
Diagnostic Medical Sonography

DMS 200 Sonography Virtual Lab

Prerequisite: Acceptance into Sonography Program

Credit Hours: 6

This course will focus on laboratory techniques. The course will show a hands-on approach to the machine and examinations seen in the clinical setting. Probe positioning, angles, and body planes will be covered. Infectious control, bioeffects, medical terminology, knobology of the machine, and virtual videos to prepare the student for a clinical rotation.

DMS 201 Introduction to Sonography

Prerequisite: DMS 200 Sonography Virtual Lab

Credit Hours: 3

This is an online course designed to introduce the student to the basic responsibilities of a diagnostic medical sonographer. The course will include medical terminology and abbreviations, ergonomics, bioeffects, patient care, departmental procedures, etiquette in the medical facility, and knobology used in diagnostic ultrasound. Introduction to Sonography will build upon the ethics and law curriculum from your previous education and apply it to the ultrasound setting. Team development, conflict resolution, interprofessional communication and education. Patient confidentiality and patient rights will be explained along with the professional codes of conduct for a diagnostic medical sonographer.

DMS 205 Sonography Sectional Anatomy & Abdominal Physiology

Prerequisite: DMS 200 Sonography Virtual Lab

Credit Hours: 2

This course will serve as an introduction to the study of the abdomen as related to the normal appearance on a sonogram. This will include understanding of the physiology of the abdominal structures, including but not limited to thyroid, breast, prostate, scrotum, urinary tract, small parts, IV, pharmacology, contrast enhancement, non-cardiac chest, and MSK imaging. Doppler applications will be applied to all structures covered in this course. The normal vs. abnormal laboratory values will be demonstrated.

DMS 206 OB/GYN for Sonography I

Prerequisite: DMS 200 Sonography Virtual Lab

Credit Hours: 3

This course will begin with the normal anatomy of the female abdominopelvic wall/floor (MSK), cavities, and organs. A description of the physiology of the female pelvic organs will also be included as well as an in-depth study of the female menstrual/ovarian cycle. Uterine and Ovarian pathology is included and the student will not only learn about the pathology process, but be able to identify the pathology on ultrasound images. This course will also include the normal anatomy of the first, second, and third trimester fetus, as well as normal measurements. Infertility methods and how they are utilized will be covered, as well as how they affect the female pelvic system. Doppler application will be applied to all areas covered in this course. The normal vs. abnormal laboratory values will be demonstrated. IV insertion, pharmacology and effect on imaging, 3-D imaging, and post-partum. The normal placenta and Amniotic Fluid values will also be a course of study. Study on Transabdominal as well as Transvaginal scanning and application will be covered. Lastly, this course will discuss the pitfalls, artifacts, and normal variants that occur with pelvic/obstetrical ultrasound.

DMS 207 OB/GYN for Sonography II

Prerequisite: DMS 206 OB/GYN for Sonography I

Credit Hours: 3

This course is a continuation of the OB/GYN for Sonography I course. In this course we will build further upon the foundation we have already created. Included will be neoplastic, infectious, congenital, heart to include anatomy, three vessels tracheal to include views, research statistics and design, and metabolic immunologic pathology/anomalies of the first, second, and third trimesters, placenta and umbilical cord. This course will also include discussion about normal vs. abnormal amniotic fluid levels and the correlation with pathology/anomalies. Also discussed in this course is fetal therapy for anomalies. Doppler application will be applied to all areas. Protocol and procedures of OB scanning will be covered in depth.

*Refer to the Placement Testing Procedure 3.22, page 22 **Refer to Course Transfer, page 17

DMS 208 Sonography Pathology of Abdomen and Small Parts

Prerequisite: DMS 205 Sonography Sectional Anatomy & Abdominal Physiology

Credit Hours: 2

This course will study diseases of the abdomen and small parts as related to the normal and abnormal appearance on a sonogram. This will include understanding of the physiology and how pathology effects it. Pathology and pathophysiology of the abdominal structures, including but not limited to thyroid, breast, prostate, scrotum, urinary tract, gastrointestinal tract, lymphatic system, contrast enhancement, small parts, noncardiac chest, and MSK imaging will be discussed and evaluated. Research statistics and design, Abnormal Doppler of all structures is covered in this course as well as the effect of pathology on laboratory values

DMS 211 Sonography Physics & Instrumentation

Prerequisite: DMS 200 Sonography Virtual Lab

Credit Hours: 3

This course will provide a detailed study of the principles of the production and propagation of sound waves as applied to diagnostic medical Sonography. Included will be acoustic physics and Doppler ultrasound principles. Ultrasound instrumentation and image optimization will be foundational objectives. This course will prepare competent entry-level general sonographers.

