Department of Physician Assistant Education



Master of Science in Medicine

6 units

ANA 6001 HUMAN GROSS ANATOMY

FALL 2023

Meeting days: Tuesday and Thursday	Instructor title and name: Joy Y. Balta, MSc, MATLHE, PhD
Meeting times: Anatomy Lab: 1:30pm-4:00pm Anatomy Lecture: 4:00pm-5:30pm	Phone: 619-849-3005
Meeting location: Anatomy Lab: PLNU Main Campus, Rohr Science 165 Anatomy Lecture: PLNU Main Campus, Latter 102	Email: jbalta@pointloma.edu
Unit I Exam: 9/26/22 Unit II Exam: 10/24/22 Unit III Exam: 11/21/22 Unit IV Exam: 12/16/22	Office location and hours: TBA

PLNU Mission

To Teach ~ To Shape ~ To Send

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service is an expression of faith. Being of Wesleyan heritage, we strive to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

COURSE DESCRIPTION

This course is designed to develop an understanding of normal clinical anatomy through an integrated anatomical approach to the study of human body structure. Students will work in small groups and actively participate in full anatomy cadaver dissection labs. These labs are complemented with lectures covering the systematic and developmental anatomy of the human body within a clinical context.

COURSE GOALS

The goals of this course are to provide students with relevant didactic and practical knowledge upon which to connect the structure of the body to applicable pathology and related disease processes.

COURSE LEARNING OUTCOMES

Successful completion of this course requires demonstration of the skills and knowledge outlined here at, minimally, the ADVANCED BEGINNER level.

- 1. Describe and explain the structure and basic function of the major organ systems in the human body. (MK2)
- ^{2.} Utilize standard anatomical terminology in describing the structure of the human body. (MK2)
- 3. Locate and palpate anatomical landmarks utilized during physical examination. (MK2)
- 4. Identify and trace the pathways of major blood vessels and nerves and name the tissues they supply or innervate. (MK2)
- 5. Identify the bones and main joints. Describe the muscle groups responsible for the primary actions occurring at the joints. (MK2)
- 6. Describe the three-dimensional structure of the human body, incorporating the spatial relationship of organs, nerves, blood vessels, bones and muscles. (MK2)
- 7. Distinguish the normal range of variation in human anatomy. (MK2)
- 8. Explain the anatomical basis of common diseases or syndromes, as they relate to abnormal anatomical and physiological function. (MK2)

Initials indicate PA core competency required to meet the PLO. PA Core Competencies:

PR = Professionalism PB = Practice-based Learning SB = Systems-based Practice

COURSE ORGANIZATION & LEARNING STRATEGIES

The course is divided into 4 Units, each of which covers specific anatomical regions and introduces the major systems of the human body. Learning strategies include didactic lectures, imaging workshops, and hands-on dissection labs, and procedural simulators.

Unit I: Back & Upper Limb

Anatomical Terms;

Intro to Musculoskeletal, Circulatory & Nervous Systems

Regional Anatomy of the Back and Upper Limb

Unit II: Thorax & Abdomen

Intro to Respiratory, Cardiovascular, and Digestive Systems

Regional Anatomy of the Thorax and Abdomen

Unit III: Pelvis & Lower Limb

Intro to Urogenital and Reproductive Systems

Regional Anatomy of the Pelvis, Perineum, and Lower Limb

Unit IV: Head & Neck

Intro to Central Nervous System and Cranial Nerves

Regional Anatomy of the Head and Neck

While the anatomical regions are distinct between Units, most of the organ systems overlap a good deal. For example, you will be introduced to fundamental concepts about the musculoskeletal system in Unit I, but we will also cover muscles and bones in Units II-IV. This means you will need to build upon concepts from a previous unit.

You are expected to attend all didactic lectures, and actively participate in all cadaver dissections. It is your responsibility to come to class prepared for the day's activity.

