

**Life and Physical Sciences
Student Learning Outcome Alignment Form**

Course Prefix/Number: HSP 2402

Course Title: Human Anatomy and Physiology II

Brief Course Description:

This course is a continuation of HSP 2401 and expands a comprehensive study of the anatomy and physiology of the human body with an emphasis on health and medical issues. Lecture topics include special senses, the endocrine system, cardiovascular and respiratory physiology, immunity, digestion, nutrition and metabolism, the urinary system, and the male and female reproductive systems.

Foundational Component Area: Life and Physical Sciences. Courses in this category focus on describing, explaining, and predicting natural phenomena using the scientific method. Courses involve the understanding of interactions among natural phenomena and the implications of scientific principles on the physical world and on human experiences.

* Choose at least one Core SLO from the Core Objective.

Core Objective	ASU SLO	Course SLO	Assignment	Assessment Method
Critical Thinking*	CT1: Gather, analyze, evaluate, and synthesize information relevant to a question or issue.	Students will collect and analyze anatomical and physiological information to evaluate clinical scenarios.	Students will be assigned a critical thinking checklist with activities and case studies conducted in and out of lecture.	Embedded Lecture Exams and Quiz Questions will be used to assess this SLO.
	CT2: Develop and demonstrate a logical position (i.e. perspective, thesis, hypothesis) that acknowledges ambiguities or contraindications.			
Communication*	CS1: Develop, interpret, and express ideas through effective written communication.	Students will develop understanding of the physical relationships of anatomical structures to one another (at all levels of organization) and communicate the acquired knowledge in written form.	Students will conduct lab investigations in which physical relationships of anatomical structures and physiology are emphasized. Students will communicate their findings in writing to the instructor.	Embedded Lab Practical questions, lab reports, or rubric-evaluated components of activities pertinent to writing will be used to assess this SLO.
	CS2: Develop, interpret, and express ideas through			

	effective oral communication.			
	CS3: Develop, interpret, and express ideas through effective visual communication.			
Empirical & Quantitative Skills	EQS1: Manipulate and analyze numerical data and arrive at an informed conclusion.	Students will collect numerical anatomical and physiological information via relevant clinical scenarios and analyze and evaluate those data in order to reach an informed conclusion.	Students will perform lab investigations in which numerical data on anatomical structures are collected, classified, and analyzed in order to reach an informed conclusion about relevant clinical scenarios.	Embedded lab practical questions, lab reports, or rubric-evaluated components of the lab investigations focusing on analysis of anatomical and physiological data will be used to assess this SLO.
	EQS2: Manipulate and analyze observable facts and arrive at an informed conclusion.	Students will make anatomical observations and collect relevant factual information and analyze and evaluate those facts in order to reach an informed conclusion.	Students will conduct lab investigations in order to observe and collect anatomical facts and perform analyses in order to reach informed conclusions about relevant clinical scenarios.	Embedded lab practical questions, lab reports, or rubric-evaluated components of the lab investigation focusing on the collection of anatomical and physiological data will be used to assess this SLO.
Teamwork*	TW1: Consider different viewpoints as a member of a team.			
	TW2: Work effectively with others to support and accomplish a shared goal.	Students will work effectively with others to support and accomplish a shared goal (e.g. engage team members, support a constructive team climate, and focus on the tasks assigned)	Hands on lab activities will be conducted in which students work in groups to complete assigned tasks.	The activity average, peer evaluations or rubric-evaluated components of the activities will be used to assess this SLO.

* Choose at least one SLO (more than one can be chosen).

HSP 2402 Human Anatomy and Physiology II

Instructor:

Office:

Phone:

E-Mail:

Office Hours:

COURSE DESCRIPTION: This course is a continuation of HSP 2401 and expands a comprehensive study of the anatomy and physiology of the human body with an emphasis on health and medical issues. Lecture topics include special senses, the endocrine system, cardiovascular and respiratory physiology, immunity, digestion, nutrition and metabolism, the urinary system, and the male and female reproductive systems. Prerequisite: HSP 2401

COURSE OBJECTIVES: Upon successful completion of this course, students will be able to demonstrate:

- Chapter 13:
 - Describe the sensory organs of taste.
 - Name five kinds of general receptors.
 - Name the five primary taste sensations.
 - Explain the five primary taste sensations.
 - Explain the mechanism for the sense of smell.
 - Describe sensory adaptation.
 - Identify the accessory structures of the eye.
 - Describe how refraction occurs within the eye.
 - Describe the structures of the middle and inner ear.
 - Distinguish between static and dynamic equilibrium.
 - Describe the parts of the inner ear and their roles in equilibrium.

