HS 371 Human Anatomy
School of Health Care Professions
University of Wisconsin – Stevens Point
Fall of 2017

Lecture:	Monday, and Wednesday		8:00-9:15	Room 146 HEC
Labs:	Section 1	Monday	10:00-11:50	Room 116 HEC
	Section 2	Wednesday	10:00-11:50	Room 116 HEC
	Section 3	Thursday	10:00-11:50	Room 116 HEC
	Section 4	Thursday	2:00- 3:50	Room 116 HEC

Instructor: Rory Suomi, PhD, LPTA (#1197-19)
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Office hours: Monday& Wednesday 12:00 – 1:00 pm,
Thursday from 1:00 am to 2:00 pm, or Tuesday by appointment.

Course description:(3 credits) This course is designed to help the student gain a functional understanding of the integumentary, skeletal, muscular, cardiorespiratory, & nervous systems of the human body.

Course materials:
Textbook: Marieb, Elaine, Mallatt, Jon & Wilhelm, Pat. Human Anatomy. 8th ed. (2017)
San Francisco, CA: Pearson Benjamin Cummings.

Lecture objectives: Listed by chapter at the end of the syllabus.
Course expectations:
Students will be present at all examinations, lab quizzes & practicums. Make-up exams and quizzes will only be granted for excused absences. Please notify instructor in advance if you know you already have a conflict with one of the scheduled exams or quizzes. Make-ups must be done within 1 week of the scheduled exam. Laboratory equipment will be treated with respect and only used for learning purposes. If any damage occurs to the lab equipment due to mistreatment, the student may be responsible for the expense to replace it.

Attendance is taken, after **4 absences**; **5 points** will be deducted from your attendance points for each absence. At 10 absences 0 points will be earned. Labs count as double classes & you **must have prior permission** from the instructor to switch days. **Note**: switching lab days, may not be possible.
Note: There is an **alternative attendance policy option** (contract) which will be explained during first 2 class meetings.
** **There may be additional readings and handouts given in class. If you miss class, you are responsible for getting a copy from a classmate**.

Student evaluation:	**% of grade**	**Points**
Three exams (100, 140, 140 points) (last exam will be during finals week)	45.2 %	380 points
6 laboratory quizzes (20 points)	14.3 %	120 points
Skeleton practicum (75 points)	9.0 %	75 points
Laboratory projects (8 x 25 points)	24.0 %	200 points
Attendance	7.5 %	65 points
Total		**840 points**

Grading scale: The final letter grade will be awarded as follows (represents minimum points for grade):

A: 92-100% (≥ 773 points)	**B-:** 80-81% (672- 688.5)	**D+:** 67-69% (563- 587.5)
A-: 90-91% (756- 772.5)	**C+:** 77-79% (647- 671.5)	**D:** 60-66% (504- 562.5)
B+: 87-89% (731- 755.5)	**C:** 72-76% (605- 646.5)	**F :** <60% or (< 504)
B: 82-86% (689- 730.5)	**C-:** 70-71% (588- 604.5)	

Tentative Lecture Schedule Lectures meet in Room 146 HEC

Date	**Lecture topic**	**Text Readings**:**
09/06	Course overview/expectations. Levels of organ/and AT	ch..1
09/11	Levels of organization and anatomical terminology (AT)	ch..1
09/13	Connective Tissue	ch..4
09/18	Connective Tissue	ch 4
09/20	Integumentary system	ch. 5
09/25	Integumentary system	ch 5
09/27	**Exam I (ch 1, 4 and 5)**	
10/02	Skeletal system (Axial)	ch 7
10/04	Skeletal System (Axial)	ch 7
10/09	Skeletal System (Axial) Appendicular	ch 7 & 8
10/11	Skeltal System (Appendicular)	
10/16	Skeletal System (Appendicular)	ch 8
10/18	Joints	ch 9
10/23	Joints l	ch. 9
10/25	Joints	ch. 9
10/30	Joints	ch. 9
11/01	Muscle Tissue (or review)	ch 10
11/06	**Exam II (ch 7,8 & 9)**	
11/08	Review exam II & Muscles	ch 11
11/13	Muscles	ch. 11
11/15	Muscles	ch. 11
11/20	Muscles	ch 11
11/22	Muscles	ch 11
11/27	Heart	ch 19
11/29	Heart	ch 19
12/04	Heart	Ch 19
12/06	CNS	ch. 13
12/11	CNS	ch. 13
12/13	**CNS**	**ch. 13**

Final exam (ch's 12,13, 19) Monday, December18th, 12:30 to 2:30pm

***Tentative Laboratory Schedule Meet in* Room 116 HEC**

Week	**Week of:**	**Laboratory topic**	
1	September 4th	**No Lab**	
2	September 11th	**Lab 1**.	Orientation to the human body
3	September 18th	**No Lab**	**lecture**
4	September 25th	**No lab**	
5	October 2nd	**Lab 2**	**(**Axial Skeleton)
6	October 9th	**Lab 3**	(Appendicular skeleton)
7	October 16th	**No Lab**	**(1 hour lecture)**
8	October23d	**Skeletal Practicum**	
9	October 30th	**Lab 4**	Joints
10	November 6th	No Lab	**Lecture**
11	November 13th	**Lab 5**	Muscles
12	November 20th	**No lab**	
13	November 27th	**Lab 6**	Muscles
14	December 4th	**Lab 7**	Heart
15	December 11th	**Lab 8.**	CNS **(ch 12 & 13)**

Course Objectives

Chapter one : Orientation to the human body

1)___ Students will be able to define anatomy & physiology and describe the subdivisions of anatomy.

