

Human Anatomy and Physiology I / BIO K211

Instructor: Nicola Ricker, Office #C270

Office Hours: M/W: 9:30am-10:45am, T/R: 2pm-3pm, & F: 11am-12pm

Other hours as needed, must be arranged prior.

Contact Info: email: Nricker@trcc.comnet.edu

Office phone: 860-215-9474 (messages left are sent to me as a recorded email)

Required Text(s): (1) ***Fundamentals of Anatomy and Physiology***, Frederic H. Martini, 10th edition, Prentice Hall Publisher.
(2) *Human Anatomy & Physiology I Laboratory Exercises Manual*

Other required materials

Dissecting kit, Non-latex disposable gloves, Lab coat (Landau 3178, recommended model) & Safety goggles.

Description of Course

Catalogue Description: A comprehensive study of the gross anatomical structure and physiology of the human body pertaining to cells, tissues, membranes and the following systems: Integumentary, Skeletal (Articular), Muscular and Nervous. Prerequisite: English 101 and successful completion of Bio 121 and Chemistry 111 or Chemistry 121 with a "C" grade or higher. This is a two semester course, in order to receive knowledge of all of the body's systems the student is obligated to complete both semesters of Human Anatomy & Physiology.

General Course Objectives

To aid the student in developing an understanding of the life processes.
To aid the student in developing an understanding of the normal structures and functions of the human body.
To provide a useful body of knowledge for biology, nursing, and allied health students.

Class Attendance Policy

Attendance is expected for all lecture and laboratory sections. Absences are counted from the first meeting of class. More than four consecutive or more than six accumulative absences could result in student receiving an "F" grade in this course. An explanation of the cause of all absences should be given to your instructor.

Human Anatomy and Physiology I / BIO K211

Academic and Classroom Misconduct

The instructor has primary responsibility for control over classroom and/or laboratory behavior and maintenance of academic integrity, and can request the temporary removal or exclusion from the classroom or laboratory of any student engaged in conduct that violated the general rules and regulations of the institution, or any student engaged in conduct deemed hazardous in the laboratory. Plagiarism, cheating on quizzes or tests, or any form of academic dishonesty is strictly prohibited. Students guilty of academic dishonesty directly or indirectly will receive a zero for the quiz/test/practical and may receive a “F” grade for the course in addition to other possible disciplinary sanctions which may be imposed through the regular institutional procedures. Any student that believes that he or she has been erroneously accused may appeal the case through the appropriated institutional procedure if their grade was affected.

Procedure for Dropping the Course

Any student who finds it necessary to discontinue this course MUST complete a withdrawal form in the Registrar’s Office at the time of the withdrawal. Verbal withdrawals made to the instructor are not acceptable. Students may withdraw from the course at any time up to the course withdrawal deadline, which is_____. Students who do not withdraw, but stop attending class will be assigned an “F” grade for the course. **Once you withdraw from class you are no longer eligible to take any remaining quizzes or tests.**

Tests, Quizzes, and Practical Exams

There will be 11 scheduled weekly quizzes, all quizzes are given during the first ten minutes of class. (No make-ups for missed quizzes due to tardiness or absence). The best advice I can give you is this: **study for the quizzes and review for the tests.** The amount of material that we cover is extensive, trying to study for just the tests, will set you up for failure. In addition to the quizzes, there are three unit tests, four lab practical exams and a comprehensive/cumulative final exam will also be given. Unit tests will be reviewed before the final exam is given.

Grade Determination

Your semester grade is based out of 800 points. $\frac{1}{2}$ of the semester’s points (400) come from lecture quizzes & tests, $\frac{1}{4}$ (200) come from lab, $\frac{1}{4}$ (200) come from the comprehensive final exam. There are no “extra credit” assignments given. EVER.

