Course Title: Regional Human Anatomy and Physiology
Course Number: PTA/OTA106

Course Description: Human body structure and function from a regional viewpoint with emphasis on the skeletal, muscular and nervous systems; the respiratory and cardiovascular systems and introduction of digestive, renal/urinary, genital/reproductive, immunologic and endocrine systems.

Department: Allied Health Science
Course Credits: 5 credits

Instructor: Gary Blevins, MS; Office 28-209
Phone: 533-3661
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Clock Hours/Instructional Delivery:
Lecture – Two 1 and 1/2-hour lectures per week.
Laboratory – Two 2-hour laboratories per week.

Prerequisites: Acceptance into the physical therapist assistant program.

Course Learning Outcomes:
1. Recognize and define a variety of terms specific to the human body and human health.
2. Analyze and describe the structures and functions of human anatomy and physiology from a regional perspective for the following regions: head and neck, thoracic, abdominopelvic, and upper and lower extremities. (7A)
3. From a regional viewpoint, demonstrate competency in identifying the major skeletal muscles, their actions, origins, insertions, and peripheral nerves. (7A)
4. Demonstrate competency in identifying the major structures and function of the gross anatomy of the central nervous system and plexuses.(7A)
5. Compare and contrast the major bones and their processes as they relate to each region of the body.(7A)
6. Discuss the physiology of the nervous, musculoskeletal, respiratory, and cardiovascular systems from a regional perspective.(7A)
7. Recognize the major organs and components of the respiratory system and understand their functions.(7B)
8. Recognize the major organs and vessels of the cardiovascular/hematologic system and understand their functions.(7B)
9. Describe briefly the basic components and functions of the gastrointenstinal, renal/urinary, endocrine/metabolic, hepatic/biliary, genital/reproductive and immunologic, systems.(7B)
10. Demonstrate competency in gathering information, recording observations, and analyzing data such as EKG interpretation, pulmonary ventilation observations.(7D18)

Course Outline:
- **I. Head and Neck Region**
  - A. Muscles
    1. Origins
    2. Insertions
    3. Actions
    4. Innervations

5. Muscle physiology

B. Bones and Joints
   1. Cervical spine
   2. Skull
   3. Joint types and major ligaments

C. Digestive system
   1. Oral cavity
   2. Pharynx

D. Respiratory system
   1. Nasal cavity
   2. Pharynx
   3. Larynx
   4. Pulmonary Ventilation

E. Cardiovascular system
   1. Major arteries and veins
   2. Hematologic
   3. Immunologic
   4. EKG and cardiac cycle

F. Nervous system
   1. Structure and function of Cranial Nerves
   2. Brain
      - Cerebral lobes
      - Basal ganglia
      - Thalamus
      - Hypothalamus
      - Limbic system
      - Internal capsule
      - Brainstem
      - Cerebellum

II **Thoracic Region**

A. Muscles
   1. Origins
   2. Insertions
   3. Actions
   4. Innervations

B. Bones and Joints
   1. Thoracic Spine and scapula
   2. Ribs cage and clavicle
   3. Joint types and major ligaments

C. Digestive system, hepatic/biliary system

D. Respiratory system
   1. Lungs
   2. Trachea
   3. Respiratory physiology

E. Cardiovascular system
   1. Heart
   2. Cardiovascular physiology
   3. Major arteries and veins

F. Nervous system - Spinal Cord
   1. Gray versus White matter

2. Sizes at different levels

III. **Abdominalopelvic Region**
   A. Muscles
      1. Origins
      2. Insertions
      3. Actions
      4. Innervations
   B. Bones and Joints
      1. Lumbar Spine
      2. Pelvis
      3. Joint types and major ligaments
   C. Digestive, Endocrine, Genital/Reproductive, and Renal/Urinary
      1. Basic structure and function of digestive organs
      2. Basic structure and function of endocrine organs
      3. Basic structure and function of urinary organs
      4. Basic structure and function of Genital/Reproductive organs
   D. Cardiovascular system
      1. Major arteries
      2. Major veins

IV. **Upper and Lower Extremities**
   A. Muscles
      1. Origins
      2. Insertions
      3. Actions
      4. Innervations
   B. Bones and Joints
      1. Lower Extremity
      2. Upper Extremity
      3. Joint types and major ligaments
   C. Nervous system - plexuses
   D. Cardiovascular system

Teaching Methods and Learning Experiences:
Lecture, readings, assignments, cooperative learning, student presentations, laboratory experiences including cadaver lab and other learning experiences.