- Chapter 14:
 - List hormones released from the anterior and posterior lobes of the pituitary gland.
 - Discuss from where the various types of hormones are derived.
 - Describe the location of the thyroid gland and identify the hormones produced by this gland.
 - Explain the functions of parathyroid hormones.
 - Describe the location, structure, and general functions of the adrenal glands.
 - Identify the hormones produced by the adrenal cortex and medulla.
 - Identify the hormones produced by the pancreas, and specify the functions of those hormones.
 - Describe the functions of the hormones produced by the kidneys, heart, and thymus.
 - Identify the hormones produced by the testes and ovaries.
 - Describe the hormones of special importance to normal growth.

- Chapter 15:
 - Describe the important components of the blood.
 - Specify the composition of plasma.
 - List three types of plasma proteins.

- List the characteristics of the functions of red blood cells.
 - Describe the functions of hemoglobin.
 - Categorize the various white blood cells on the basis of their structures and functions.
 - Describe the function and production of platelets.
 - Distinguish between granulocytes and agranulocytes.
 - Discuss mechanisms that control blood loss after an injury.
 - Explain the importance of blood typing and the basis for ABO and Rh incompatibilities.
- Chapter 16:
 - Describe the size of the heart and its location in the thorax.
 - Identify the layers of the heart wall and the function of each.
 - Identify the four chambers of the heart, and list its associated great vessels.
 - Name the four heart valves, and describe the locations and functions of each.
 - Describe the vascular supply to the heart.
 - Identify the electrical events associated with a normal electrocardiogram tracing.
 - Draw a diagram of a normal electrocardiogram.
 - Define cardiac output, and describe the factors that influence this variable.
 - Describe normal heart sounds and define murmurs.
 - Explain the role of the autonomic nervous system in controlling cardiac output.
- Chapter 17:
 - Distinguish the structures and functions of various blood vessels.
 - Explain the difference between pulmonary and systemic vessels.
 - Define blood flow, blood pressure, and resistance.
 - Describe the effects of the sympathetic and parasympathetic nervous systems on the blood vessels.
 - Describe the factors that influence blood pressure and explain how blood pressure is regulated.
 - List the major arteries that supply the head and abdomen.
 - Identify the main arteries and veins of the lower limbs.
 - List the major veins that carry blood away from the lower limbs.
 - Describe the hepatic portal system.
 - Define pulse pressure and list locations of the body surface where the pulse can be detected.
- Chapter 18:
 - Define immunity and explain its relationship to the lymphatic system.
 - Identify the major components of the lymphatic system.
 - Describe the structure of lymphoid tissues, vessels and organs.
 - Describe the major functions of the lymphatic system.
 - Describe a lymph node and its functions.
 - Explain the difference between nonspecific and specific defenses.
 - Explain the role of lymphocytes in the immune response.
 - Explain the roles of the thymus and spleen.
 - Identify the body's three lines of defense against pathogens.