Human Anatomy and Physiology I / BIO K211

Point Distribution

Item	Possible Point total
11 weekly chapter quizzes each worth 10 points (the 2 lowest will be dropped)	90 points
Pre-test score	10 points
3 Unit Tests (100 points each, 100 questions each)	300 points
4 laboratory practical's (50 points each)	200 points
Cumulative Final (200 questions)	200 points
Semester total	800 points

To calculate your grade, divide the number of points you have earned from the total available points up to that point. For example, let's say you have had 6 quizzes, the pretest and 1-unit test. Your scores are: 8, 7, 6, 8, 7, 7, for quizzes, 10 on the pretest, and 78 on test 1. Your total point accumulation is 131. The total available (60 + 10 + 100) is 170. You divide your point total by the total amount of points possible. $131/170 = .7705 \times 100 = 77.05 = C+$

Grade Scale

94.00 or higher = A

90 – 93 = A-

87 – 89 = B+

84 – 86 = B

80 – 83 = B-

74 – 76 = C

70 – 73 = C-

67 – 69 = D+

64 – 66 = D

60 – 63 = D-

59 or lower = F

There will be NO grading on the normal distribution curve (i.e. No grading on a curve)

Make-up Policy

All tests, quizzes, and practical exams are scheduled in advance (see class schedule at the end of this syllabus). If a scheduling conflict occurs, come see me as early as possible to discuss the best course of action such as dropping

Human Anatomy and Physiology I / BIO K211

the course or switching into another section. Vacations are not a reason to miss a scheduled test or practical exam.

Lecture: Quizzes **cannot** be made up for any reason and they **will not** be given early/late. Unit tests can be made up, but at the discretion of the instructor. Makeup tests will be granted on an individual basis only following a conference with the instructor; where the reason(s) for missing the test must be determined as mitigating circumstances beyond the control of the student such as, illness, death in the family, or change in condition of employment. All make-up tests will be scheduled at the **convenience of the instructor** (typically office hours) and ***must be made up within 48 hours of the original test date and time.*** Only one (1) Unit Test make-up will be allowed.

Lab: Missed laboratory exercises can be made up. If you know you will miss a lab exercise for any reason, come speak to me about attending another lab section. Lab practical's **cannot** be made-up.

Revisions to the Syllabus:

Students are responsible for learning all of the objectives and all of the items in the course outline whether they are discussed in lecture and/or laboratory or not. The instructor reserves the right to revise the objectives, topical outline, or academic schedule contained in this syllabus without notice. However, if a revision affects a scheduled unit test, a 48 hour notice will be given for the new test date.

Cellular Phone Policy:

There is no texting, Snapchat, Instagram, Facebook, or etc. allowed during lecture or lab. Under no circumstance are phones to be answered in class. When there are extenuating circumstances that require a student to be available by phone, that student must speak to the instructor prior to class, so that together they can arrive at an agreement.

If a cell phone is out (this includes, but is not limited to: on desk/on lap/on floor/on desk next to you) in class or lab at any time during a quiz/test/practical it will be assumed that the student(s) are cheating and the quiz/test/practical will be handed in with a zero, with no possibility of a make-up and further disciplinary sanctions will be possible.

Human Anatomy and Physiology I / BIO K211

BOARD OF REGENTS FOR HIGHTER EDUCATION AND CONNECTICUT STATE COLLEGES AND UNIVERSITIES POLICY REGARDING SEXUAL MISCONDUCT REPORTING, SUPPORT SERVICES AND PROCESSES POLICY

Statement of Policy for Public Act No. 14-11: An Act Concerning Sexual Assault, Stalking and Intimate Partner Violence on Campus:

“The Board of Regents for Higher Education (BOR) in conjunction with the Connecticut State Colleges and Universities (CSCU) is committed to insuring that each member of every BOR governed college and university community has the opportunity to participate fully in the process of education free from acts of sexual misconduct, intimate partner violence and stalking. It is the intent of the BOR and each of its colleges or universities to provide safety, privacy and support to victims of sexual misconduct and intimate partner violence.”

UNITED STATES DEPARTMENT OF EDUCATION AND OFFICE OF CIVIL RIGHTS TITLE IX STATEMENT OF POLICY:

“Title IX of the Education Amendments of 1972 (Title IX) prohibits discrimination based on sex in education programs and activities in federally funded schools at all levels. If any part of a school district or college receives any Federal funds for any purpose, all of the operations of the district or college are covered by Title IX.

Title IX protects students, employees, applicants for admission and employment, and other persons from all forms of sex discrimination, including discrimination based on gender identity or failure to conform to stereotypical notions of masculinity or femininity. All students (as well as other persons) at recipient institutions are protected by Title IX – regardless of their sex, sexual orientation, gender identity, part-or full-time status, disability, race, or national origin-in all aspects of a recipient’s educational programs and activities.”

