



**COWLEY COLLEGE
& Area Vocational Technical School**

COURSE PROCEDURE FOR

**PATHOPHYSIOLOGY
ALH5236 4 Credit Hours**

Student Level:

This course is open to students on the college level in either the freshman or sophomore year.

Catalog Description:

ALH5236 - PATHOPHYSIOLOGY (4 hrs)

This course is designed to provide an in depth study of pathophysiology for students who wish to know more about the human body and disease. It would be very useful for students who are currently functioning in healthcare or those who plan to enter the allied health workforce. This is an introductory course in pathophysiology; it is expected that students who enroll in the course already have an academic and working knowledge of human physiology.

Prerequisite:

BIO4150 Human Anatomy and Physiology or ALH5235 Allied Healthcare Provider Anatomy and Physiology.

Controlling Purpose:

This course is designed to provide an overview of pathophysiology for students who wish to know more about the human physiology and disease.

Learner Outcomes:

Upon completion of the course, the student will have a basic understanding of human pathophysiology that will be immediately useful in the allied health workplace.

Units Outcomes and Clock Hours of Instruction for Core Curriculum:

The following outline defines the minimum core content not including the final examination period. Instructors may add other material as time allows.

Evaluation Key:

- A = All major and minor goals have been achieved and the achievement level is considerably above the minimum required for doing more advanced work in the same field.
- B = All major goals have been achieved, but the student has failed to achieve some of the less important goals. However, the student has progressed to the point where the goals of work at the next level can be easily achieved.
- C = All major goals have been achieved, but many of the minor goals have not been achieved. In this grade range, the minimum level of proficiency represents a person who has achieved the major goals to the minimum amount of preparation necessary for

taking more advanced work in the same field, but without any major handicap of inadequacy in his background.

- D = A few of the major goals have been achieved, but the student's achievement is so limited that he is not well prepared to work at a more advanced level in the same field.
- F = Failing, will be computed in GPA and hours attempted.
- N = No instruction or training in this area.

UNIT 1: INTRODUCTION TO PATHOPHYSIOLOGY						
Outcomes: The student will gain an overview of pathophysiology.						
A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Explain the role of pathophysiology in the diagnosis and treatment of disease.
						Use appropriate terminology.
						Explain the importance of a patient's medical history.
						Describe common cellular adaptations and possible reasons for the occurrence of each.
						Identify precancerous cellular changes.
						List common causes of cell damage.
						Describe common types of cell necrosis and possible outcomes.

UNIT 2: INFLAMMATION OF HEALING						
Outcomes: The student will gain an understanding of inflammation and how it affects healing.						
A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Explain the role of normal defenses in preventing disease.
						Describe how changes in capillary exchange affect the tissues and the blood.
						Compare normal capillary exchange with exchange during the inflammatory response.
						Describe the local and systemic effects of inflammation.
						Explain the effects of chronic inflammation.
						Discuss the modes of treatment of inflammation.
						Describe the types of healing and the disadvantages of each.
						List the factors, including a specific example for each, that hasten healing.
						Identify the classifications of burns and describe the effects of burns.
						Describe the possible burn complications occurring in the first few days.

UNIT 2: INFLAMMATION OF HEALING

Outcomes: The student will gain an understanding of inflammation and how it affects healing.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Explain three reasons why the healing of a burn may be difficult.

UNIT 3: IMMUNITY AND ABNORMAL RESPONSES

Outcomes: The student will learn about immunity and how diseases are transmitted to others.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the normal immune response.
						List the components of the immune system and the purpose of each.
						Explain the four methods of acquiring immunity.
						Discuss tissue transplant rejection and how it is treated.
						Describe the mechanism and clinical effects of each of the four types of hypersensitivity reactions.
						Explain the effects of anaphylaxis.
						Discuss the mechanism of autoimmune disorders.
						Describe the disorder of systemic lupus erythematosus, its pathophysiology, clinical manifestations, diagnostic tests, and treatment.
						Describe the cause, modes of transmission, and implications for health professionals of acquired immunodeficiency syndrome
						Describe the course, effects, and complications of HIV-AIDS.