- Distinguish between humoral and cellular immunity.
- Chapter 19:
 - Describe the primary functions of the respiratory system.
 - Identify the organs of the upper respiratory system and describe their functions.
 - Discuss the structure of the airway outside the lungs.
 - Describe the functional anatomy of the alveoli.
 - Define and compare the processes of external respiration and internal respiration.
 - Describe the major steps involved in external respiration.
 - Explain the important structures of the respiratory membrane.
 - Describe how oxygen is picked up, transported, and released in the blood.
 - Describe the factors that influence the respiration rate.
 - Identify the four distinct respiratory volumes.
- Chapter 20:
 - Describe the location and structural features of the kidneys.
 - Describe the structure of the nephron.
 - Identify and describe the major factors responsible for the production of urine.
 - Describe how antidiuretic hormone and aldosterone influence the volume and concentration of urine.
 - List and describe the factors that influence filtration pressure.
 - Describe the structure and functions of the ureters, urinary bladder, and urethra.
 - Differentiate between the contents of different substances in the plasma and urine.
 - Describe the normal characteristics and composition of urine.
 - List the most important waste products that are excreted from the kidneys.
 - Describe the micturition reflex center.
- Chapter 21:
 - Explain what is meant by the terms fluid balance and electrolyte balance.
 - Compare the composition of intracellular and extracellular fluids.
 - Identify the hormones that play important roles in regulating fluid balance and electrolyte balance.
 - Describe the movement of fluid within the extracellular and intracellular fluids.
 - Discuss the mechanisms by which sodium and potassium ion concentrations are regulated to maintain electrolyte balance.
 - Explain the buffering systems that balance the pH of the intracellular and extracellular fluids.
 - Identify the most frequent threats to acid-base balance.
 - Explain how the body responds when the pH of body fluids varies outside normal limits.
 - Describe metabolic alkalosis.
 - Compare respiratory acidosis with metabolic acidosis.
- Chapter 22:
 - Identify the organs of the digestive system.

- Explain the processes by which materials move through the digestive tract.
 - Describe the anatomy of the stomach and its roles in digestion and absorption.
 - Describe the anatomic characteristics of the small intestine.
 - Explain three hormones secreted from the digestive system to regulate digestion.
 - Describe the structure of the pancreas and secretory activities for digestion.
 - Describe the major functions of the liver.
 - Describe the regions of the large intestine.
 - Explain the significance of the large intestine in the absorption of nutrients.
 - Specify the nutrients required by the body.
- Chapter 23:
 - Describe the components of the male reproductive system.
 - Specify the normal composition of semen.
 - Explain the hormonal mechanisms that regulate male reproductive functions.
 - Outline the process of spermatogenesis.
 - Describe the structure of the penis.
 - Describe the components of the female reproductive system.
 - Identify the phases and events of the female reproductive cycle.
 - Identify and describe the ligaments that support the uterus and hold it in place.
 - Describe the structure of a mammary gland.
 - List the general symptoms of sexually transmitted infections.
- Chapter 24:
 - Describe the process of fertilization.
 - Describe the major events of cleavage.
 - Differentiate between an embryo and a fetus.
 - Describe the hormonal changes in the maternal body during pregnancy.
 - Describe the major events of the early periods of embryonic development.
 - Discuss the birth process and explain the role of hormones in this process.
 - List the three blood vessels in the umbilical cord and the basic umbilical cord functions.
 - Describe the length of the neonatal period.
 - Define the terms chromosomes, genes, autosomes, alleles, and homozygous.
 - Distinguish between dominant and recessive alleles.

TEXTBOOK

- Moini J. Anatomy and Physiology for Health Professionals. 2nd Edition. Jones and Bartlett. ISBN: 978-1-284-03694-7
- BodyViz Software Program.

STUDENT RESPONSIBILITY AND ATTENDANCE

It is the student's responsibility to be on time for class, participate in class discussions, and be actively engaged in the learning process. Instructions and assignments will often be given during class, therefore it is in your best interest to attend. If you have to miss class due to an unforeseen event/accident or illness, please contact the instructor prior to the start of class. Pending the reason for your absence, the instructor may inform you of any missed homework assigned during class. Not acceptable reasons for absences include but are not limited to: over

sleeping, work, wanting to leave early or come back late from the weekend, and celebrating a friend, relative or pet's birthday. If you are sick, let the instructor know and bring a physician's note when you come back to class.

LATE WORK OR MISSED ASSIGNMENTS POLICY Late work will not be accepted unless you have received permission from the instructor prior to the due date. If you miss an assignment due to an unexcused absence, you are out of luck. Show up for class!

ACADEMIC HONESTY Academic honesty is expected on all work. Students are expected to maintain complete honesty and integrity in their online experiences. Any student found guilty of any form of dishonesty in academic work is subject of disciplinary action and possible expulsion from ASU. The Department of Health Science Professions adheres to the academic honesty statement as set forth in the Angelo State University Student Handbook (2011-2012) <http://www.angelo.edu/content/files/17358-university-honor-code>. The University "faculty expects all students to engage in all academic pursuits in a manner that is above reproach and to maintain complete honesty and integrity in the academic experience both in and out of the classroom setting and may initiate disciplinary proceedings against a student accused of any form of academic dishonesty, including but not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials."

PLAGIARISM

Plagiarism at ASU is a serious topic. The Angelo State University's Honor Code gives specific details on plagiarism and what it encompasses. Plagiarism is the action or practice of taking someone else's work, idea, etc., and passing it off as one's own. Plagiarism is literary theft.

In your discussions and/or your papers, it is unacceptable to copy word for word without quotation marks and the source of the quotation. We use the *APA Style Manual of the American Psychological Association* as a guide for all writing assignments. Quotes should be used sparingly. It is expected that you will summarize or paraphrase ideas giving appropriate credit to the source both in the body of your paper and the reference list. Papers are subject to be evaluated for originality via Bb Turnitin. Resources to help you understand this policy better are available at the ASU Writing Center

http://www.angelo.edu/dept/writing_center/academic_honesty.php.

STUDENTS WITH DISABILITIES

1. "Angelo State University is committed to the principle that no qualified individual with a disability shall, on the basis of disability, be excluded from participation in or be denied the benefits of the services, programs, or activities of the university, or be subjected to discrimination by the university, as provided by the Americans with Disabilities Act of 1990 (ADA), the Americans with Disabilities Act Amendments Act of 2008 (ADAAA), and subsequent legislation."

2. The Office of Student Affairs is the designated campus department charged with the responsibility of reviewing and authorizing requests for reasonable accommodations based on a disability, and it is the student's responsibility to initiate such a request by contacting the Office of Student Affairs, University Center, Room 112 at (325) 942-2047 or (325) 942-2211 (TDD/FAX) or by e-mail at studentservices@angelo.edu to begin the process. The Office of Student Affairs will establish the particular documentation requirements necessary for the various types of

disabilities. Reasonable accommodations will be made for students determined to be disabled or who have documented disabilities.

INCOMPLETE GRADE POLICY (OP 10.11 Grading Procedures)

It is policy that incomplete grades be reserved for student illness or personal misfortune. Please contact faculty if you have serious illness or a personal misfortune that would keep you from completing course work. Documentation may be required.

STUDENT ABSENCE FOR OBSERVANCE OF RELIGIOUS HOLY DAYS

"A student who intends to observe a religious holy day should make that intention known in writing to the instructor prior to the absence." Please see ASU Operating Policy [10.19](#).

COPYRIGHT POLICY

Students officially enrolled in this course should make only one printed copy of the given articles and/or chapters. You are expressly prohibited from distributing or reproducing any portion of course readings in printed or electronic form without written permission from the copyright holders or publishers.

SYLLABUS CHANGES

The faculty member reserves the option to make changes as necessary to this syllabus and the course content. If changes become necessary during this course, the faculty will notify students of such changes by email, course announcements and/or via a discussion board announcement. It is the student's responsibility to look for such communications about the course on a daily basis.

TENTATIVE SCHEDULE

Date	Topic	Chapter
Week 1	The Senses	13
Week 2	Endocrine System	14
Week 3	Endocrine System	14
Week 4	Blood /	15
Week 5	The Heart	16
Week 6	Vascular System	17
Week 7	Lymphatic System and Immunity	18
Week 8	Respiratory System	19
Week 9	Respiratory System	19
Week 10	Urinary System	20
Week 11	Fluid, Electrolyte, and Acid-Base Balance	21
Week 12	Digestive System	22
Week 13	Digestive System	22
Week 14	Reproductive System	23
Week 15	Pregnancy and Development	24
Finals Week		

The Archer College of Health and Human Services Curriculum Committee voted unanimously to approve the recommendation of the HSP department to offer A&P1 and A&P2. We believe offering an integrated, systems approach will greatly benefit a number of groups including HSP majors, Kinesiology students, and pre-nursing students. The primary technology that will be utilized in these courses is *Body Viz*, which allows students to visualize often abstract A&P concepts utilizing 3-D “stacked” images from actual CT and MRI scans. BodyViz allows students a unique sense of discovery while they investigate real patient data, making their learning experience more meaningful.