



BAKER COLLEGE
STUDENT LEARNING OUTCOMES

VAS2320 Non-Invasive Vascular II

3 Semester Hours

Student Learning Outcomes and Enabling Objectives

1. Describe peripheral arterial, and visceral vascular anatomy.
 - a. Identify the vessels in the peripheral arterial systems.
 - b. Identify the vessels evaluated with sonography in the visceral vascular system.
 - c. Analyze the difference between arterial and venous wall anatomy.
 - d. Evaluate the anatomy and blood flow patterns of pseudoaneurysms, dialysis access grafts, and fistulae.
2. Analyze components of normal and abnormal peripheral arterial, and visceral vascular pathophysiology and hemodynamics.
 - a. Explain the effects of collateral flow in the arterial system.
 - b. Distinguish between fusiform, saccular, and dissecting aneurysms.
 - c. Examine the symptoms related to acute and chronic disorders.
 - d. Define systemic versus autoregulatory control of peripheral resistance
 - e. Define power, work, and energy.
3. Determine the risk factors for the peripheral arterial, and visceral vascular systems.
 - a. Identify clinical signs associated with acute and chronic disease.
4. Evaluate the mechanisms and pathological findings associated with peripheral arterial, and visceral vascular disease.
 - a. Describe the evolution of atherosclerotic plaque
 - b. Distinguish between acute and chronic disease.
 - c. Describe the variations in vascular resistance in the mesenteric arterial system during pre and postprandial states.
5. Identify current treatment options for patients with peripheral arterial, and visceral vascular disease.
 - a. Explain indications for treatments
 - b. Describe medical control and reduction of risk factors
 - c. Explain surgical intervention.
6. Analyze diagnostic criteria in relation flow properties, hemodynamics, energy, and physical principles.

- a. Describe the capabilities, limitations, protocol/technique, waveforms, and diagnostic criteria for peripheral arterial, arterial injury, and visceral vascular sonography procedures.
 - b. Describe the protocols/techniques used for preoperative mapping of the extremity veins, radial, internal mammary and epigastric arteries, and assessment of dialysis access grafts and fistulae.
 - c. Describe non-imaging vascular testing, plethysmography instruments, and methods for calibrating sonographic imaging systems
 - d. Describe the test procedures and modalities used for evaluation of vasculogenic impotence.
 - e. Explain the noninvasive test procedures and provocative maneuvers used for detection of thoracic outlet syndrome and upper extremity ischemia.
 - f. Describe the capabilities and limitations of duplex sonography for identification of arteritis
 - g. Describe the components of Poiseuille's law and Bernouli's principle.
7. Analyze the importance of test validation, and correlative imaging.
 - a. Evaluate sensitivity, specificity, positive and negative predictive values, accuracy, and disease prevalence.

These SLOs are approved for experiential credit.

Effective: Spring 2018