UNIT 4: INFECTION

Outcomes: The student will gain an understanding of the general issues that concern human infections.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the basic characteristics of bacteria, viruses, chlamydiae, rickettsiae, mycoplasmas, fungi, and parasites.
						Discuss the locations, advantages, and disadvantages of resident (normal) flora.
						Describe the methods of transmitting microbes.
						List the factors determining host resistance.
						Explain the factors contributing to pathogenicity and virulence of microbes.

UNIT 4: INFECTION

Outcomes: The student will gain an understanding of the general issues that concern human infections.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Discuss methods of preventing and controlling infection.
						Describe the stages in the development and course of an infection.
						Describe typical, local, and systemic signs of infection.
						State the common diagnostic tests for infection and the purpose of each.
						Describe the mechanisms of action of common antimicrobial drugs.
						Explain the basic guidelines for use of antimicrobial drugs.
						Describe the respiratory infection influenza, including the cause, transmission, immunization, incidence, manifestations, and possible complications.

UNIT 5: NEOPLASMS

Outcomes: The student will learn about various types of neoplasms.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Distinguish between benign and malignant tumors, their characters, and terminology.
						List the warning signs of cancer.
						Explain the local and systemic effects of cancer.
						Describe common cancer diagnostic tests.
						Discuss the spread of malignant tumors by invasion, metastasis, and seeding and relate them to the staging of cancer.
						Describe the stages involved in carcinogenesis, specific risk factors, and possible preventive measures.
						Explain the host defenses against cancer.
						Discuss possible treatment measures, including radiation and chemotherapy, as well as nutrition.
						Describe and differentiate among three examples of malignant tumors: skin cancer, ovarian cancer, and brain cancer.

UNIT 6: FLUID, ELECTROLYTE, AND ACID-BASE IMBALANCES

Outcomes: The student will gain an understanding of fluid, electrolyte and acid-base abnormalities.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Explain the movement of water between body compartments that results in edema.
						Describe the causes and effects of dehydration.
						Explain the meaning of third-spacing.
						Discuss the causes and signs of hyponatremia and hypernatremia.
						Explain the causes and signs of hypokalemia and hyperkalemia.
						Describe the causes and signs of hypocalcemia and hypercalcemia.
						Describe the causes and effects of hypomagnesemia, hypophosphatemia, hypochloremia, and hyperchloremia.
						Explain how metabolic acidosis, metabolic alkalosis, respiratory acidosis, and respiratory alkalosis develop and their effects on the body.
						Explain how decompensation develops and its effects on the central nervous system.

UNIT 7: CONGENITAL AND GENETIC DISORDERS

Outcomes: The student will learn about inherited genetic disorders.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Differentiate among the terms congenital, genetic, chromosomal, developmental, and multifactorial defects.
						Describe the inheritance pattern of autosomal recessive, autosomal dominant, and X-linked recessive disorders.
						Explain the common causes of developmental disorders and their relationship to fetal development.
						Describe the benefits and risks of genetic screening programs and prenatal testing.
						Discuss the purposes of genetic engineering and current concerns.
						Describe the genetic defect in a child with Down syndrome and the effects on the child.

UNIT 8: DISEASE ASSOCIATED WITH ADOLESCENCE

Outcomes: The student will gain an appreciation of the diseases that affect adolescents.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the changes in the postural abnormalities kyphosis, lordosis, and scoliosis.
						Discuss the bone osteomyelitis and the importance of early

UNIT 8: DISEASE ASSOCIATED WITH ADOLESCENCE

Outcomes: The student will gain an appreciation of the diseases that affect adolescents.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						treatment.
						Describe the effects of juvenile rheumatoid arthritis.
						Compare the eating disorders anorexia nervosa and bulimia nervosa.
						Explain the cause and potential effects of acne.
						Describe the disease infectious mononucleosis.
						Describe the following disorders involving the reproductive system: chromosomal abnormalities, testicular cancer, and menstrual abnormalities.

