

UT

Ultrasound Technician Courses

DMS 101: Sonographic Physics and Instrumentation Lec: 140/Lab: 00/Ext: 00 The General Ultrasound Program Provides a Firm Foundation in the Basic Principles and Practices of Ultrasound Theory and Scanning Techniques. This course will cover Sound Production and Propagation, Interaction of sound in Matter, Instrument Options and Transducer Selection. Prerequisites: None

DMS 101L: Sonographic Physics and Instrumentation Lab Lec: 00/Lab: 48/Ext: 00 Students will be provided with Hands-on Laboratory Instruction in Equipment Operation including Evaluating Anatomic Structures in the Regions of Interest, Recognizing the Sonographic Appearance of Normal Tissue Structures, and Recognizing the Importance of, and Employ Ergonomically Correct Scanning Techniques. Prerequisites: None

DMS 102: Medical Terminology Lec: 96/Lab: 00/Ext: 00 During this Course, the Student will learn how to Comprehend and Employ Appropriate Medical Terminology, Abbreviations, Symbols, Terms, and Phrases that Will be Used in the Sonographic Setting. Prerequisites: None

DMS 103: Patient Care Lec: 96/Lab: 00/Ext: 00 This Course Prepares the Student to Provide Basic Patient Care and Comfort. Specific Concentrations will be Infection Control and Standard Precautions, Respond to Patient's Needs, Identifying Life-Threatening Situations, Proper Patient Positioning,

Spiritual/Cultural Needs HIPPA Policies, Medical Law and Ethics as well as Ergonomics. Prerequisites: None

DMS 201: Fundamentals of General Sonography I Lec: 140/Lab: 00/Ext: 00 During this Course, the Student will learn the Fundamentals of Abdominal Sonography along with the Anatomy and Pathophysiology of the Abdomen to Include: Anterior Abdominal Wall, Peritoneal Cavity, GI Tract, Abdominal Vasculature, Pancreas, Liver, Biliary System, Spleen, Kidneys, Adrenals, and Urinary Tract. The student will also be able to Obtain and Evaluate Pertinent Patient History and Physical Findings, Extend Standard Diagnostic Testing Protocol, Review Data from Current and Previous Exams to Produce a Summary of Findings, Recognize Examination Findings that Require Immediate Response and Notify the Interpreting Physician in the Concentrated Areas of Study. Prerequisites: DMS 101

DMS 201L: Fundamentals of General Sonography I Lab Lec: 00/Lab: 48/Ext: 00 During this Lab Duration, the Student Will Learn to Select the Appropriate Technique(s) for the Exam(s) being Performed, Adjust Instrument Controls to Optimize Image Quality, Perform Linear, Area, and Circumference, and Other Related Measurements from Sonographic Images or Data, Recognize and Compensate for Acoustical Artifacts, Utilize Appropriate Devices to Obtain Pertinent Documentation, Minimize Patient Exposure to Acoustic Energy, Apply Basic Physics: Master the Protocols of the Right Upper Quadrant and the Abdomen Complete. Prerequisites: DMS 101L

DMS 202: Principles of Hemodynamics and Doppler Lec: 140/Lab: 00/Ext: 00 This Course Will Give the Student a Full Understanding of Hemodynamics, Physics of Doppler, Principles of Doppler Techniques, Methods of Doppler Flow Analysis, Recording Techniques, Acoustic Artifacts, Biological Effects, Pertinent In-Vitro and In-Vivo Studies, Exposure Display Indices, Generally Accepted Maximum Safe Exposure Levels, ALARA Principle, and Emerging Technologies. Prerequisites: None

DMS 202L: Principles of Hemodynamics and Doppler Lab Lec: 00/Lab: 48/Ext: 00 Students will be provided with Hands-on Laboratory Instruction in Hemodynamics and Doppler techniques including Evaluating Anatomic Structures in the Regions of Interest, Recognizing the Sonographic Appearance of normal blood flow Doppler, and Recognizing the Importance of, and Employ, Ergonomically Correct Scanning Techniques. Prerequisites: DMS 101L

DMS 301: Fundamentals of Obstetrics and Gynecological Ultrasound I Lec: 140/Lab: 00/Ext: 00 During this Course, the Student will Learn the Fundamentals of Gynecological Ultrasound as well as Anatomy and Pathophysiology of Gynecology. Specific Concentrations will be Reproductive System, Pelvic Muscles, Suspensory Ligaments, Peritoneal Spaces, and Pelvic Vasculature as well as 1st Trimester OB Evaluation. The student will also be able to Obtain and Evaluate Pertinent Patient History and Physical Findings, Extend Standard Diagnostic Testing Protocol, Review Data from Current and Previous Exams to Produce a Summary of Findings, Recognize Examination Findings that Require Immediate

Response and Notify the Interpreting Physician in the Concentrated Areas of Study. Prerequisites: DMS 101, DMS 201 & DMS 202

DMS 301L: Fundamentals of Obstetrics and Gynecological Ultrasound I Lab Lec:

00/Lab: 48/Ext: 00 The Student Will Learn to Select the Appropriate Technique(s) for the Exam(s) being Performed, Adjust Instrument Controls to Optimize Image Quality, Perform Linear, Area, and Circumference, 42 and Other Related Measurements from Sonographic Images or Data, Recognize and Compensate for Acoustical Artifact, Utilize Appropriate Devices to Obtain Pertinent Documentation, Minimize Patient Exposure to Acoustic Energy, Apply Basic Physics: Master the Protocol of the non-gravid female pelvis. Prerequisites: DMS 101, DMS 201, and DMS 202

DMS 302: Fundamentals of General Sonography II Lec: 140/Lab: 00/Ext:

00 During this Course, the Student will Learn the Fundamentals of Small Parts (Superficial Structures) as well as Vasculature, and Muscular-Skeletal Ultrasound along with the Anatomy and Pathophysiology Associated with Each Concentration to Include: Thyroid Gland, Scrotum, Prostate, Breast, Per-Vertebral Arteries, Extremities, Brain and Spinal Cord, Muscular-Skeletal Structures and non-cardiac chest. The student will also be able to Obtain and Evaluate Pertinent Patient History and Physical Findings, Extend Standard Diagnostic Testing Protocol, Review Data from Current and Previous Exams to Produce a Summary of Findings, Recognize Examination Findings that Require Immediate Response and Notify the Interpreting Physician in the Concentrated Areas of Study. Prerequisites: DMS 101, DMS 201& DMS 202

DMS 302L: Fundamentals of General Sonography II Lab Lec: 00/Lab: 48/Ext: 00 During this Lab Duration, the Student Will Learn to Select the Appropriate Technique(s) for the Exam(s) being Performed, Adjust Instrument Controls to Optimize Image Quality, Perform Linear, Area, and Circumference, and Other Related Measurements from Sonographic Images or Data, Recognize and Compensate for Acoustical Artifacts, Utilize Appropriate Devices to Obtain Pertinent Documentation, Minimize Patient Exposure to Acoustic Energy, Apply Basic Physics: Master the Protocols of the Thyroid, Scrotum, Breast, Carotid Artery, DVT, and Muscular Skeletal Ultrasound. Prerequisites: DMS 101, DMS 201 and DMS 202

DMS 401: Professional Development Lec: 102/Lab: 00/Ext: 00 This Course Utilizes Student Case Presentations and Peer Review to Assess the Student's the Ability to Interpret Sonographic Criteria and Findings, Correlate with Other Diagnostic Studies and Clinical Signs and Symptoms to Derive at Clinical Impressions. Additionally, the Student is Prepared for the Real World of Work via Assistance with Resume Writing, Interviewing Techniques, and Job Placement. Prerequisites: None

DMS 402: Fundamentals of Obstetrics and Gynecological Ultrasound II Lec: 140/Lab: 00/Ext: 00 During this Course, the Student will learn the Fundamentals of Obstetrical Ultrasound as well as Anatomy and Pathophysiology of Obstetrics. Specific Concentrations will be Sectional Anatomy, Pertinent Measurement Techniques, Doppler Applications, Placenta, Congenital/Genetic Anomalies, Growth Anomalies, Amniotic Fluid, Viability, Multiples, Fetal Monitoring,

Maternal Factors, Postpartum, and Fetal Therapy. The student will also be able to Obtain and Evaluate Pertinent Patient History and Physical Findings, Extend Standard Diagnostic Testing Protocol, Review Data from Current and Previous Exams to Produce a Summary of Findings, Recognize Examination Findings that Require Immediate Response and Notify the Interpreting Physician in the Concentrated Areas of Study. Prerequisites: DMS 101, DMS 202 and DMS 301

DMS 403: Introduction to Clinical Practicum Lec: 106/Lab: 00/Ext: 00 Introduction to the critiquing of ultrasound images on a basic level to improve the student's ability to use sonographic terminology in describing ultrasound images. Students will submit basic normal case studies and the analysis of two ultrasound journal articles.

CPR 101: CPR/AED & First Aid Training Lec: 06/Lab: 10/Ext: 00 This course covers core material such as adult, pediatric, and infant CPR, one and two-rescuer scenarios, and use of bag valve mask, foreign-body airway obstructions, AED, and barrier devices. The Heart saver First Aid course teaches choking for adults and children. Students will also learn how to manage illnesses and injuries in the first few minutes before professional help arrives. Course completion cards are issued for successfully completing a written and skills exam. Following American Heart Association guidelines.

CAR 101: Career Development Lec: 32/Lab: 00/Ext: 00 The career preparation class ensures that all students have the academic background and technical skills essential to lead productive and successful lives as they enter the workforce.

Students are prepared in the following areas: resume writing, interviewing skills, how to dress for an interview, and how to respond to interview questions.

DMS 501 & 502: Clinical Externship I & II Lec: 00/Lab: 00/Ext: 1000 Prerequisite: SPI These courses are externship on the job training for a total of 500 hours each section. Students will practice in a clinical setting, what they have learned in the classroom for a clinical setting. This course will include the classroom instruction, lab work and that is needed for clinical externship. This will prepare students to work with ultrasound equipment and conduct examinations, learn how to work with team, communicate in medical terminology, and understand how to apply concept in a real-life setting. Externship is classified as on the job training.