If any student experiences sexual misconduct or harassment, and/or racial or ethnic discrimination on Three Rivers Community College Campus, or fears for their safety from a threat while on campus, please contact Vicki Baker, the Diversity Officer and Title IX Coordinator at 860.215.9208 or email: vbaker@trcc.commnet.edu.

ACCOMMODATIONS:

Students with learning disabilities should contact the Learning Specialist, Matt Liscum, at 860-215-9265 or via email at mliscum@trcc.commnet.edu as soon

Human Anatomy and Physiology I / BIO K211

as possible to ensure timely accommodations. Students with physical disabilities should contact Elizabeth Willcox at 860-215-9289 or via email at ewillcox@trcc.commnet.edu to facilitate accommodations. All testing accommodations MUST be discussed with the instructor in a timely manner, that is, *at least* one to two class meetings **prior** to any scheduled test for which accommodations are needed.

Digication:

All students are required to maintain an online learning portfolio in Digication that uses the college template. Through this electronic tool students will have the opportunity to monitor their own growth in college-wide learning. The student will keep his/her learning portfolio and may continue to use the Digication account after graduation. A Three Rivers General Education Assessment Team will select and review random works to improve the college experience for all. Student work reviewed for assessment purposes will not include names and all student work will remain private and anonymous for college improvement purposes. Students will have the ability to integrate learning from the classroom, college, and life in general, which will provide additional learning opportunities. If desired, students will have the option to create multiple portfolios.

Class expectations:

It is expected that you are spending 2-3 hours of reading/studying for this class for every “academic” hour we meet in class. We meet 6 “academic” hours per week, therefore you should expect to spend **at least 12 - 18 hours per week** on this class, outside of class meetings, every week!

Course Learning Outcomes (Objectives): Human Anatomy and Physiology I

1. The student will develop “critical thinking skills” and will be able to draw sound scientific conclusions through the analysis of scientific data.
2. The student will demonstrate knowledge of the organization of the body on the cellular, tissue and organ-system levels.
3. The student will demonstrate knowledge of body positions and planes of reference.
4. The student will be able to identify the principle elements that make up the body, give their chemical symbols, and summarize the biological role of each.

Human Anatomy and Physiology I / BIO K211

5. The student will demonstrate knowledge of the atomic structure and its relationship to the interaction of atoms to form molecules.
6. The student will demonstrate knowledge of ionic, covalent and hydrogen bonding and give examples of each.
7. The student will be able to describe the types of inorganic compounds found in the body and explain their biological role.
8. The student will be able to define pH and be able to identify any given pH as acid, alkaline or neutral; describe how pH changes are minimized by buffers.
9. The student will be able to discuss the major classes of organic molecules found in the human body and explain their biological role.
10. The student will be able to demonstrate knowledge of the cell, its organelles and their functions
11. The student will demonstrate knowledge of the various mechanisms of passive and active transport relative to the plasma membrane.
12. The student will demonstrate knowledge of somatic cell division (mitosis) and reproductive cell division (meiosis).
13. The student will be able to summarize the chemical make-up of enzymes and describe enzymatic action, as well as give the principle properties of enzymes.
14. The student will be able to define metabolism and give examples of various forms of metabolic processes.
15. The student will be able to demonstrate knowledge of chemical energy and the cellular respiratory process.
16. The student will demonstrate knowledge of protein synthesis.
17. The student will demonstrate knowledge of the types of tissues, membranes, and their functions.
18. The student will demonstrate knowledge of the organization of the integumentary system and its various functions.
19. The student will demonstrate knowledge of the relationship of the integumentary system to homeostasis.
20. The student will demonstrate knowledge of the development of bone tissue.
21. The student will demonstrate knowledge of bone tissue structurally and functionally.
22. The student will be able to identify the bones of the body and their prominent markings.

