

NORTHWESTERN CONNECTICUT COMMUNITY COLLEGE

COURSE SYLLABUS

Course Title: Anatomy and Physiology II Lab

Course BIO* 212 Lab

Course Description: Laboratory to accompany BIO* 212. This laboratory section presents a study of the anatomy and physiology of humans. Histology slides, animal dissections, computer dissection, diagnostic imaging, laboratory medical test results and experimentation will be used as needed. Much of the dissection experience will be provided through the use of ADAM INTERACTIVE ANATOMY and the accompanying student lab dissection guide to give students a virtual human dissection experience.

Pre-requisite/Co-requisite: Prerequisite: BIO* 211 Co-requisite: BIO* 212 Lecture

Goals: To provide a learning environment that will demonstrate and support lecture content dealing with the Nervous, Endocrine, Cardiovascular, Lymphatic, Respiratory, Digestive, Urinary and Reproductive Systems.

Outcomes: At the conclusion of this course students should be able to:

- Test spinal and cranial reflexes and explain causes of testing abnormalities
- Use diagnostic imaging to locate and identify important anatomical regions and structures within the brain using T1 and T2 weighted MRI images, models, computer simulations and dissection specimens
- Perform other diagnostic tests for vision, hearing, equilibrium, and other
- Identify structure of the nervous system using models, dissected specimens, prepared slides, drawings, computer programs, and diagnostic imaging
- Demonstrate and explain the concept of stereognosis
- Demonstrate discriminative touch, two point discrimination, and sensory adaptation and determine how it is applied in daily life
- Recognize and identify signs and symptoms of common nervous system pathologies including but not limited to ALS, CVA, Trauma, Alzheimer's Disease, Poliomyelitis, Multiple Sclerosis, Parkinsonism, and various brain tumors
- Identify histology slides for the major endocrine organs including, but not limited to the anterior and posterior pituitary, adrenal gland, thyroid, pancreas and identify specific histological feature of each
- Identify the anatomical location of major endocrine organs
- Analyze laboratory medicine values to recognize specific endocrine pathologies
- Explain how and why a glucose tolerance test is performed and relate blood glucose levels to insulin and glucagon production
- Explain the inheritance of the different major blood types – A, B, O and Rh – and determine the blood type when shown a test result
- Specify blood types when given genotypes determine bloodtransfusion compatibility when given blood phenotypes
- Identify the types of cellular elements in blood and be able to discriminate between the various cell types when given prepared slides
- Analyze CBC results to determine if an abnormality is present and if so what the implications are for the "patient"
- Explain the process of staining blood using Wright's stain and identify blood components
- Explain what happens when blood clots on a slide after observing the process microscopically
- Explain and recognize different blood pathologies when given specific laboratory test results and/or microscope slides
- Recognize major blood vessels and anatomical features of the heart using models, dissection specimens, histology slides and computer simulations
- Recognize the components of an ECG and identify selected pathologies
- Demonstrate universal precautions when handling blood specimens
- Recognize and identify chambers of the heart, valves, and other important anatomical structures associated with the heart