UNIT 9: THE RELATIONSHIP BETWEEN PREGNACY AND DISEASE

Outcomes: The student will gain an understanding of the relationship between a normal pregnancy and diseases that affect the pregnant mother.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Understand the stages of fetal development and the basic effects on the mother.
						Describe the impact of maternal hormonal changes on the systems.
						Discuss the potential problems of hypertension, thrombus formation, placental separation, and Rh incompatibility during pregnancy.

UNIT 10: AGING AND DISEASE PROCESSES

Outcomes: The student will learn about the aging and how age affects the acquisition of disease.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the metabolic and structural aging changes in tissues.
						Discuss the effects of hormonal changes as women and men age.
						Describe the common changes in the heart and the arteries as one ages.
						Explain the causes and effects of osteoporosis and osteoarthritis in older individuals.
						Discuss the common changes in nervous system function as one

UNIT 10: AGING AND DISEASE PROCESSES

Outcomes: The student will learn about the aging and how age affects the acquisition of disease.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						ages.
						Describe common changes in the digestive system and the urinary system as one ages.
						Explain the increased incidence of infections and cancer as one grows older.

UNIT 11: THE EFFECTS OF IMMOBILITY

Outcomes: The student will gain an understanding of how immobility adversely affects one's health status.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the possible effect of immobility on skeletal muscle, bone, and joints.
						Discuss the development of decubitus ulcers.
						Explain the changes in blood pressure and potential thrombus formation when mobility is limited.
						List the potential problems related to respiratory function with immobility.
						Discuss the common effects of immobility on appetite, bowel function, and urinary function.
						Describe the potential effect on immobility on a child's growth.

UNIT 12: THE INFLUENCE OF STRESS

Outcomes: The student will gain an understanding of how acute and chronic stress adversely affects one's health status.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the stress response.
						Explain how the stress response is related to diseases.
						Describe how severe stress may lead to acute renal failure, stress ulcers, or infection.
						Suggest positive coping strategies.

UNIT 13: PAIN

Outcomes: The student will gain an increased appreciation of how pain adversely affects the life of the ill.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						State the causes of pain.
						Describe the pain pathway.
						Relate the methods of pain control to the gate-control theory.
						Discuss the signs and symptoms of pain in adults and young children.
						Explain the factors that may alter pain perception.
						Compare acute and chronic pain.
						Discuss the types of headache.
						Describe methods of pain management.

UNIT 14: SUBSTANCE ABUSE

Outcomes: The student will gain an increased understanding and empathy for people who suffer from substance abuse.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Use the appropriate terminology when discussing substance abuse.
						Discuss the factors predisposing to substance abuse.
						Question possible signs of substance abuse.
						Describe the problems of drug overdose, withdrawal, pregnancy, psychedelic experiences, and infection.

UNIT 15: ENVIRONMENTAL HAZARDS

Outcomes: The student will gain a broad understanding of how environmental hazards affect humans.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the sources and name examples of hazardous materials in the environment.
						Describe the effects of hyperthermia and hypothermia.
						Discuss the effects of radiation.
						List possible safety measures in the workplace.
						Describe examples of dangerous insects and animals.
						Discuss the possible effects of contaminated food and water.

UNIT 16: INTRODUCTION TO THE BASIC PHARMACOLOGY AND SELECTED THERAPIES

Outcomes: The student will gain a broad understanding of pharmacology and alternative medicine.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Define the terms commonly used in pharmacology.
						Differentiate the types of adverse reactions of medication administration.
						Explain the factors that determine blood levels of a drug.
						Compare the methods of drug administration.
						Describe the role of receptor sites in drug action.
						Differentiate a pharmaceutical generic name from a trade name.
						Explain the basics for the various legal restrictions on the sale of drugs listed in different (controlled) schedules.
						Describe the therapeutic roles of specified members of the health care team, to include both traditional and alternative.
						Describe the basic concepts of Asian medicine.