Human Anatomy and Physiology I / BIO K211

23. The student will demonstrate knowledge of the articulations of the body and explain their structural differences and their functions.
24. The student will demonstrate knowledge of the different types of muscle tissues, give their anatomical location and primary functions.
25. The student will demonstrate knowledge of the neuroelectrical chemical factors of muscle contraction.
26. The student will demonstrate knowledge of the mechanisms for supplying energy in muscle contraction.
27. The student will demonstrate knowledge of the types of muscle contraction.
28. The student will be able to name, give the attachments and action of the major groups of skeletal muscles.
29. The student will be able to explain the general function of the nervous system.
30. The student will be able to list the divisions of the nervous system and the composition of each division.
31. The student will be able to describe the general structure and function of a neuron.
32. The student will be able to explain how neurons are classified.
33. The student will be able to name the different types of neurological cells and describe their functions.
34. The student will be able to explain how an injured nerve fiber may regenerate.
35. The student will be able to explain the events that lead to the conduction of a nerve impulse.
36. The student will be able to explain the electrochemical changes associated with impulse transmission.
37. The student will be able to explain the electrochemical changes associated with synaptic transmission.
38. The student will be able to name the parts of a reflex arc and describe the function of each part.
39. The student will be able to name the different types of reflex arcs.
40. The student will be able to describe the coverings of the brain and spinal cord.
41. The student will be able to describe the vascular/cerebrospinal fluid system of the central nervous system.

Human Anatomy and Physiology I / BIO K211

42. The student will be able to describe and explain the structure, organization and function of the spinal cord.
43. The student will be able to describe and explain the structure, organization and function of the brain.
44. The student will be able to give the location and function of the spinal nerves.
45. The student will be able to give the location and function of the cranial nerves.
46. The student will be able to describe the structure, organization and function of the autonomic nervous system.
47. The student will be able to describe and explain the structure and function of the specialized sensory receptors.
48. The student will be able to give the location of the olfactory organs and explain their primary functions.
49. The student will be able to describe the structure and function of the tongue.
50. The student will be able to describe the structure and function of the ear.
51. The student will be able to describe the structure and function of the eye.

Course Outline:

UNIT I

1. Introduction
 - A) Characteristics of Life
 - 1) Organization
 - 2) Irritability
 - 3) Adaptability
 - 4) Movement
 - 5) Growth
 - 6) Metabolism
 - 7) Reproduction
 - B) Anatomy and Physiology Defined
 - 1) Subdivisions of anatomy and physiology

Human Anatomy and Physiology I / BIO K211

C) Terms of Location and Anatomical Position

- 2) Superior/Inferior
- 3) Anterior/Posterior
- 4) Ventral/Dorsal
- 5) Cranial/Caudal
- 6) Proximal/Distal
- 7) Internal/External
- 8) Peripheral/Deep
- 9) Medial
- 10) Lateral
- 11) Central
- 12) Parietal
- 13) Visceral

D) Fundamental Planes

- 1) Coronal or Frontal
- 2) Transverse or Horizontal
- 3) Sagittal
- 4) Medial
- 5) Lateral

E) Cavities

- 1) Coelom
- 2) Thoracic
 - 1) pericardial
 - 2) pleural
- 3) Abdominal
- 4) Pelvic
- 5) Orbital
- 6) Nasal

Human Anatomy and Physiology I / BIO K211

- 7) Buccal
- F) Organization of the body
 - 1) Cells
 - 2) Tissues
 - 3) Organs
 - 4) Systems
 - a) integumentary
 - b) skeletal
 - c) muscular
 - d) nervous
 - e) endocrine
 - f) circulatory
 - g) respiratory
 - h) digestive
 - i) excretory
 - j) reproductive
- 2. Chemistry of Life
 - A) matter and elements
 - B) how elements differ
 - C) structure of matter
 - D) electron arrangement
 - E) electron arrangement vs. reactivity
 - F) chemical bonding
 - 1) ionic bonding
 - 2) covalent bonding
 - a) polar
 - b) non-polar
 - 3) Hydrogent bonding