2)___ Students will be able to name the levels of structural organization in the body and explain their relationships

3)___ Students will be able to list the organ systems of the body and briefly state their functions.

4)___ Students will be able to define the anatomical position

5)___ Students will be able to use anatomical terminology to describe body directions, regions & planes.

6)___ Students locate the major body cavities, their sub-divisions & the major organs contained within

7)___ Students will be able to identify medical imaging techniques used to visualize internal structures.

Chapter four: Tissues

1)___ Students will be able to define tissue and list the four main types of tissue in the body.

2)___ Students will be able to list the several functional and structural characteristics of epithelial tissue.

3)___ Students will be able to describe apical, lateral and basal surface features of epithelia cells.

4)___ Students will be able to define exocrine and endocrine glands.

5)___ Students will be able to describe several functional and structural characteristics of connective tissue.

6)___ Students will be able to describe the types of connective tissue and their functions.

7)___ Students will be to discuss the structure and function of mucous, serous & cutanenous membranes

8)___ Students will be able to briefly describe the three types of muscle tissue

9)___ Students will be able to describe the inflammatory and repair processes by which tissues recover from injury.

Chapter five : Integumentary system

1)___ Students will be able to name the tissue types that compose the epidermis, dermis and hypodermis.

2)___ Students will be able to name & describe the functions of the major layers of the epidermis & dermis.

3)___ Students will be able to describe the factors that contribute to skin color.

4)___ Students will be able to list the parts of a hair and a hair follicle and explain the function of each part.

5)___ Students will be able to compare the structure and function of oil and sweat glands.

6)___ Students will be able to identify the structure of nails.

7)___ Students will be able to explain why serious burns are life-threatening and how burns are treated.

8)___ Students will be able to differentiate between first, second and third degree burns.

9)___ Students will summarize the characteristics and warning signs of skin cancers, especially melanoma.

10___ Students will be able to explain the changes that occur in the skin from birth to old age.

Chapter six : Bones and skeletal tissues.

1)___ Students will be able to locate the major cartilage elements of the adult human body, and explain the functional properties of cartilage tissue.

2)___ Students will be able to compare structure, functions & locations of the 3 types of cartilage tissue

3)___ Students will be able to explain why bones can be considered organs.

4)___ Students will be able to describe the main functions of the bony skeleton.

5)___ Students will be able to describe the gross anatomy of a typical long bone and typical flat bone.

6)___ Students will be able to discuss the chemical composition of bone tissue and the functions of its organic and inorganic parts.

7)___ Students will be able to explain endochondral ossification and how endochondral bones grow at their epiphyseal plates.

8)___ Students will be able to discuss how bone tissue is remodeled within the skeleton.

9)___ Students will be able to explain the steps in the healing of bone fractures.

10___ Students will be able to list some symptoms for specific disorders of bone.

11___ Students will be able to describe bone architecture and bone mass change with age.

Chapter seven : The axial skeleton

1)___ Students will be able to define the axial skeleton and contrast it with the appendicular skeleton.

2)___ Students will be able to describe the various types of bony markings.

3)___ Students will be able to name and identify the bones and important bony markings of the skull.

4)___ Students will be able to discuss the location and function of the orbit, nasal cavity & paranasal sinuses.

5)___ Students will be able to describe the general structure of the vertebral column, and list its components.

6)___ Students will be able to discuss the structure of a typical vertebra, and briefly describe some of the special features of cervical, thoracic and lumbar vertebrae.

7)___ Students will be able to describe structural components of the ribs and sternum.

8)___ Students will be able to list 3 types of abnormal curvatures of the spinal column & explain spinal stenosis.

9)___ Students will be able to describe how the axial skeleton changes with age.

Chapter eight : The appendicular skeleton

1)___ Students will be able to name the basic parts of the appendicular skeleton.

2)___ Students will be able to identify bones/bony markings that comprise the pectoral girdle and explain their functions.

3)___ Students will be able to describe the bones of the arm, forearm, wrist and hand.

4)___ Students will be able to name the bones contributing to the hip bone.

5)___ Students will be able to compare and contrast the male and female pelvis.

6)___ Students will be able to identify the bones of the lower limb and their important markings.