INSTRUCTIONAL OBJECTIVES

Unit I. Back and Upper Limb

- Define the anatomical position, the major planes of section, and the primary terms of direction used in anatomical descriptions. Knowledge
- ^{2.} Define the primary movements utilized in anatomical descriptions. ^{Knowledge}
- ^{3.} Identify the major subdivisions of the nervous system. Define the functional components of a typical spinal nerve. Compare and contrast the length of the spinal cord, the location of spinal segments, and the relationship of spinal roots and nerves to the intervertebral spaces in the fetus, newborn, and adult. ^{Analysis}
- ^{4.} Describe the components of a typical spinal cord segment, including the structures that form a typical spinal nerve. Describe the relationship of the spinal cord and nerves to the spinal meninges and to a typical intervertebral articulation. Trace the distribution of a typical spinal nerve. ^{Comprehension}
- Identify the spinal meninges, the spaces between them, and the major contents of each space. Describe the functions and clinical significance of each. Knowledge
- ^{6.} Describe the anatomical basis for and clinical significance of a lumbar puncture (spinal tap). Knowledge
- ^{7.} Define a dermatome. Contrast this with the cutaneous territory of a peripheral nerve. ^{Comprehension}

- Define the basic functions and organization of the autonomic nervous system. Differentiate between sympathetic and parasympathetic components, pathways, and functions, and preganglionic and postganglionic elements. Comprehension
- ^{9.} Identify the bones of the back and their major features. Describe the functional aspects of these structures. Knowledge
- ^{10.} Identify the principle regions of the vertebral column, giving the number of vertebrae and the characteristics of a typical vertebra in each region. ^{Knowledge}
- Describe the normal curvatures of the vertebral column in pre- and postnatal conditions. Describe the features and the clinical significance of kyphosis, lordosis, and scoliosis. Comprehension
- Describe the components of the intervertebral disc and the functional significance of each. Describe the anatomical basis of a herniated ("slipped") disc. Comprehension
- 13. Identify the muscles of the back according to their general topography. Describe their attachments, innervation, and major actions. Differentiate the extrinsic and intrinsic muscles of the back. Predict the functional consequences of lesions of specific motor nerves and paralysis of the associated muscles. Application
- ^{14.} Identify the specific anatomical regions of the upper limb. ^{Knowledge}
- ^{15.} Identify the bones of the upper limb and their major features. Describe the functional aspects of these structures. Identify these structures in standard medical imaging. ^{Comprehension}
- Define the components of the shoulder complex. Identify the muscles of the shoulder, indicating their attachments, innervation, and major actions. Identify the muscles composing the "rotator cuff."

 Describe the functional significance of this group. Comprehension
- Describe the general structure of the female breast and its relationship to the thoracic wall.

 Describe the lymphatic drainage of the breast and the anatomical bases for various degrees of mastectomy. Comprehension
- Trace the course of motor and cutaneous innervation in the upper limb. Identify the spinal segmental level(s) of origin and relationship to the brachial plexus of each major peripheral nerve. Predict the functional consequences of lesions to specific spinal levels, parts of the brachial plexus, and individual peripheral nerves. Application
- Define the osseofascial compartments of the upper limb. Identify the muscles contained in each compartment. Describe the attachments, innervation, and major actions of each muscle. Describe the innervation of each compartment as a whole, and the major actions governed by that innervation. Predict the functional consequences of loss of action of each muscle and each compartment. Application
- ^{20.} Trace the flow of blood from the subclavian artery to and through the upper limb by describing the courses and branching patterns of the major arteries and veins. Knowledge
- ^{21.} Describe the pattern of lymphatic drainage of the upper limb, including the relationship of this drainage to that of the axilla and breast. ^{Comprehension}

