informational purposes and are subject to change without notice or obligation. The College reserves the right to change policies and other requirements in compliance with State and Federal laws. The provisions of this document do not constitute a contract.