Human Anatomy and Physiology I / BIO K211

- G) Elements of biological importance
 - H) Inorganic compounds
 - I) Organic compounds
3. The cell
- A) The cell theory
 - B) The anatomy and physiology of the cell
 - 1) Cytoplasmic membrane
 - 2) Cytoplasm
 - 3) Cytoplasmic organelles
 - a) endoplasmic reticulum
 - b) golgi bodies
 - c) ribosomes
 - d) centrioles
 - e) lysosomes
 - f) vacuoles
 - g) mitochondria
 - 4) Nucleus
 - a) membrane
 - b) nucleoplasm
 - c) chromatin
 - d) nucleolus
 - 5) Appendages
 - a) flagella
 - b) cilia
 - C) The movement of materials across the cell membrane
 - 1) Diffusion
 - a) osmosis
 - b) dialysis

Human Anatomy and Physiology I / BIO K211

- c) facilitated diffusion
- 2) Active transport
- 3) Endocytosis
 - a) pinocytosis
 - b) phagocytosis
- D) The cell's cycle of growth (somatic cells)
 - 1) Growth phase 1
 - 2) Synthesis phase
 - 3) Growth phase 2
 - 4) Reproduction of somatic cells
 - a) Mitosis – nuclear division
 - 1) prophase
 - 2) metaphase
 - 3) anaphase
 - 4) telophase
 - b) Cytokinesis – cytoplasmic division
- E) Division of reproductive cells
 - 1) Meiosis
 - a) reduction division
 - 1) prophase 1
 - 2) metaphase 1
 - 3) anaphase 1
 - 4) telophase 1
 - b) equational division
 - 1) prophase 2
 - 2) metaphase 2
 - 3) anaphase 2
 - 4) telophase 2

Human Anatomy and Physiology I / BIO K211

- F) Cellular Metabolism
 - 1) Anabolism
 - 2) Catabolism
 - 3) Enzymes
 - a) composition
 - b) action
 - 4) Cellular respiration
 - a) glycolysis
 - b) the kreb's cycle
 - c) the electron transport system/cytochrome system
 - 5) Protein synthesis
 - a) transcription
 - b) translation

- 1. Histology
- 2. Specialization of Cells (Tissues)
 - A) Structure and Function of the tissues
 - 1) Epithelial
 - 2) Connective
 - 3) Muscular
 - 4) Nervous
 - B) Membranes
 - 1) Serous
 - 2) Mucous
 - 3) Cutaneous
 - 4) Synovial
- 3. The Integumentary System
 - A) The skin and its tissues

Human Anatomy and Physiology I / BIO K211

- 1) Structure
- 2) Function
- B) Appendages and Glands of the skin
- C) Pigmentation

UNIT II

1. The Skeletal System

- A) Types of bones cells and their functions
 - 1) Osteoblasts
 - 2) Osteoclasts
 - 3) Osteocytes
- B) The Bony Matrix
- C) Types of Bone Tissue
 - 1) Compact
 - 2) Spongy
- D) Membranes of Bone Tissue
 - 1) Periosteum
 - 2) Endosteum
- E) Classification of Bones
 - 1) Long
 - 2) Short
 - 3) Flat
 - 4) Irregular
 - 5) Sesamoid
- F) Formation and Growth of Bones
 - 1) Membranous Ossification
 - 2) Endochondrial Ossification
 - 3) Factors affecting bone growth and development
 - a) vitamins & minerals

Human Anatomy and Physiology I / BIO K211

- b) hormones
 - c) physical exercise
 - 4) The anatomy and physiology of fractures
- G) Divisions of the Skeletal System and their Bones
 - 1) Axial: 80 bones
 - 2) Appendicular: 126 bones
 - a) pectoral girdle
 - b) pelvic girdle
 - 3) Descriptive Terms
 - a) processes: process, condyle, tubercle, tuberosity, trochanter, crest, spine, head
 - b) cavities and depressions: groove, sinus, atrum, cornal, meatus, foramen, fissure
fovea, fossa
- H) Arthrology: joints of articulation
 - 1) Synarthroses (immovable joints)
 - a) synchondroses
 - b) sutures
 - 2) Amphiarthroses (slightly movable joints)
 - a) joints between the vertebrae
 - b) joints between the pubis and sacroiliac
 - 3) Synovial-Diathrososes (free moving joints)
 - a) ball and socket
 - b) hinge
 - c) pivot
 - d) condyloid
 - e) gliding
 - f) saddle