- Define the carpal tunnel. Note the relationships of tendons, nerves and blood vessels to the carpal tunnel. Describe the clinical significance of this arrangement in the context of carpal tunnel syndrome. Comprehension
- Define the movements of the thumb and fingers. Describe the interaction of extrinsic and intrinsic muscles, retinacula, and fibrous digital sheaths in producing precision hand movement. Describe the relationship between the extensors of the digits and the lumbrical and interosseous muscles. Define the role of this arrangement in the production of precision hand movement. Comprehension
- ^{24.} Identify the bony components, major ligaments, key accessory structures (e.g., intra-articular discs), and movements permitted at the shoulder, elbow, and wrist joints. Describe the characteristic features of the major traumas to each joint. ^{Comprehension}
- Locate the surface projections and palpation points of the major structures of the upper limb in a basic surface examination. Knowledge

Unit II. Thorax and Abdomen

- Identify the bones of the thoracic cage and thoracolumbar spine, and their major features. Describe the functional aspects of these structures. Comprehension
- Describe the structure of the thoracic wall, including its layers and the contents of a typical intercostal space. Note the arrangement of the intercostal muscles and neurovascular elements. Note collateral routes and major anastomoses of arteries. Comprehension
- ^{3.} Describe the major subdivisions of the thoracic cavity and list their contents. Describe the subdivisions of the mediastinum and list their contents. ^{Comprehension}
- 4. Identify and differentiate the right and left lungs, including their lobes and fissures. Comprehension
- ^{5.} Identify the primary, secondary, and tertiary branches of the bronchial tree and the pulmonary arteries and veins. Define a bronchopulmonary segment and relate such segmentation to the organization of the bronchial and vascular trees. ^{Knowledge}
- ^{6.} Describe the courses and relationships of the major longitudinal structures (e.g., trachea, esophagus, vagus nerves, phrenic nerves, aorta, sympathetic networks, azygous system, thoracic duct) running through the thoracic cavity. ^{Comprehension}
- Describe the structure, position, and actions of the diaphragm. Identify its innervation, and indicate the segmental sources and pathways taken by these nerves to reach the diaphragm. Describe the mechanics of respiration, including a comparison of the roles of the diaphragm, thoracic cage, and thoracoabdominal muscles in normal respiration. Comprehension
- 8. Describe the gross structure of the heart, including the fibrous cardiac skeleton. Comprehension
- Trace the course of blood flow through the right and left sides of the heart. Identify the internal structures of each chamber and the location and structure of each of the valves. Knowledge
- ^{10.} Identify the elementary sounds of the normal heart. Relate these to the flow of blood through the heart and the actions of the cardiac valves. Identify the anatomical and auscultation projections of each of the cardiac valves onto the body surface. ^{Application}

- ^{11.} Trace the flow of blood through the major coronary vessels. Identify which vessels supply the main flow to and drainage from each of the chambers and the interventricular septum and possible anastomoses and collateral vascular pathways. ^{Knowledge}
- Describe the conducting system and extrinsic innervation of the heart. Comprehension
- ^{13.} Identify the surface regions of the abdominal wall, and the major internal projections onto them. Describe the structure of the abdominal wall, including its layers. ^{Comprehension}
- ^{14.} Compare and contrast the organization of the neurovascular supply of the thoracic and abdominal walls in terms of: sources of supply, segmental organization, relationships to muscular layers, areas of overlap and communication. ^{Analysis}
- Describe the inguinal canal, its contents, and its surface projections. Include a description of the development of the canal, its relation to the descent of the testes in males, and the comparable situation in females. Identify the homologies between abdominal and scrotal/labial structures. Differentiate between direct and indirect inguinal hernias and femoral hernias. Comprehension
- ^{16.} Identify the major peritoneal folds, reflections, and spaces in the abdominopelvic cavities. Describe the functional and clinical significance of such arrangements. Indicate which abdominopelvic organs are intraperitoneal or retroperitoneal. ^{Comprehension}
- ^{17.} Identify the organs of the abdominopelvic cavity. Describe the relations, gross structure (i.e., shape, lobes, subdivisions, fissures, ducts, etc.), blood supply, innervation, lymphatic drainage, and basic function of each. ^{Comprehension}
- 18. Trace the course of the extrahepatic biliary system from liver, into and out of the gallbladder, and into the duodenum. Note the relations of the bile tract. Follow the course of exocrine pancreatic secretions from their source to the duodenum. Note the relations of this system to the biliary tract.

 Knowledge
- 19. Identify the kidneys and suprarenal glands. Describe their normal positions, relations, and neurovascular supplies. Trace the flow of urine from the gross collecting structures in the kidney to the urinary bladder. Note the relationships of the ureters to surrounding structures. Comprehension
- 20. Identify the urinary bladder. Describe its gross features, relationship to the peritoneal cavity, position in the pelvis in both full and empty states, the nature and source of its innervation, and its means of filling and drainage in both males and females. Comprehension
- ^{21.} Identify the major abdominal arterial trees/axes and their territories. Note the anastomoses between arterial trees and the importance of these in providing collateral circulation. ^{Knowledge}
- Trace the flow of blood from the thoracoabdominal walls and organs to the heart by describing the formations and courses of the portal, caval, azygos, and vertebral venous tracts. Indicate anastomoses between these tracts and discuss the clinical significance of such connections. Note the relations of the major veins along their courses. Comprehension
- ^{23.} Trace the primary drainage routes of lymph from the organs and walls of the thoracoabdominal cavities to their points of venous connection. Knowledge

- Locate the surface projections and palpation points of the major thoracic and abdominal organs in a basic surface examination. Knowledge
- ^{25.} Identify the major structures of the thorax and abdomen in standard medical imaging. ^{Knowledge}

Unit III. Pelvis and Lower Limb

- Identify the bones and joints of the pelvis and their major features. Describe the functional aspects of these structures. Identify the pelvic differences between males and females. Relate these to the mechanics of the pelvis, including the construction of the birth canal. Application
- ^{2.} Identify the pelvic diaphragm, its components, and their basic functions. Indicate differences between males and females with respect to relationships to the urogenital tracts. ^{Knowledge}
- Identify the rectum, anal canal, and the anal sphincters. Describe the relationships of these structures, with particular reference to the basis of a digital anorectal exam in both males and females. Describe the anatomical basis for control of defecation and cause of hemorrhoids. Comprehension
- ^{4.} Trace the courses of the male and female reproductive tracts. Identify accessory glands or organs in the pathway. Note the relationships of components. Describe the nerves, muscles, and vasculature that are responsible for normal sexual functioning in males and females. Comprehension
- Define and delineate the boundaries and subdivisions of the perineum. Identify the contents of each. Knowledge
- ^{6.} Identify the sacral and coccygeal plexuses, their segmental origins, and their major peripheral branches. Identify the sources of autonomic innervation to the pelvis and perineum. Knowledge
- Trace the flow of blood through the pelvis and perineum by describing the courses, branching patterns, and distributions of the major arteries and veins. Note the relations of these vessels to neighboring organs, mesenteries, and major veins. Knowledge
- Trace the primary drainage routes of lymph from the organs and walls of the pelvic cavity and perineum to their primary lymph nodes and points of venous connection. Knowledge
- ^{9.} Locate the surface projections and palpation points of major pelvic and perineal structures in a basic surface examination. ^{Comprehension}
- ^{10.} Identify the major structures of the pelvis and perineum in standard medical imaging. Knowledge
- ^{11.} Identify the bones and joints of the lower limb and their major features. Describe the functional aspects of these structures. ^{Comprehension}
- ^{12.} Identify the muscles of the gluteal region, indicating their attachments, innervation, and major actions. Note the roles of the gluteal muscles during locomotion. ^{Knowledge}
- Describe the geographic relationships of neurovascular structures in the gluteal region and the consequences of intragluteal injections into specific quadrants of the region. Comprehension
- ^{14.} Define the boundaries and contents of the femoral triangle and popliteal fossa. Describe the anatomical basis of a femoral hernia. Note the spatial relationships of the major neurovascular