Grade/Evaluation Criteria:

Lecture Test 1	15%
Lab Test 1	15%
Lecture Test 2	19%
Lab Test 2	15%
Presentation	15%
Lab Test 3	21%
Total	100%

- If a student fails a lecture/lab course it will result in dismissal from the program.
- An overall grade of 70% (2.0) for this course is required to progress in the program.

Texts/Learning resources/References:
Required Texts:

- *Essential Clinical Anatomy,* 5rd Ed., Keith Moore and Anne Agur, Lippincott Williams and Wilkins, 2015. *(Focus on material found in study guide and labs)
- *Trail Guide to the Body*, 5th Ed., Andrew Biel, Books of Discovery,2014

Course Schedule:

Dat	Lecture Topic		
	Unit # 1 <u>Head and Neck Region</u>		
09/ 20	Introductions and Unit 1 Lecture 1A		485-562, 581-624, 627-654*
25	Unit 1 Lecture 1B		
27	Unit 1 Lecture 2		
10/ 2	Unit 1 Lecture 3		
4	Unit 1 Lecture 4		
11	***Unit #1 Lecture Exam***		
	Unit #2 <u>Thoracic Region and Abdominopelvic Region</u>		
16	Unit 2 Lecture 1		
18	No Class		
23	Unit 2 Lecture 2		43-109, 112-190, 265-314*
25	Unit 2 Lecture 3		
30	Unit 2 Lecture 4		
11/ 1	Unit 2 Lecture 5		
6	Unit 2 Lecture 6		
8	***Unit 2 Lecture Exam***		
	<u>Unit #3 Upper and Lower Extremities</u>		309-394, 397-482*
15	Group presentation (Shoulder and arm)	PTA (1:30 – 2:30)	
20	Group presentation (Elbow)	OTA (1:30 – 2:30)	
22	Holiday (no Class)		
27	Group presentation (Hand)	PTA (1:30 – 2:30)	OTA (2:30- 3:30)
29	Group presentation (Hip)	OTA (1:30 – 2:30)	PTA (2:30- 3:30)
12/ 4	Group presentation (Knee)	PTA (1:30 – 2:30)	OTA (2:30- 3:30)
6	Group presentation (Ankle and foot)	OTA (1:30 – 2:30)	PTA (2:30- 3:30)

Lab Schedule: OTA/PTA 106, Human Regional Anatomy and Physiology
Fall 2017 Labs:
PTA (Tu 2-4pm and W 3-5pm,)
OTA (M 3-5pm and Th 2-4pm,) Room 28/134

Date:	PTA/OTA	Lecture Topic	Reading in Text* Pages:
		Unit #1 Head and Neck region	
09/	20/21	Lab 1: Topography, Bones, Cartilages, ligaments	
	25/26	Lab 2: Muscles	Biel: 225-270
	27/28	Lab 3: Brain and Cranial nerves	
10/	2/3	Lab 4: Cardiovascular and endocrine system	
	4/5	Lab 5: Digestive system and Respiratory system	
	9	***Unit #1 Lab Exam*** (OTA start exam at 1:30) (PTA start exam at 3:00)	
	10	No PTA lab (Open lab time for studying)	
	12	No OTA lab (Open lab time for studying)	
		Unit #2 Thoracic Region and Abdominopelvic Region	
	16/17	Lab 1: Topography, Bones, Cartilages, ligaments	
	19	No OTA Lab (Open lab time for studying)	
	23/24	Lab 2: Muscles, Spinal cord, and Spinal nerves	Biel: 167-218
	25/26	Lab 3: Heart and Blood vessels	
	30/31	Lab 4: Cardiac physiology and Blood pressure/pulse	
11/	1/2	Lab 5: Respiratory Anatomy and Physiology.	
	6/7	Lab 6: Digestive, Urinary, Reproductive, and endocrine**.**	
	8	No Lab Lecture exam	
	9	No OTA lab Study time (Open lab time for studying)	
	13	***Unit #2 Lab Exam*** (OTA start exam at 1:30) (PTA start exam at 3:00)	
	14	No PTA lab (Open lab time for studying)	
		Unit #3 Upper and Lower Extremities	
	15/16	Shoulder joint: Topography, Bones, Cartilages, ligaments, Muscle, Nerves, Blood vessels	Biel: 45-100
	20/21	Elbow Topography, Bones, Cartilages, ligaments, Muscle, Nerves, Blood vessels	Biel: 107-160
	22/23	***No lab (Holiday)***	
	27/26	Hand joints: Topography, Bones, Cartilages, ligaments, joints Muscle, Nerves, Blood vessels	
	29/30	Hip Joint: Topography, Bones, Cartilages, ligaments, Joints Muscle, Nerves, Blood vessels	Biel: 275-336
12/	4/5	Knee joint: Topography, Bones, Cartilages, ligaments, Joints Muscle, Nerves, Blood vessels	Biel: 343-398
	6/7	Ankle joint and foot: Topography, Bones, Cartilages, ligaments, Joints, Muscle, Nerves, Blood vessels	Biel: 343-398
	TBD	***Unit # 3 Lab exam***	

PTA Program Grading Policy:

Grades are reported to your permanent transcript as a numerical grade to the nearest tenth according to the following table. A numerical grade of less than 2.0 is a failure:

Letter Grade	Percent	Numerical Grade
A	96-100 95 94	4.0 3.9 3.8
A-	93 92 90-91	3.7 3.6 3.5
B+	89 88 87	3.4 3.3 3.2
B	86 85 84	3.1 3.0 2.9
B-	83 82 80-81	2.8 2.7 2.6
C+	79 77-78 75-76	2.5 2.4 2.3
C	74 72-73 70-71	2.2 2.1 2.0

Z Grade:
The 'Z' grade is "an instructor initiated option to withdraw a student from a class after the official withdraw date has passed". A 'Z' grade is not given for non-attendance or to anyone who has not completed all of the course work to date.

Incomplete Grade:
If your performance in a course has been generally satisfactory with the exception of 1 or 2 assignments or skill checks, you may be able to arrange for an Incomplete Grade Student Contract with the instructor. The student or instructor may initiate the request for an incomplete grade. Incomplete grades are given solely at the instructor's discretion and under specific conditions that must be met to change an incomplete to a permanent grade. An incomplete grade in any course of the program is equivalent to being placed on probation. If the Student

Contract is not completed as agreed, the student may be dismissed from the program. A copy of an Incomplete Grade Student Contract can be found in the PTA handbook Appendix.

Attendance As It Pertains To Grading:
While absences or tardiness may be unavoidable for acceptable reasons, please be reminded that your **attendance is considered a critical factor in judging your values to your profession**.

The following is the attendance grading policy: (unless excused by physician, related to a death in family, or at program director's discretion**)**

1 or 2 absences = will not affect grade.
3 or more absences = .2 points **subtracted** from final GPA for the course.

Clinical Courses: All absences must be made up during clinical rotations.

•• The maximum total absence from a lecture/lab course will be 6 lectures and 6 labs or any combination thereof. Exceeding this **will result in failure of the course.**

Student Holidays for Reasons of Faith or Conscience (SSB 5173):
SCC/SFCC students are entitled to two days of excused absences per academic year for reasons of faith or conscience or for organized activities conducted under the auspices of a religious organization. Students' grades will not be adversely impacted by authorized absences under this policy, although students in courses with required community clinical and /or practicum experiences must fulfill these requirements to meet the licensure requirements of the program.

All absences under this policy must be submitted to the Chief Academic Officer in writing at least two weeks prior to the desired absence, containing a precise explanation of how the requested holiday is related to a reason of faith, conscience or an organized activity conducted by a religious organization. If deemed in alignment with the policy, the student will receive a document with date(s) of the approved absences (must be full days). The student is solely responsible for ensuring the documentation authorizing the absence is provided to each of the instructors whose classes or assignments are affected by the absence. The instructor(s) will determine, within two days after receiving the notification, what adjustments, if any, will need to be made for the student to make up assignments or tests missed during the absence(s), and the instructor may require that the student submit the assignment or take the test before or after the regularly scheduled date. If the student fails to notify the instructor of an authorized absence under this policy, the instructor is not obligated to make accommodations.

Probationary Policies: Please refer to the PTA Student Handbook regarding the Remediation Process.

Disability And Support Services:
SFCC complies with the mandates of Section 504 of the Rehabilitation Act and the Americans with Disabilities Act (ADA). It is the student's responsibility to make known any disability for which accommodation is requested. A student requesting accommodations must work through Disability Support Services to verify their disability and to determine what accommodations are appropriate. A request for reasonable accommodation by a qualified student with a documented disability will be considered on a case-by-case basis. All inquiries are considered confidential.

Reasonable accommodations appropriate for a specific course, a specific classroom, a laboratory or a clinical setting will be considered. Accommodations that would compromise patient care or that would fundamentally alter the essential nature of the program or activity, are not considered to be reasonable.

In the event of a denial of an accommodation, a student has the option to appeal the denial by following the process for complaint resolution listed in the SFCC Policies and Procedures for Reasonable Accommodations for Students with Disabilities. A copy of the procedure is available in the Disability Support Services Office.

Any student with a health condition or disability which may require accommodations in order to effectively participate in any PTA class or clinical, should contact Disability Support Services (DSS). [Building 17, Room 201, 533-4166]

Respect Within The Academic Community:
In order for learning to take place, students must feel safe; this safety is due all students, not only those who share your values, beliefs, and life experiences. For this reason, courtesy, thoughtfulness, and acceptance are essential in our discussions in and out of the classroom. Acceptance should not be confused with agreement; one need not agree with a person to listen, and one must listen well in order to disagree either cogently or respectfully. Every student in this course has a voice and so deserves the courtesy of attentive listening and the freedom to express diverse ideas.

Children In The Workplace:
No employee or visitor to CCS shall leave a child unattended nor shall a child be left with a CCS employee/student unless the child is enrolled in an authorized program of CCS. CCS does not supervise children outside of such officially sanctioned programs, and neither CCS nor its employees, agents, nor students may accept responsibility to do so on behalf of CCS.

Student Code Of Conduct:
http://spokanefalls.edu/Resources/StudentLife/StudentConcerns.aspx?page=PV4

Course Regulation, Requirements and Procedures:

Attendance and Participation:
As the instructor for this class, I respect the fact that college students are adult learners. With this respect comes the obligation that students demonstrate the attributes that make for a successful college student. Successful students attend class, make a point to be on time to class, come prepared for class, and are active participants in the educational process.

Each week there will be activities that require active participation in class such as laboratory exercises and in lectures. My expectations are that you will attend class and be an active learner. Failure to do so will have negative consequences for your grade. Missed information from class and missed opportunity to participate in classroom activities will result in your becoming hopelessly behind, which usually results in low performance on lecture tests and lab tests.

No unexcused absences allow during testing days!! Please see the instructor preferably before an absence, if not before the absence, then immediately after returning to

class. Missed exams (excused absences only) must be made up within one week after returning to class. **Lab Exams cannot be made up for any reason.**

Classroom Decorum:
Some general classroom rules: Please be **on time** to class and **do not** leave early. It is disruptive to the rest of the students and in fact rude to arrive after class has begun or to leave before the session has ended. Please do not visit during instructor lectures or viewing of videos during class time; it is rude and disruptive to other students. Reserve your visitation to planned activities that require group discussion, such in the laboratory. If you want to visit with your friends, go to the student union for a cup of coffee; **do not** come to class.

Student Responsibilities in this class:

- Behave toward others in a professional manner
- Avoid personal attacks, harsh criticism, and objectionable language while communicating with others
- Pay attention to the course calendar; keep up with the course work
- Submit your work on time.
- Actively participate in all course activities.
- Seek assistance from instructors when needed.
- Take control of your attitude, time, and performance

You are expected to take the responsibility to form the **good study habits** that are the mark of a good student. **Be organized!** Read the text information **before** the subject is considered in class. Regularly **study** and **review** your text, lecture and laboratory notes. **Good lecture notes are a MUST!** Plan to study and then **do it every day!** Regular organized study is more important than the total number of hours that you study right before an exam. Remember that you begin the course with a perfect score. You are responsible for maintaining that score during the quarter by mastering the material presented in the lecture, laboratory and text. As a guide the expected study time outside of class for any college course is **two hours for every hour in class per week** – or about 14 hours of study outside of class per week. **DO NOT CRAM!** The formation of study groups is highly recommended.