DMS 214 Introduction to Echo

Prerequisite: DMS 230 Sonography Virtual Lab

Credit Hours: 4

This course will serve as an introduction to the study of basic heart anatomy and physiology. The course will include different types of pathology, valve disease, transthoracic, parasternal, Apical, Subcostal, Transesophageal Suprasternal windows, stress testing, basic embryology and fetal circulation, congenital anomalies, and 3D/4D echocardiography. This course will include video links, forums, quizzes, and testing.

DMS 220 General Sonography Clinical I

Prerequisite: DMS 200 Sonography Virtual Lab

Credit Hours: 5

This course is an introductory course to Sonography scanning, procedures, and protocols. The student will begin with observation and progress to assisting with and performing procedures. This course will cover general Sonography procedures of the abdomen, thyroid, scrotum, breast, MSK, non-cardiac chest, ultrasound guided procedures, GI system, Lymphatic system, and major structures of the abdomen, and small parts. Hours and days are subject to change.

DMS 221 General Sonography Clinical II

Prerequisite: DMS 220 General Sonography Clinical I

Credit Hours: 5

This course is a continuation to DMS 220 General Sonography Clinical I. The student will continue observing some procedures and progress to assisting with and performing procedures. This course will cover general sonography procedures of the abdomen, thyroid, scrotum, breast, MSK, non-cardiac chest, ultrasound guided procedures, GI tract, lymphatic system, and major vasculature structures of the abdomen, and small parts. Hours and days are subject to change.

DMS 222 General Sonography Clinical III

Prerequisite: DMS 221 General Sonography Clinical II

Credit Hours: 5

This course is a continuation of DMS 221 General Clinical II to Sonography scanning, procedures, and protocols. The student will begin with observation and progress to assisting with and performing procedures. This course will cover general Sonography procedures of the abdomen, thyroid, scrotum, breast, MSK, non-cardiac chest, ultrasound guided procedures, GI system, Lymphatic system, and major structures of the abdomen, and small parts. Hours and days are subject to change.

DMS 230 Vascular Sonography I

Prerequisite: DMS 200 Sonography Virtual Lab

Credit Hours: 3

This course begins with the vasculature anatomy, location, and different waveforms. The student will learn different

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approaches and techniques to vascular ultrasonography. This course will introduce the student to Doppler imaging of the abdomen, extremities, intracranial vessels, and ankle brachial indexes, and Plethysmography.

DMS 231 Vascular Sonography II

Prerequisite: DMS 230 Vascular Sonography I

Credit Hours: 3

This course will increase your knowledge and Doppler skills of the cerebrovascular, extremities, abdominal vasculature, transcranial, plethysmography, segmental, ABIs, aortic aneurysms, IVC imaging, venous Doppler evaluation with compression and augmentation, Allen test, Laser vein ablation, radio frequency, invasive vs. noninvasive testing, carotid imaging and evaluation, Raynaud's testing, and all vascular Sonography procedures. Lab scanning and exam competencies will be performed in the lab setting. We will begin registry review during the last couple weeks

DMS 234 Sonography, Physics & Instrumentation/Registry Review

Prerequisite: DMS 211 Sonography Physics & Instrumentation

Credit Hours 3

This course will continue the study of principles of the production and propagation of sound waves as applied to diagnostic medical Sonography. Included will be hemodynamics of blood flow, harmonics, Doppler, artifacts, quality assurance, and Bio-effects. Ultrasound instrumentation and image optimization will be foundational objective. This course will prepare competent entry-level general sonographers. The student will use the URR.com review to help prepare for SPI registry.

DMS 237 Vascular Sonography Registry Review

Prerequisite: DMS 230 Vascular Sonography I, DMS 231 Vascular Sonography II

Credit Hours 2

This course will review your knowledge and Doppler skills of the cerebrovascular extremities, abdominal vasculature, transcranial, plethysmography, segmental, ABIs, aortic aneurysms, IVC imaging, venous Doppler evaluation with compression and augmentation, Allen test, Laser vein ablation, radio frequency, invasive vs. noninvasive testing, carotid imaging and evaluating, Raynaud's testing, and all vascular Sonography procedures. Ultrasound Registry Review online software will be used during this course.

