

SONO - 1003 Fundamentals Sonography/Pt Care, 3.00 Credits

Level: Lower

This course is designed to provide a general overview of the study of diagnostic medical sonography and the role it serves in the health care delivery system. Several key topics in imaging including introductory principles of sonography, discipline terminology, sonography specialties and careers in the profession will be explored. The course will also include a dialogue of medical legal ethics and the sonographer's role in making ethical decisions. Patient care topics including transfer techniques, patient history and vital signs, infection control, sterile techniques, medical emergencies and basic pharmacology will be presented. Finally, cultural awareness and the sonographer's role in a multicultural health care setting will be discussed.

SONO - 2003 Sectional Anatomy, 3.00 Credits

Level: Lower

This course is designed to provide the tools necessary to understand basic sectional anatomy of the human body. Emphasis is placed on imaging correlation to human cadaver cross-sections. Sectional anatomy of the abdomen, male and female pelvis, neck, thorax, head and fetal anatomy will be reviewed. In addition, vascular anatomy will also be discussed.

SONO - 2013 US Physics and Instrument I, 3.00 Credits

Level: Lower

This course is designed to provide a practical understanding of the principles of ultrasound physics and sonographic instrumentation as it pertains to diagnostic medical sonography and its use in the clinical setting. Topics include the properties of sound waves, interactions of sound waves, ultrasound instrumentation and functions of the components of processing, scan converter displays, image and display techniques, film and methods of permanent image recording, ultrasound transducers, operating standards, equipment calibration, resolution, gray scale photography and film critique. In addition, sonographic artifacts will be analyzed.

SONO - 2021 Sonographic Procedures I Lab, 1.00 Credit

Corequisite(s):

Level: Lower

This course provides the theoretical basis for performing sonographic procedures with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the abdominal organs, pelvic cavity and organs, and superficial/small parts such as thyroid will be introduced. The laboratory setting will reinforce the theoretical foundation of the lecture through demonstration, role playing, and skill practice in the laboratory. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 2023 Sonographic Procedures I, 3.00 Credits

Corequisite(s):

Level: Lower

This course provides the theoretical basis for performing sonographic procedures. The imaging evaluation for the abdominal organs, male pelvic cavity and organs, and superficial/small parts such as thyroid and scrotum will be introduced. This includes the disease process for each organ/organ system with application to the sonographic and Doppler patterns. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality.

SONO - 2024 Sonographic Procedures I, 4.00 Credits

Level: Lower

Applied Learning-Practicum

This course provides the theoretical basis for performing sonographic procedures with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the abdominal organs, pelvic cavity and organs and superficial/small parts such as thyroid will be introduced. The laboratory setting will reinforce the theoretical foundation of the lecture through demonstration, role playing and skill practice in the laboratory. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 3013 US Physics & Instrument II, 3.00 Credits

Prerequisite(s): SONO 2013 with D or better

Level: Lower

This course is a continuation of SONO 2013 and is designed to provide a practical understanding of the principles of ultrasound physics and sonographic instrumentation as it pertains to diagnostic medical sonography and its use in the clinical setting. Topics include the properties of sound waves, interactions of sound waves, ultrasound instrumentation and functions of the components of processing, scan converter displays, image and display techniques, film and methods of permanent image recording, ultrasound transducers, operating standards, equipment calibration, resolution, gray scale photography and film critique. Additionally, Doppler physics and applications along with sonographic artifacts discussed and practiced.

SONO - 3016 Sonography Clinical I, 6.00 Credits

Prerequisite(s): SONO 2024 with C+ or better

Level: Lower

Applied Learning-Clinical Plcm, Clinical Liability Insurance

This course allows for the continued progression of skills in the clinical setting. Procedural competence and the acquisition of additional proficiencies in diagnostic medical sonography are the focus of this clinical experience. Continued assessment of learning and proficiency is conducted using summative competencies and initial and intermediate level learning objectives during the clinical rotation. This clinical experience consists of 480 hours, which will be completed 40 hours per week for 12 weeks.

SONO - 3023 Sonography Clinical I, 3.00 Credits

Level: Lower

Applied Learning-Clinical Plcm

This course allows for the continued progression of skills in the clinical setting. Procedural competence and the acquisition of additional proficiencies in diagnostic medical sonography are the focus of this clinical experience. Continued assessment of learning and proficiency is conducted using summative competencies and initial and intermediate level learning objectives during the clinical rotation. This clinical experience consists of 40 hours per week for the duration of the course offering (minimum of 150 hours required). Clinical schedule will be appointed based on availability of affiliated clinical site.

