

Bossier Parish Community College
Master Syllabus

Course Prefix and Number: SONO 200

Credit hours: 1

Course Title: Introduction To Sonography

Course Prerequisites: Enrollment in the DMS program courses is limited to those students who have been selected and admitted to the professional phase of the program. Program courses are sequenced by semester and must be taken as a group each semester per program requirements and policies.

Textbook(s):

Required Textbooks: Textbook of Diagnostic Sonography: Sandra L. Hagen-Ansert 9th edition 2 Vol set

Course Description:

This introduction sonography course will focus on patient care, HIPAA, organization of the hospital, environmental safety, and the sonographer's professionalism in the workplace. Students will learn the foundations of sonography as well as gain an introduction into understanding other imaging modalities. Imaging artifacts, physical findings, physiology, and laboratory data will be introduced and discussed thoroughly.

Learning Outcomes:

A. Demonstrate knowledge and application of ergonomic techniques.

- 1) Industry standards and OSHA guidelines
- 2) Types of work-related musculoskeletal disorders
- 3) Role of Administration in the prevention of MSI
- 4) Role of Sonographer in the prevention of MSI
- 5) Best practices for prevention
 - a) Daily exercises in the workplace
 - b) Neutral posture
 - c) Patient transfer and assistance
 - d) Patient positioning
 - e) Equipment and accessories
 - f) Supports, tools, and devices
 - g) Transducer grip and pressure
 - h) Schedules/Workload
 - i) Workstation/work area(s)

B. Demonstrate knowledge and application of types and methods of infection control.

- 1) Personal and patient
 - a) Standard precautions
 - b) Isolation procedures
 - c) Aseptic and sterile technique

- 2) Environment
 - a) Equipment
 - b) Transducer cleaning and disinfection
 - c) Accessories

C. Demonstrate knowledge and application of patient care.

- 1) Compliance with program and clinical education facility policies and procedures
- 2) Patient Care Partnership
- 3) Patient directives
- 4) Anticipate and be able to respond to the needs of the patient
 - a) Demonstrate age-related and cultural competency
 - b) Demonstrate appropriate patient care in settings outside of the sonography department.
- 5) Transport and transfer of patients with support equipment
 - a) Oxygen
 - b) Intravenous lines/pumps
 - c) Urinary catheters
 - d) Drainage tubes
- 6) Vital signs
- 7) Color
- 8) Skin integrity
- 9) Clinical history
- 10) Proper patient positioning and draping
- 11) Comfort
- 12) Privacy
- 13) IV insertion and injection with use of contrast-enhanced imaging
- 14) Basic pharmacology as related to the concentration
- 15) Post interventional procedure care and discharge
- 16) Life-threatening situations and implement emergency care as permitted by institutional policy, including the following:
 - a) Pertinent patient care procedures
 - b) Principles of psychological support
 - c) Emergency conditions and procedures
 - d) First aid and resuscitation techniques
- 17) Reporting and documentation of incidents and/or adverse reactions

D. Demonstrate knowledge of the roles and responsibilities of healthcare professions to effectively communicate and collaborate in the healthcare environment.

- 1) Team development
- 2) Conflict resolution
- 3) Interprofessional communication and education

E. Demonstrate knowledge of medical ethics and law.

- 1) Patient's right to privacy based on applicable legal and regulatory standards
- 2) HIPAA
- 3) Electronic documentation and transmission
- 4) Terminology related to ethics, values, and morals

- 5) Types of law
- 6) Risk management
- 7) Medical malpractice liability coverage
- 8) Informed consent
- 9) Documentation of clinical incidents
- 10) Professional scope of practice and clinical standards
- 11) Professional code of ethics

F. Demonstrate knowledge of medical and sonographic terminology.

- 1) Definitions, abbreviations, symbols, terms, and phrases
- 2) Correlating diagnostic and imaging procedures
- 3) Sonographic appearances

To achieve the learning outcomes, the student will or will be able to:

- Develop an appreciation of the history and development of ultrasound and its application in sonography
- Describe a career in sonography
- Demonstrate an understanding of the basic principles and terminology of ultrasound
- Identify basic sonographic principles, scanning modes, and transducers
- Appreciate the responsibility of the sonographer to acquire and access adequate and accurate patient history to assist the supervising radiologist and physicians with diagnosis and treatment of the patient
- Define patient focus care
- Discuss basic patient care techniques
- Describe patient transfer techniques
- Discuss infection control and isolation techniques
- Demonstrate the ability to respond to common medical emergencies
- Describe how to assist patients with special needs
- Define patient rights and HIPAA
- Explain how to interview a patient, obtain a health history, and perform a physical assessment
- Demonstrate knowledge and application of types and methods of infection control
- Demonstrate knowledge and application of patient care
- Demonstrate knowledge of medical ethics and laws
- Be familiar with common laboratory tests and what their results may indicate
- Possess an understanding of good scanning ergonomics and the importance of applying safe scanning techniques and positions in the benefit of the sonographer's health and career longevity
- Define OSHA and discuss its role in sonography
- Define common types of work-related injury for sonographers and know what causes them
- Describe and apply "best practices" in sonography
- Demonstrate a minimal understanding of other imaging modalities that will be utilized in tandem to assist with patient care
- List the properties of x-rays and gamma rays

- Define radiographic contrast and density
- Discuss the use of contrast media in diagnostic imaging
- Compare and contrast how images are produced using computed tomography, nuclear medicine, positron emission tomography, and diagnostic ultrasound
- Identify a variety of artifacts, their source and resolution
- List ways in which spectral and color Doppler displays can present motion and flow information incorrectly
- Describe how specific artifacts can be recognized
- Explain how artifacts can be handled to avoid the pitfalls and misdiagnoses that they can cause

Course Requirements: In order to pass the course, the student must earn 76% of the total possible points on the unit tests for the course and make a minimum score of 70% on the final exam. The student must achieve an overall course average of 76%. Grades will not be rounded. Failure to complete any of the course requirements listed below will result in an “F” for the course.

The student will:

- Participate in/complete all classroom/laboratory experiences (such as discussion questions; quizzes; section test; case studies; concept mapping; DVD, video, web-site, or reading assignments).
- Be held responsible for the content of the entire course. The final exam is mandatory, will be cumulative, and worth 25% of the overall grade for the course.

Course Grading Scale:

93–	100%=	A
85–	92%=	B
76–	84%=	C
68–	75%=	D
0 –	67%=	F

Attendance Policy: The college attendance policy (for the classroom) is available at <http://catalog.bpcc.edu/content.php?catoid=5&navoid=369#class-attendance>

Course Fees: (if applicable)

Nondiscrimination Statement

Bossier Parish Community College does not discriminate on the basis of race, color, national origin, gender, age, religion, qualified disability, marital status, veteran's status, or sexual orientation in admission to its programs, services, or activities, in access to them, in treatment of individuals, or in any aspect of its operations. Bossier Parish Community College does not discriminate in its hiring or employment practices.

COORDINATOR FOR SECTION 504 AND ADA

Angie Cao, Student and Disability Services Specialist

Disability Services, F254, 6220 East Texas Street, Bossier City, LA 71111

318-678-6511

acao@bpcc.edu

Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.

Equity/Compliance Coordinator

Teri Bashara, Director of Human Resources

Human Resources Office, A-105

6220 East Texas Street

Bossier City, LA 71111

Phone: 318-678-6056

Hours: 8:00 a.m.-4:30 p.m. Monday - Friday, excluding holidays and weekends.