DMS 250 General Sonography Registry Review

Prerequisite: DMS 205 Sonography Sectional Anatomy & Abdominal Physiology, DMS 206 OB/GYN for Sonography I, DMS 207 OB/GYN for Sonography II, DMS 208 Pathology of Abdomen and Small Parts

Credit Hours: 4

This course is divided into two areas that will review all necessary subject matter of normal vs. diseased anatomy, functions, pathology, physiology, sectional abdominal anatomy, OB/GYN, and small parts to better prepare students to sit for registry exam. URR.com online registry review will be used for this course.

DMS 251 Vascular Sonography Clinical I

Prerequisite: DMS 200 Sonography Virtual Lab

Credit Hours: 5

This course is an introduction to Vascular Sonography Clinical I. The student will still be observing some procedures and progress to assisting with and performing procedures. This course will cover vascular sonography procedures of the abdomen, thyroid, scrotum, carotids, upper and lower extremities, breast, MSK, noncardiac chest, palmar arch, lower extremity exercise testing, vessel mapping, and visceral vasculature and major vasculature structures of the abdomen, extremities, and small parts. Hours and days are subject to change.

DMS 252 Vascular Sonography Clinical II

Prerequisite: DMS 251 Vascular Sonography Clinical I

Credit Hours: 5

This course is a continuation of Vascular Sonography Clinical I. The student will still be observing some procedures and progress to assisting with and performing procedures. This course will cover vascular sonography procedures of the abdomen, thyroid, scrotum, carotids, upper and lower extremities, breast, MSK, non-cardiac chest, palmar arch, lower extremity exercise testing, vessel mapping, and visceral vasculature and major vasculature structures of the abdomen, extremities, and small parts. Hours and days are subject to change.

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DMS 253 Vascular Sonography Clinical III

Prerequisite: DMS 252 Vascular Sonography Clinical II

Credit Hours: 5

This course is a continuation of the Vascular Sonography Clinical I, II. The student is more confident with vascular, abdominal and small parts procedures at this point in their clinical rotation. This course will cover the vasculature procedures of the abdomen, carotids, arterial, vein of the upper and lower extremities, SMA, Aorta, IVC, renal arteries, TCD, Plethysmography thyroid, scrotum, breast, MSK, noncardiac chest, major vasculature structures of the abdomen, small parts, palmar arch; lower extremity exercise testing; vessel mapping; and visceral vasculature OB/Gynecology. Hours and days are subject to change.

Economics

ECON 101 (2249) Issues in Today's Economy

Prerequisite: None

Credit Hours: 3

Issues in Today's Economy is designed to be a practical guide to the economy for non-majors. The course emphasizes important current issues in both the macro and micro economy such as inflation, unemployment, taxes, healthcare, energy policy, crime, terrorism and the global economy.

ECON 203 (2241) Macroeconomics KRSN ECO1020**

Prerequisite: None

Credit Hours: 3

Introduces the student to the principles of macroeconomics. The course will cover the economic theories involved in explaining the behavior of the entire economy. Topics will include supply and demand, the relationship between economic activity with the money and banking system, unemployment, inflation, productivity, economic growth, economic fluctuations and international trade.

ECON 204 (2242) Microeconomics KRSN ECO1010**

Prerequisite: None

Credit Hours: 3

Introduces the student to the principles of microeconomics. The course will cover such topics as consumer choice, supply and demand relationships in markets, the theory of the firm within perfect competition, monopoly, monopolistic competition, and oligopoly market structures, the labor market, income inequality and government intervention in markets.

Education

EDUC 107 (0823) Administration & Organization of a Child Care Program

Prerequisite: None

Credit Hours: 3

This course will provide the student with an understanding of the organization and administration of a child care program. They will gain and understanding of how to administer a variety of high quality child care programs according to the state rules and regulations.

EDUC 110 (5275) Child Development KRSN PSY2030**

Prerequisite: None

Credit Hours: 3

This course is designed for teachers in training and teachers in service whose major interest is the pre-kindergarten, kindergarten, and primary child. It would also be a valuable tool for social service workers, special educators, parents, home visitors, and others who require a practical understanding of the young child. This course introduces the uniqueness of the young child in comparison to the older child and illustrates how to work with young children in ways that relates to their development level.

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