- Demonstrate proficiency taking a pulse, blood pressure and pulse oximetry readings and explain the significance of the results when resting and after exercise
- Describe the significance of the lymphatic system and recognize histological features
- Identify specific lymphatic structures
- Recognize and explain selected lymphatic pathologies using lab test results
- Explain diagnostic testing procedures for blood vessels, heart, and lymphatic disorders
- Identify components of the respiratory system using models, histology slides, dissection specimens, and computer simulations
- Explain the function of a peak flow meter
- Instruct a classmate in the proper technique required to use a peak flow meter
- Recognize and explain selected respiratory pathologies
- Identify components of the digestive system using models, specimens, and histology slides
- Discuss and recognize common digestive pathologies
- Explain the role of nutrition in treating selected disorders including diabetes mellitus type I and type II
- Identify urinary system anatomy and recognize selected urinary system pathology
- Use blood test results to recognize metabolic disturbances including acidosis and alkalosis and their causes when given ABG results
- Recognize, identify, and explain the role of the major reproductive organs & glands for males and females
- Recognize the role of specific placental components
- Recognize selected reproductive system abnormalities
- Create a case study including patient history assessment, differential diagnosis, diagnostic testing, diagnostic treatment and prognosis for a patient with an approved disorder that is applicable to Anatomy and Physiology content. Case study outcomes include
 - Synthesize appropriate symptoms for the selected disorder
 - Describe the patient assessment results based upon the patient signs, symptoms and history
 - Present and analyze laboratory, diagnostic imaging, genetic, and biopsy test results that are appropriate
 - Interpret test results to exclude specific differential diagnoses
 - Present and discuss treatment options explaining why a particular treatment choice is made
 - Demonstrate proper documentation of academic sources using either APA or CSE format.

College Policies

Plagiarism: Plagiarism and Academic Dishonesty are not tolerated at Northwestern Connecticut Community College. Violators of this policy will be subject to sanctions ranging from failure of the assignment (receiving a zero), failing the course, being removed/expelled from the program and/or the College. Please refer to your “Student Handbook” under “Policy on Student Rights,” the Section entitled “Student Discipline,” or the College catalog for additional information.

Americans with Disabilities Act (ADA): The College will make reasonable accommodations for persons with documented learning, physical, or psychiatric disabilities. Students should notify Dr. Christine Woodcock, the Counselor for Students with Disabilities. She is located at Green Woods Hall, in the Center for Student Development. Her phone number is 860-738-6318 and her email is cwoodcock@nwcc.edu.

School Cancellations: If snowy or icy driving conditions cause the postponement or cancellation of classes, announcements will be made on local radio and television stations and posted on the College’s website at www.nwcc.edu. Students may also call the College directly at **(860) 738-6464** to hear a recorded message concerning any inclement weather closings. Students are urged to exercise their own judgment if road conditions in their localities are hazardous.

Use of Electronic Devices: Some course content as presented in Blackboard Learn is not fully supported on mobile devices at this time. While mobile devices provide convenient access to check in and read information about your courses, they should not be used to perform work such as taking tests, quizzes, completing assignments, or submitting substantive discussion posts.

Sexual Assault and Intimate Partner Violence Resource Team: NCCC is committed to creating a community that is safe and supportive of people of all gender and sexual identities. This pertains to the entire campus community, whether on ground or virtual, students, faculty, or staff.

Sexual assault and intimate partner violence is an affront to our national conscience, and one we cannot ignore. It is our hope that no one within our campus community will become a victim of these crimes. However, if it occurs, NCCC has created the SART Team - Sexual Assault and Intimate Partner Violence Resource Team - to meet the victim's needs.

SART is a campus and community based team that is fully trained to provide trauma-informed compassionate service and referrals for comprehensive care. The team works in partnership with The Susan B. Anthony Project to extend services 24 hours a day, 7 days a week throughout the year.

The NCCC team members are:

Ruth Gonzalez, Ph.D.	860-738-6315	Green Woods Hall Room 207
Susan Berg	860-738-6342	Green Woods Hall Room 223
Kathleen Chapman	860-738-6344	Green Woods Hall Room 110
Michael Emanuel	860-738-6389	Founders Hall Annex Room 308
Seth Kershner	860-738-6481	Library
Jane O'Grady	860-738-6393	Founders Hall Annex Room 212
Robin Orlomoski	860-738-6416	Business Office Room 201
Patricia Bouffard, Ex-Officio	860-738-6319	Founders Hall Room 103
Savannah Schmitt		Student Representative
Jacob Wujcik		Student Representative

At NCCC we care about our students, staff and faculty and their well-being. It is our intention to facilitate the resources needed to help achieve both physical and emotional health.