Human Anatomy and Physiology I / BIO K211

- 4) Movements permitted by Diarthroses (synovial joints)
 - a) angular movements: flexion, extension, abduction, adduction, elevation, depression
 - b) circumduction
 - c) rotation
 - d) Special movements:
 - 1) supination
 - 2) pronation
 - 3) inversion
 - 4) eversion
 - 5) protraction
 - 6) retraction
- 5) Practical Terms Related to the Skeletal System
 - a) sprain
 - b) dislocation
 - c) bursitis
 - d) arthritis
 - e) osteomyelitis
 - f) kyphosis
 - g) lordosis
 - h) scoliosis

2. The Muscular System

- A) Types, location and function of muscle tissue
 - 1) smooth muscle
 - 2) cardiac muscle
 - 3) striated or skeletal muscle
- B) Contraction of muscle tissue

Human Anatomy and Physiology I / BIO K211

- 1) Conditions of contraction
 - a) stimuli
 - b) response to stimuli
 - c) chemical changes
 - 2) Types of contraction
 - 3) The physiology of skeletal muscle contraction
- C) Skeletal muscles
- 1) Naming
 - a) directions of fibers
 - b) location
 - c) size
 - d) number of origins
 - e) shape
 - f) origin and insertion (attachments)
 - g) action
 - 2) Grouping
 - a) prime mover – antagonist
 - b) prime mover – synergist
- D) Skeletal Muscles and Their Bony Levers
- 1) The principle action of skeletal muscles
 - a) flexor
 - b) extensor
 - c) abductor
 - d) adductor
 - e) levator
 - f) depressor
 - g) supinator
 - h) pronator

Human Anatomy and Physiology I / BIO K211

- i) sphincter
- j) tensor
- k) rotator

UNIT III

1. The Nervous System

A) The function of the Nervous System

B) The organs of the Nervous System

- 1) Brain
- 2) Spinal cord
- 3) Membranes
- 4) Nerve cords
- 5) Ganglion
- 6) Nerve nucleus

C) The Cells and Tissues of the Nervous System

1) Supportive tissues and their function

- a) neuroglia cells
 - 1) astrocytes
 - 2) oligodendrocytes
 - 3) microglia cells
 - 4) ependyma

2) The Neuron

- a) anatomy
 - 1) nerve cell body
 - 2) nissl bodies (chromophilic substances)
 - 3) dendrites
 - 4) axons

Human Anatomy and Physiology I / BIO K211

- 5) axoplasm
 - 6) axolemma
 - 7) neurolemmocytes (Schwann cells)
 - b) function of neurons
 - c) types of neurons
 - 1) unipolar
 - 2) bipolar
 - 3) multipolar
 - 4) sensory
 - 5) association – connection-interneuron
 - 6) motor
 - 3) Nerve Impulse transmission
 - 4) The Synapse and Impulse Transmission
 - 5) Nerve Regeneration
 - 6) The Function (behavior) Unit of the Nervous System
 - a) The reflex arc
 - 1) composition
 - 2) types
2. The Divisions of the Nervous system
- A) The Central Nervous System
 - 1) Membranes
 - 2) The spinal cord
 - a) structure
 - b) functions
 - c) pathways
 - 1) ascending tracts
 - a) fasciculus gracilis

Human Anatomy and Physiology I / BIO K211

- b) fasciculus cuneatus
 - c) spinothalamic (lateral and anterior)
 - 2) descending tracts
 - a) corticospinal
 - b) reticulospinal
 - c) rubrospinal tracts
 - d) spinal cord injuries
 - 1) spinal shock
 - 2) paralysis
 - a) flaccid paralysis
 - b) spastic paralysis
- 2. The Brain
 - a) structural make-up
 - b) lobes
 - c) organization
 - 1) cerebrum
 - 2) ventricles
 - 3) thalamus
 - 4) hypothalamus
 - 5) limbic system
 - 6) pineal gland
 - 7) pons
 - 8) medulla oblongata
 - 9) cerebellum
 - d) functions
- B. The Peripheral Nervous System
 - 1) The cranial nerves
 - a) location