- structures in each area. Identify the main components of the arterial anastomoses in each area.
- Define the osseofascial compartments of the lower limb. Identify the muscles contained in each compartment. Describe the attachments, innervation, and major actions of each muscle. Describe the innervation and major actions of each compartment as a whole. Predict the functional consequences of loss of action of each muscle and each compartment. Application
- ^{16.} Trace the course of cutaneous and motor innervation in the gluteal region and lower limb. Identify the spinal segmental level(s) of origin and relationship to the lumbosacral plexus of each major peripheral nerve. Predict the functional consequences of lesions to specific spinal levels and individual peripheral nerves. ^{Application}
- ^{17.} Trace the flow of blood through the lower limb by describing the courses, branching patterns, and distributions of the major arteries and veins. Note the relations of these vessels to neighboring structures and the composition of major collateral networks. Describe the significance of the saphenous veins in relation to varicose veins and coronary bypass surgery. ^{Comprehension}
- Describe the pattern of lymphatic drainage of the lower limb, including the relationship of this drainage with those of the abdominal wall and groin regions. Comprehension
- ^{19.} Locate the projections and palpation points of the major structures of the lower limb in a basic surface examination. ^{Comprehension}
- ^{20.} Identify the major structures of the pelvis and perineum in standard medical imaging. Knowledge

Unit IV. Head and Neck

- Identify the bones of the skull, hyoid, and cervical spine, and their major features, in dry osteology specimens and in standard medical imaging. Describe the functional aspects of these structures.
 Comprehension
- Describe the boundaries of the face and scalp. Describe the structure of the scalp. Identify the major muscles of facial expression and their actions. Describe the innervation of the face and scalp. Trace the flow of blood through the face and scalp. Describe the morphology and general relationships of the parotid gland. Describe the clinical significance of the relationship between the parotid gland, its duct, and the extracranial distribution of the facial nerve. Comprehension
- 3. Identify the meninges surrounding the brain and the folds of dura mater that subdivide the cranium. Explain the functional/clinical significance of this arrangement. Describe the innervation of the dura mater. Comprehension
- Trace the flow of blood through the cranial cavity, indicating major anastomoses and collateral routes. Describe the formation of the cerebral arterial circle and explain its functional and clinical

- significance. Identify the dural venous sinuses, indicating their relations to the cranial meninges. Trace the emissary communications of the venous sinuses with the extracranial venous system and explain the functional/clinical significance of this arrangement. Explain the anatomical basis for epidural, subdural, and subarachnoid cranial hemorrhages. Comprehension
- ^{5.} Identify the 12 pairs of cranial nerves and the functional components carried in each nerve. Trace the course of each of the cranial nerves from its origin at the base of the brain to its final destination(s). Indicate the avenue(s) taken in exiting the skull, and the peripheral relations of each nerve. Predict the functional deficit(s) expected from destruction of each nerve. Identify the sources of autonomic innervation to the head. Describe the primary functions governed by each autonomic component in the head. ^{Application}
- ^{6.} Identify the bony elements of the orbit. Indicate the major extraorbital structures lying superior, inferior, medial, and lateral to the orbit, and the position of the eyeball relative to the orbit. ^{Knowledge}
- ^{7.} Identify the extraocular muscles, their actions, and their nerve and blood supply. Predict the functional deficit resulting from damage to each muscle. Describe the method of clinical testing of the individual extraocular muscles and their nerves. ^{Application}
- ^{8.} Identify the major triangles of the neck, the boundaries of each, and the major contents of each. Identify the muscles in the neck, including their attachments, innervation, and major actions. Knowledge
- ^{9.} Identify the thyroid and parathyroid glands, their vascular and nervous supply, and their relations to each other and surrounding cervical structures. Knowledge
- Trace the course of cranial nerves IX, X, XI, and XII in the neck. Describe the relationship of each nerve to its major neighboring structures. Identify the functional components of each nerve. Describe the deficit expected from lesion of each. Note the formation, relations, and distributions of the phrenic nerve and the ansa cervicalis. Describe the location and relations of the cervical sympathetic trunk and its ganglia. Comprehension
- ^{11.} Trace the flow of blood through the subclavian artery and its major branches. Note the regions supplied by each branch, the relationship of the branches to surrounding structures, and anastomoses between the branches. ^{Knowledge}
- Trace the flow of blood through the carotid arterial tract. Note the regions supplied by each of the major branches, the relationship of the branches to surrounding structures, and anastomoses between branches. Describe the locations and functions of the carotid sinus and carotid body.

 Comprehension
- Trace the flow of blood through the jugular system of veins, noting the regions drained by each of the tributaries, and interconnections between the major veins. Knowledge
- ^{14.} Identify the muscles of mastication, their attachments, sources of innervation, and major actions in chewing. Knowledge
- ^{15.} Trace the flow of blood through the maxillary artery and its major branches. Identify the regions supplied and the anastomoses between branches. ^{Knowledge}
- ^{16.} Trace the routes of lymphatic drainage in the head and neck. Indicate the major aggregations of lymph nodes and their relations to neighboring structures. ^{Knowledge}

- Define the boundaries and subdivisions of the oral cavity and pharynx. Describe the bony, muscular, neurovascular, and glandular relations of each. Comprehension
- Identify the muscles of the oral floor and walls, soft palate and auditory tube, and pharynx, and their actions and innervation. Identify the extrinsic and intrinsic muscles of the tongue. Describe the sensory and motor nerve supply to the tongue. Predict the deficit expected to follow an injury to each nerve. Application
- Describe the location, innervation, lymphatic drainage, secretory drainage, and general relationships of the submandibular and sublingual salivary glands and the oropharyngeal tonsils. Comprehension
- Describe the basic structure and relationships of the external nose and nasal cavities. Identify the paranasal sinuses, noting the drainage route of each into the nasal cavity. Describe the relationship of each sinus to the surrounding oral, orbital, and cranial cavities. Describe the pattern of innervation of the nasal region and paranasal sinuses. Trace the arterial supply to the nasal region.

 Comprehension
- ^{21.} Identify the major features of the larynx. Identify the major intrinsic muscles of the larynx. Determine the actions of these muscles and the roles of these actions in sound production. Trace the courses of the neurovascular supply of the larynx. Predict the functional consequences of damage to the different nerves comprising this innervation. Describe the major topographic relationships of the larynx and its neurovascular supply. Note the clinical significance of such arrangements. ^{Application}
- ^{22.} Identify the boundaries and components of the external ear. Describe the innervation of the region.

 Comprehension
- ^{23.} Identify the boundaries and contents of the middle ear. Indicate the relationships of the major neighboring structures. Identify the muscles of the middle ear, their actions, and their sources of innervation. ^{Knowledge}

Note: Superscripts identify the Bloom's Taxonomy level for each objective.

UNIT INSTRUCTION

UNIT	HOURS	LECTURES	LABS
Unit I	20	Orientation; Nervous System; Back; Upper Limb	Orientation; Back; Upper Limb
UNIT I EXAM			
Unit II	20	Thorax and Abdomen	Thorax and Abdomen
UNIT II EXAM			
Unit III	20	Pelvis and Lower Limb	Pelvis and Lower Limb
UNIT III EXAM			

Unit IV	15	Head and Neck	Head and Neck
UNIT IV EXAM			

REQUIRED TEXTS AND RECOMMENDED STUDY RESOURCES

Moore, Keith L., Dalley, Arthur F., Agur Anne M., 2017. Clinically Oriented Anatomy, 8E, LWW

ISBN-13: 978-1496347213 ISBN-10: 1496347218

Agur, Anne M. R. and Dalley, Arthur F. 2019. Moore's Essential Clinical Anatomy, 6E. LWW

ISBN-13: 9781496369659 ISBN-10: 1486369653

Detton, Alan J. 2016. Grant's Dissector, 17E. LWW

ISBN-13: 978-1975134600 ISBN-10: 1975134605

Gilroy, AM and BR MacPherson. 2016. Atlas of Anatomy, 4E. Thieme Medical Publishers.

ISBN-13: 978-1684202034 ISBN-10: 1626232520

SUPPLIES

22 Pcs Advanced Dissection Kit For Anatomy and Biology Medical Students With Scalpel Knife Handle - 11 Blades - Case - Lab Veterinary Botany Stainless Steel Dissecting Tool Set For Frogs Animals etc

LEARNING MODALITIES

Modalities include lectures, on-line pre-lecture activities, reading assignments, and clinical skills labs. The class schedule and assignments can be found in Canvas.

ATTENDANCE AND PARTICIPATION POLICY

- 1. You MUST attend:
 - 1. PE and clinical skills labs appropriately dressed and with all necessary equipment
 - 2. examinations on the date and time for which they are schedule
 - 3. community learning groups
- 2. We expect
 - 4. active participation in all class activities.

- 5. completion of all class preparatory assignments prior to commencement of class.
- 6. respect for the class, peers and faculty.
- 7. on-time arrival for all classes, laboratories, learning groups or any scheduled activities. Routine tardiness demonstrates a lack of professionalism and will not be tolerated

INCOMPLETES AND LATE ASSIGNMENTS

All assignments are to be submitted/turned in by the beginning of the class session when they are due—including assignments posted in Canvas. Incompletes will only be assigned under extremely unusual circumstances. Students failing an examination or practicum must complete the designated remediation (See REMEDIATION below) within the assigned time.

FINAL EXAMINATION POLICY

Successful completion of this class requires taking the final examinations (written and practical) on their respective scheduled days. No requests for early examinations or alternative days will be approved.

ASSESSMENT AND GRADING

Student course grades are calculated using all assessment tools utilized during the course. These include written examinations and practical examinations.

ACTIVITY	% OF GRADE
Written Unit Examinations (4)	50%
Laboratory Practical Unit Examinations (4)	50%
TOTAL	100%

Grading will be in keeping with Point Loma Nazarene University policy for graduate programs and grading will be as follows:

A =93-100	C=73-76
A -=92-90	C-=70-72
B+ =87-89	D+=67-69
B=83-86	D=63-66
B-=80-82	D-=60-62
C+=77-79	F=0-59
I	

REMEDIATION

Remediation is the process by which both the student and the program are assured that performance indicating a deficiency in knowledge or skills is subsequently demonstrated to be satisfactory. This may include a re-test over missed material, a skills demonstration or a review of missed material with completion of corrected answers. It is important to note that this is content remediation, not grade remediation and no grade will be changed based on these activities.

Within 48 hours of the posting of a grade of <70%, the student MUST contact the course director to discuss the student's performance and create a remediation plan. Unless otherwise directed by the course director, remediation activities must be completed within 5 days.

PLNU COPYRIGHT POLICY

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

PLNU ACADEMIC HONESTY POLICY

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See the Academic Honesty Policy in the Graduate and Professional Studies Catalog for definitions of kinds of academic dishonesty and for further policy information.

PLNU ACADEMIC ACCOMMODATIONS POLICY

While all students are expected to meet the minimum standards for completion of this course as established by the Technical Standards and the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center. (DRC@pointloma.edu or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 (a) prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach

courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

SEXUAL MISCONDUCT AND DISCRIMINATION

Point Loma Nazarene University faculty are committed to helping create a safe learning environment for all students. If you (or someone you know) have experienced any form of sexual discrimination or misconduct, including sexual assault, dating or domestic violence, or stalking, know that help and support are available through the Title IX Office at pointloma.edu/Title-IX. Please be aware that under Title IX of the Education Amendments of 1972, it is required to disclose information about such misconduct to the Title IX Office.

If you wish to speak to a confidential employee who does not have this reporting responsibility, you can contact Counseling Services at counselingservices@pointloma.edu or find a list of campus pastors at pointloma.edu/title-ix

This syllabus is subject to change. Students are encouraged to check course messages and emails in order to remain current.

ARC-PA standards (5th edition) addressed in this course: B2.02 (a)