UNIT 17: BLOOD AND LYMPHATIC DISORDERS

Outcomes: Students will gain a broad understanding of the many blood and lymphatic disorders that affect humans.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the terms describing abnormalities in the blood.
						Describe and compare the pathophysiology, etiology, manifestations, diagnostic tests, and treatment for each of the selected anemias: iron-deficiency, pernicious, aplastic, sickle cell, and thalassemia.
						Differentiate between primary and secondary polycythemia, and describe the effects on the blood and circulation.
						Describe hemophilia A: its pathophysiology, signs, and treatment.
						Discuss the disorder disseminated intravascular coagulation: its pathophysiology, etiology, manifestations, and treatment.
						Compare acute and chronic leukemia: the incidence, onset and course, pathophysiology, signs, diagnostic tests, and treatment.
						Compare Hodgkin's disease and non-Hodgkin's lymphomas, including pathophysiology, signs, and treatment.
						Describe the pathophysiology, signs, and treatment of multiple myeloma.

UNIT 18: CARDIOVASCULAR DISORDERS

Outcomes: The student will learn about various cardiovascular disorders.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the common diagnostic tests for cardiovascular function.
						Describe the dietary and lifestyle changes, and the common drug groups used, in the treatment of cardiovascular disease.
						Explain the role of cholesterol and lipoproteins in the development of atheromas.
						State the factors predisposing one to atherosclerosis.
						Compare angina and myocardial infarction.
						Describe the common dysrhythmias and cardiac arrest.
						Discuss the causes of congestive heart failure and the effects of left-sided and right-sided failure.
						Explain the changes in the blood flow and their effects in common congenital heart defects.
						Discuss the development of rheumatic fever and rheumatic heart disease.
						Describe the etiology and pathophysiology of infectious endocarditis and pericarditis.
						Explain the development and possible effects of essential hypertension.
						Compare the arterial peripheral vascular diseases atherosclerosis, Buerger's disease, Raynaud's disease, and aneurysms.
						Describe the development and effects of the venous disorders, varicose veins, phlebothrombosis, and thrombophlebitis.
						Discuss the types of shock and the initial and progressive effects of shock on the body.

UNIT 19: RESPIRATORY DISORDERS

Outcomes: The student will gain an understanding of respiratory disease.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the common upper respiratory tract infections.
						Explain how secondary bacterial infections occur in the respiratory tract.
						Compare the different types of pneumonia.
						Differentiate the effects of primary from secondary tuberculosis.
						Describe the pathophysiology and complications of cystic fibrosis.
						Describe the etiology and pathophysiology of bronchogenic carcinoma.

UNIT 19: RESPIRATORY DISORDERS

Outcomes: The student will gain an understanding of respiratory disease.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the possible outcomes of aspiration.
						Compare the types of asthma and describe the pathophysiology and manifestations of an acute attack.
						Compare and contrast emphysema and chronic bronchitis.
						Explain how bronchiectasis develops as a secondary problem and also its manifestations.
						Describe the causes of pulmonary edema and explain how it affects blood oxygen tension levels.
						Compare the effects of small, moderate, and large-sized pulmonary emboli.
						Describe the causes of atelectasis and the resulting effects on ventilation and oxygen levels.
						Explain the effects of pleural effusion on ventilation.
						Compare the types of pneumothorax and hemothorax.
						Explain how a flail chest injury affects ventilation, oxygen levels, and circulation.
						Describe the types of pathophysiology and signs of infant respiratory distress syndrome.
						Describe the possible causes of adult respiratory distress syndrome and the pathophysiology.
						Describe the etiology and changes in blood gases with acute respiratory failure.

UNIT 20: DIGESTIVE SYSTEM

Outcomes: The student will gain an understanding of the diseases that affect the digestive system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the various causes of vomiting and the vomiting process.
						Differentiate diarrhea from constipation.
						Differentiate cleft lip from cleft palate.
						Describe the common oral infections and periodontal disease.
						Explain the common causes of dysphagia.
						Differentiate the types of hiatal hernias and explain their effects.
						List the causes of acute gastritis and describe the common signs.
						Compare the effects of acute gastritis, chronic gastritis, and gastroenteritis.
						Describe the etiology, the signs, and possible complications of

UNIT 20: DIGESTIVE SYSTEM

Outcomes: The student will gain an understanding of the diseases that affect the digestive system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						peptic ulcers.
						Describe the pathophysiology, etiology, and early signs of gastric cancer.
						Explain how dumping syndrome develops and list the signs associated with the syndrome.
						Explain how pyloric stenosis interferes with normal function, and list the common manifestations.
						Describe how gallstones develop and the signs of obstruction.
						Differentiate the types of jaundice.
						Compare the types of infectious hepatitis.
						Describe the common manifestations of hepatitis.
						Explain why the cause of toxic hepatitis should be identified quickly.
						Differentiate the types of cirrhosis.
						Describe the pathophysiology and manifestations of cirrhosis.
						Describe the pathophysiology, the signs, and possible complications of acute pancreatitis.
						Explain how gluten toxicity may affect individuals with celiac disease.
						Describe the signs of malabsorption.
						Compare and contrast Crohn's disease with ulcerative colitis.
						Describe the stages in the development of acute appendicitis and the signs associated with each stage.
						Explain how diverticulosis and diverticulosis develop.
						Describe the causes and possible characteristics of colorectal cancer.

UNIT 21: URINARY SYSTEM DISORDERS

Outcomes: The student will gain an understanding of the diseases that affect the urinary system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Compare the etiology, pathophysiology, and manifestations of cystitis and pyelonephritis.
						Explain the development of acute post-Streptococcal glomerulonephritis, its signs and symptoms, including laboratory tests and possible complications.

UNIT 21: URINARY SYSTEM DISORDERS

Outcomes: The student will gain an understanding of the diseases that affect the urinary system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the etiology and significant manifestations of nephritic syndrome.
						Explain the common signs and symptoms of urinary tract obstruction.
						List common causes of urinary calculi.
						Explain how hydronephrosis develops and the effects on the kidney.
						Describe the incidence and early signs of adenocarcinoma of the kidney, bladder cancer, and Wilm's tumor.
						Explain how nephrosclerosis effects renal and systemic blood pressure.
						Describe the etiology, usual age at onset, manifestations, and outcome of adult polycystic disease.
						Compare acute and chronic renal failure with regard to common causes, pathophysiology, signs and symptoms, and possible complications.
						Describe how dialysis substitutes for a nonfunctioning kidney.

UNIT 22: ACUTE NEUROLOGIC DISORDERS

Outcomes: The student will gain an understanding of the acute diseases that affect the neurological system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Relate the focal effect of a lesion to the specific area of damage in the brain.
						Describe the possible effects of increases in intracranial pressure on a level of consciousness, motor and sensory functions, vital signs, vision, and language.
						Explain the effects of increased intracranial pressure on brain herniation.
						Compare the effects of brain tumors in different areas of the brain.
						Compare and contrast transient ischemic attacks (TIAs) to cerebrovascular accidents (CVAs).
						List and describe the causes of CVAs.
						Describe the immediate and long-term effects of CVAs.
						Explain how cerebral aneurysms develop, their effects, and

UNIT 22: ACUTE NEUROLOGIC DISORDERS

Outcomes: The student will gain an understanding of the acute diseases that affect the neurological system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						possible complications.
						Describe the cause, pathophysiology, and manifestations of bacterial meningitis.
						Explain how a brain abscess may cause focal and general effects.
						Compare the types of head injuries.
						Describe the factors contributing to primary and secondary brain damage after head injury.
						Differentiate the types of hematomas and describe the effect of a hematoma on the brain.
						Explain the possible manifestations of head injury and the complications.
						Explain how seizures may be related to infection or injury.
						Describe how various types of spinal cord injury may occur.
						Explain how the effects of spinal cord injury depend on the location of the damage.
						Compare the signs of spinal shock with the permanent effects of spinal cord injury.
						Describe the possible complications of spinal cord injury.

UNIT 23: CHRONIC NEUROLOGIC DISORDERS

Outcomes: The student will gain an understanding of the chronic diseases that affect the neurological system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the pathophysiology of hydrocephalus, differentiating the communicating from the noncommunicating types.
						Describe the signs of increasing intracranial pressure in the neonate.
						Describe the major types of spina bifida and the effects on a child who has the defect.
						Describe the etiology of cerebral palsy.
						Describe the types of cerebral palsy and signs of each.
						Differentiate the types of seizures.
						Explain how seizures develop and the possible precipitating factors.
						Describe the pathophysiology and course of multiple sclerosis.

UNIT 23: CHRONIC NEUROLOGIC DISORDERS

Outcomes: The student will gain an understanding of the chronic diseases that affect the neurological system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the common effects of multiple sclerosis.
						Relate the pathophysiology to the signs of Parkinson's disease.
						Explain how amyotrophic lateral sclerosis affects motor function and how this relates to the signs of progression.
						Describe the pathophysiology of myasthenia gravis and its effects on the body.
						Describe the inheritance of Huntington's disease to include the onset and early signs.
						Describe the changes in the brain as Alzheimer's disease develops and the effects on function.
						Describe the etiology and pathophysiology of herniated intervertebral disc and the early signs.
						Compare the disorders of schizophrenia, depression, and panic disorder with regard to the pathophysiology and effects on behavior.

UNIT 24: DISORDERS OF EYE AND EAR

Outcomes: The student will gain an understanding of the diseases that affect the eyes and ears.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the common structural defects impairing vision: hyperopia, presbyopia, myopia, astigmatism, amblyopia, and nystagmus.
						Describe the common infections in the eye and their possible effects on vision.
						Explain how intraocular pressure may become elevated, and how it may affect vision.
						List and compare the signs of chronic glaucoma, acute glaucoma, cataract, macular degeneration, and detached retina.
						Describe how the retina may become detached and the possible effects on vision should it occur.
						Describe the types of hearing loss with an example of each.
						Describe otitis media and its cause, pathophysiology, and signs.
						Describe the pathophysiology and signs of otosclerosis and of Meniere's syndrome.
						Explain how permanent hearing loss is caused by acute otitis

UNIT 24: DISORDERS OF EYE AND EAR

Outcomes: The student will gain an understanding of the diseases that affect the eyes and ears.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						media, chronic otitis media, Meniere's syndrome, and damage to the auditory area of the brain.

UNIT 25: ENDOCRINE DISORDERS

Outcomes: The student will gain an understanding of the diseases that affect the endocrine system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Explain how hormone levels in the blood are controlled by negative feedback by the hypothalamic-pituitary system under normal and abnormal conditions.
						Differentiate type 1 and type 2 diabetes mellitus.
						Explain the early signs of diabetes.
						Compare the causes and development of hypoglycemia and hyperglycemia.
						Describe the common degenerative effects of diabetes mellitus.
						Explain the relationship between parathyroid hormone and calcium and their changes with various disorders.
						Describe the possible effects of a pituitary tumor.
						Compare the effects of an excess and a deficit of growth hormone in a child and in an adult.
						List the causes and effects of diabetes insipidus and inappropriate ADH syndrome.
						Describe the causes of goiter.
						Explain the effects of an excess and a deficit of thyroid hormones.
						Define and list the possible causes of Cushing's syndrome.
						Define and list the effects of Addison's disease.

UNIT 26: MUSCULOSKELETAL DISORDERS

Outcomes: The student will gain an understanding of the diseases and traumatic conditions that affect the musculoskeletal system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the types of fractures, the healing process in bone, and potential complications.
						Compare and contrast dislocations, sprains, and strains.

UNIT 26: MUSCULOSKELETAL DISORDERS

Outcomes: The student will gain an understanding of the diseases and traumatic conditions that affect the musculoskeletal system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the pathophysiology of osteoporosis, the predisposing factors, and possible complications.
						Compare the causes and effects of rickets, osteomalacia and Paget's disease.
						Describe the common bone tumors.
						Describe the characteristics of Duchenne's muscular dystrophy.
						Describe the effects of fibromyalgia.
						Compare and contrast osteoarthritis, rheumatoid arthritis, and ankylosing spondylitis with regard to pathophysiology, etiology, manifestations, and possible complications.
						Describe the distinguishing features of infectious (septic) arthritis.
						State the etiology and common signs of gout.

UNIT 27: SKIN DISORDERS

Outcomes: The student will gain an understanding of the diseases that affect the integumentary system.

A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe common skin lesions.
						Describe the causes, typical lesions, and location of contact dermatitis, urticaria, and atopic dermatitis.
						Describe the cause and lesions associated with the inflammatory conditions psoriasis, lichen planus, discoid lupus erythematosus, pemphigus, and scleroderma.
						Distinguish between the bacterial infections impetigo and furuncles.
						Describe the effect of Streptococcus pyogenes on connective tissue in acute necrotizing fasciitis.
						Describe the viral infections herpes simplex, herpes zoster, and warts.
						Describe the forms of tinea and fungal infection.
						Describe the agent, the infection, and manifestations of scabies and pediculosis.
						Compare the skin cancers, describing the lesion, predisposing factors, and spread of squamous cell carcinoma, malignant melanoma, and Kaposi's sarcoma.

UNIT 28: REPRODUCTIVE SYSTEM DISORDERS						
Outcomes: The student will learn about common reproductive system disorders.						
A	B	C	D	F	N	Specific Competencies
						Upon completion of this unit, the student will be able to
						Describe the causes of infertility in males and females.
						Describe the common congenital abnormalities in males and females.
						Compare and contrast benign prostatic hypertrophy with cancer of the prostate.
						Describe the incidence and pathophysiology of testicular cancer.
						Compare the common menstrual disorders.
						Describe endometriosis and its complications.
						Explain how pelvic inflammatory disease develops and its effects.
						Describe breast lesions, fibrocystic breast disease, and breast cancer.
						Compare and contrast the common benign and malignant tumors in the cervix, uterus, and ovaries.
						Describe common sexually transmitted diseases.

Projects Required:

None

Textbook:

Contact Bookstore for current textbook.

Materials/Equipment Required:

Computer and online connection.

Attendance Policy:

Students should adhere to the attendance policy outlined by the instructor in the course syllabus.

Grading Policy:

The grading policy will be outlined by the instructor in the course syllabus.

Maximum class size:

Based on classroom occupancy

Course Time Frame:

The U.S. Department of Education, Higher Learning Commission and the Kansas Board of Regents define credit hour and have specific regulations that the college must follow when developing, teaching and

assessing the educational aspects of the college. A credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally-established equivalency that reasonably approximates not less than one hour of classroom or direct faculty instruction and a minimum of two hours of out-of-class student work for approximately fifteen weeks for one semester hour of credit or an equivalent amount of work over a different amount of time. The number of semester hours of credit allowed for each distance education or blended hybrid courses shall be assigned by the college based on the amount of time needed to achieve the same course outcomes in a purely face-to-face format.

Refer to the following policies:

[402.00 Academic Code of Conduct](#)

[263.00 Student Appeal of Course Grades](#)

[403.00 Student Code of Conduct](#)

Disability Services Program:

Cowley College, in recognition of state and federal laws, will accommodate a student with a documented disability. If a student has a disability which may impact work in this class and which requires accommodations, contact the Disability Services Coordinator.