Human Anatomy and Physiology I / BIO K211

- b) function
 - 2) The spinal nerves
 - a) location
 - b) function
 - C. The Autonomic Nervous System
 - 1) Sympathetic division
 - 2) Parasympathetic division
 - 3) Autonomic transmitters
 - D) Clinical terms related to the Nervous System
- 3. Somatic and Special Senses
 - A) Receptors
 - 1) Types
 - a) mechanical
 - 1) free-nerve (dendritic) ending
 - 2) meissner's corpuscles
 - 3) merkel's disks
 - 4) pacinian corpuscles
 - 5) hair cells
 - 6) baroreceptors
 - 7) proprioceptors
 - 8) root hair plexuses
 - 9) muscle spindles
 - 10) golgi tendon organs
 - 11) krause end bulbs
 - 12) ruffini's corpuscles
 - b) photoreceptors
 - 1) rods

Human Anatomy and Physiology I / BIO K211

- 2) cones
 - c) chemoreceptors
 - 1) olfactory cells
 - 2) taste buds (gustatory hairs)
 - 3) aortic bodies
 - 4) carotid bodies
 - d) thermoreceptors
 - e) nociceptors
- 2) Functions
- B) The Sense of smell
 - 1) Olfactory cells and their function
 - C) The Sense of Taste
 - 1) Taste Buds and their function
 - D) The Ear
 - 1) structural makeup
 - 2) physiology of hearing
 - 3) equilibrium
 - a) static
 - b) dynamic
 - E) The Eye
 - 1) structural makeup
 - 2) physiology of sight
 - 3) common disorders

Human Anatomy and Physiology I / BIO K211

ALL DATES ARE OPEN TO REVISION AS NEEDED

Date	Lecture Portion	Laboratory Portion
1/17-1/19	Chapter 1: An Introduction to Anatomy and Physiology Chapter 4: The Tissue Level of Organization	M/W: No lab
1/22-1/26	M: Pretest W: Quiz #1 Chapter 4: The Tissue Level of Organization Chapter 5: The Integumentary System	Syllabus -Safety Rules & Procedure Agreement -Lab exercises: Anatomical Terminology
1/29-2/2	M: Quiz #2 Chapter 5: The Integumentary System Chapter 6: Osseous Tissue and Bone Structure	-Diffusion/Osmosis -Microscope review
2/5-2/9	M: Chapter 6: Osseous Tissue and Bone Structure W:Test #1 (chapters 1, 4-6)	-Histology- Prepared Slides
2/12-2/16	M: Quiz #3 Chapter 7: The Axial Skeleton Chapter 8: Appendicular Skeleton Chapter 9: Articulations	--Histology- Prepared Slides -The Skull & Vertebra
2/19-2/23	M: No classes Chapter 10: Muscle Tissue	NO Labs this week Open lab Weds.
2/26-3/2	M: Quiz #4 Chapter 10: Muscle Tissue Chapter 11: The Muscular System	- Lab Practical #1 -The Bones and Markings of the Human Body

Human Anatomy and Physiology I / BIO K211

3/5-3/9	M: Quiz #5 Chapter 12: CNS	The Bones and Markings of the Human Body
3/12-3/16	SPRING BREAK!	
3/19-3/23	M: Quiz #6 Chapter 13: Nervous System and Neural Tissue	Lab practical #2: Skeletal System Cat dissection: skinning. (yes, skinning)
3/26-3/30	M: Test #2 (chapters 7-13) Chapter 14: CNS	Cat dissection continued, Superficial Muscles
4/2-4/6	M: Quiz #7 Chapter 14: CNS Chapter 15: Central Nervous System	Cat dissection Continued Superficial Muscles & Deep Muscles
4/9-4/13	M: Quiz #8 Chapter 15: Central Nervous System Chapter 16: ANS	Cat dissection Continued Deep Muscles
4/16-4/20	M: Quiz #9 Chapter 16: ANS	Lab practical #3: Cat Muscles
4/23-4/27	M: Quiz #10 Chapter 16: ANS Chapter 17: Special Senses	Brain Dissection & Brain and Cranial Nerves Eye dissection, eye and ear models.
4/30-5/4	M: Quiz #11 Chapter 17: Special Senses W: ???	Special senses
5/7-5/11	M: Test #3 (chapters 14-17) W: Review	Practical #4 Review after
5/14-5/15	Final Exams Friday 5/11: 8am-11am Monday: 8am-11am & 11:30-2:30 Tuesday: 9:30-12:30	