7)___ Name the three supporting arches of the foot and explain their importance.

8)___ Students will be able to describe various disorders of the appendicular skeleton.

9)___ Students will be able to describe how limb length changes, relative to the length of the head and trunk, as we grow.

Chapter nine : Joints

1)___ Students will be able to define joint, and classify joints by structure and by function.

2)___ Students will be able to describe the general structure of fibrous joints and provide examples of the 3 types.

3)___ Students will be able to describe cartilaginous joints and provide examples of the two main types.

4)___ Students will be able to describe the structural characteristics shared by all synovial joints.

5)___ Students will be able to explain how synovial joints function & what factors influence joint stability.

6)___ Students will be able to name and describe the common types of body movements.

7)___ Students will be able to name six classes of synovial joints based on shape and the types of movement they allow.

8)___ Students will be able to describe the key features of the acromioclavicular, shoulder, elbow, hip, knee and ankle joints.

9)___ Students will be able to name the most common joint injuries & discuss problems associated with each.

10)__ Students will be able to name and describe the main types of arthritis.

11)__ Students will be able to explain how the function of joints change with aging.

Chapter 10 : Muscle tissue

1)___ Students will be able to list 4 functional properties that distinguish muscle tissue from other tissues.

2)___ Students will be able to compare and contrast skeletal, cardiac and smooth muscle tissue.

3)___ Students will be able to name the layers of connective tissue that occur in and around skeletal muscle.

4)__ Students will be able to describe the bundle within bundle organization of skeletal muscle

5)__ Students will be able to compare and contrast the three kinds of skeletal muscle fibers.

6)___ Students will be able to describe the capacity of regeneration of muscle tissue in comparison to other types of tissue.

7)__ Students will be able to explain symptoms of muscular dystrophy, myofascial pain syndrome and fibromyalgia.

8)__ Students will be able to explain the changes that occur in skeletal muscle with age.

Chapter 11: Muscles of the body.

1)__ Students will be able to explain the three types of lever systems in which muscles participate, and indicate the arrangement of elements (effort, fulcrum & load) in each.

2)__ Students will be able to describe the functions of prime movers (agonist), antagonists, synergists & fixators.

3)__ Students will be able to list the criteria used in naming muscles.

4)__ Students will be able to name and identify the major muscles listed in Tables 11.1 through Tables 11.16. and be able to state the general location and action(s) of each.

Chapter 19: The Heart

1)___ Students will be able to describe the orientation & location of the heart in the thorax.

2)___ Students will be able to describe the layers of the pericardium and tissue layers of the heart wall.

3)___ Students will be able to list the structural features of each heart chamber.

4)___ Students will be able to describe the path of a drop of blood through the 4 heart chambers and the systemic and pulmonary circuits.

5)___ Students will be able to name the heart valves and describe their locations and functions.

6)___ Students will be able to name the components of the conducting system of the heart and describe the conduction pathway.

7)___ Students will be able to describe the locations of the coronary arteries and cardiac veins of the heart

8)___ Students will be able to define coronary artery disease, heart failure, and atrial and ventricular fibrillation.

9)___ Students will be able to list some of the major effects of aging on the heart.

Chapter 12: Fundamentals of the Nervous System

1)___ Students will be able to list the main functions of the nervous system

2)___ Students will be able to explain the structural and functional divisions of the nervous system

3)___ Students will be able to define neuron, its structural components and their functional roles.

4)___ Students will be able to classify neurons structurally and functionally.

5)___ Students will be able to list the six types of supporting cells in nervous tissue and distinguish them by function.

6)___ Students will be able to define reflex and its basic components as well as list the components of a reflex arc consisting of a sensory neuron, interneuron and motor neuron and show how they relate to the basic organization of the nervous system.

7)___ Students will be able to distinguish the role of gray matter from white matter in the CNS.

8)___ Students will be able to describe how multiple sclerosis relates to myelin & axon function.

Chapter 13: Central Nervous System

1) Students will be able to identify the 4 major parts of the adult brain.

2)___ Students will be able to name the major lobes, fissures and functional areas of the cerebral cortex.

3)___ Students will be able to name the three classes of fiber tracts in white matter of the cerebrum.

4)___ Students will be able to describe the structure and functions of the diencephalon.

5)___ Students will be able to identify the three basic subdivisions of the brain stem and their function.

6)___ Students will be able to describe the structure and functions of the cerebellum

7)___ Students will be able to explain how the meninges, cerebrospinal fluid and the blood-brain barrier protect the CNS.

8)___ Students will be able to explain the formation of cerebrospinal fluid and describe its pattern of circulation.

9)___ Students will be able to describe the gross structure of the spinal cord, and arrangement of gray and white matter.

10___ Students will be able to describe signs/symptoms of concussions, brain contusions, strokes, Alzheimer's disease.

11___ Students will be able to explain the effects of severe injuries to the spinal cord.

12___ Students will be able to describe specific CNS congenital disorders.