SONO - 3024 Sonography Clinical II, 4.00 Credits

Prerequisite(s): SONO 3016 with C+ or better or SONO 3023 with C+ or better

Level: Lower

Applied Learning-Clinical Plcm, Clinical Liability Insurance

This course allows for the continued progression of skills in the clinical setting. Procedural competence and the acquisition of additional proficiencies in diagnostic medical sonography are the focus of this clinical experience. Continued assessment of learning and proficiency is conducted using summative competencies and initial and intermediate level learning objectives during the clinical rotation. This clinical experience consists of 40 hours per week for the duration of the course offering (minimum of 180 hours required). Clinical schedule will be appointed based on availability of affiliated clinical site.

SONO - 3031 Sonographic Procedures II Lab, 1.00 Credit

Prerequisite(s): SONO 2023 with D or better or SONO 2024 with D or better

Level: Lower

This Course provides the theoretical basis for performing sonographic procedures with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the female pelvic organs; first, second, and third trimester Obstetrical; Carotid, Peripheral Arterial and Venous Vascular scanning will be introduced. The laboratory setting will reinforce the theoretical foundation of the lecture through demonstration, role playing, and skill practice in the laboratory. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 3033 Sonographic Procedures II, 3.00 Credits

Prerequisite(s): SONO 2024 with D or better or SONO 2023 with D or better

Corequisite(s): SONO 2024 with D or better or SONO 2023 with D or better

Level: Lower

This course provides the theoretical basis for performing sonographic procedures. The examination protocols and imaging evaluation for the female pelvic organs; first, second, and third trimester Obstetrical; Carotid, Peripheral Arterial and Venous Vascular scanning will be introduced. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality.

SONO - 3034 Sonographic Procedures II, 4.00 Credits

Level: Lower

Applied Learning-Practicum

This course provides the theoretical basis for performing sonographic procedures with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the female pelvic organs; First, Second and Third Trimester Obstetrical; Carotid, Peripheral Arterial and Venous Vascular Scanning will be introduced. The laboratory setting will reinforce the theoretical foundation of the lecture through demonstration, role playing and skill practice in the laboratory. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 4003 Professional Dev in Sonography, 3.00 Credits

Level: Lower

This course is an overview of the radiographer's continued professional development. The course is designed to encourage active participation in professional organizations and a development of lifelong learning. The course will culminate in a senior research project and presentation on a topic within the field of radiologic science and imaging. Students will be expected to prepare for the Registry Exam(s).

SONO - 4013 Advanced Physics and Prob Solv, 3.00 Credits

Prerequisite(s): SONO 2013 with D or better and SONO 3013 with D or better

Level: Lower

This course is designed to educate the student on how new technology, equipment, and sonographic procedures impact the use of ultrasound physics and instrumentation in the clinical setting. This course continues to build upon the content and theory previously learned in Ultrasound Physics and Instrumentation I and II. Various case studies and course materials will be utilized to help students enhance critical thinking skills towards application in the clinical setting.

SONO - 4024 Sonography Clinical III, 4.00 Credits

Prerequisite(s): SONO 3024 with C+ or better

Level: Lower

Applied Learning-Clinical Plcm, Clinical Liability Insurance

This course allows for the continued progression of skills in the clinical setting. Procedural competence and the acquisition of additional proficiencies in diagnostic medical sonography are the focus of this clinical experience. Continued assessment of learning and proficiency is conducted using summative competencies and advanced and mastery level learning objectives during the clinical rotation. This clinical experience consists of 40 hours per week for the duration of the course offering (minimum of 180 hours required). Clinical schedule will be appointed based on availability of affiliated clinical site.

SONO - 4031 Sonographic Procedures III Lab, 1.00 Credit

Prerequisite(s): SONO 3031 with D or better and SONO 3033 with D or better

Corequisite(s): SONO 3031 with D or better and SONO 3033 with D or better

Level: Lower

This course provides students with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the breast, superficial tissues, musculoskeletal, GI tract, interventional, and pediatric scanning will be introduced. The laboratory setting will reinforce the theoretical foundation of the lecture through demonstration, role playing, and skill practice. Overview of Safety with regards to biologic effects and quality control will be introduced. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 4034 Sonographic Procedures III, 4.00 Credits

Level: Lower

Applied Learning-Practicum

This course provides the theoretical basis for performing sonographic procedures with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the Breast; Thyroid; Scrotum; Musculoskeletal; GI Tract; Interventional and Pediatric Scanning will be introduced. The laboratory setting will reinforce the theoretical foundation of the lecture through demonstration, role playing and skill practice in the laboratory. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 4043 Sonographic Procedures III, 3.00 Credits

Prerequisite(s): SONO 3033 with D or better and SONO 3031 with D or better and SONO 4031 *

Corequisite(s): SONO 3033 with D or better and SONO 3031 with D or better and SONO 4031 *

Level: Lower

This course provides the theoretical basis for performing sonographic procedures. The examination protocols and imaging evaluation for the breast, musculoskeletal, GI tract, interventional, pediatric scanning will be introduced. This includes the disease processes for each organ/organ system with application to sonographic and Doppler patterns. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality.