

SONOGRAPHY

SON 1000, Introduction to Sonography Introduction to Sonography

1 hr., 1 cr.,

(Offered spring). Prerequisite: Program acceptance. This course is an introduction to the profession of sonography and the role of the sonographer. Emphasis is on medical terminology, ethical/aspects, written and verbal communication, patient care and professional issues relating to registry, accreditation, professional organizations, and history of the profession.

SON 1052, Sonography Pathology Sonography Pathology

4 hrs., 4 crs.,

(Offered fall). Prerequisite: SON1144. This course is designed to enhance the student's knowledge of normal and abnormal anatomy. Emphasis is placed on sonographic appearance, both normal and pathological. Clinical scenarios will enable the student to apply information in the clinical setting, and encourage the necessary critical thinking skills. Case studies and study questions will evaluate the student's comprehension of the topic.

SON 1100, Principles and Protocols of Sonography Imaging Principles and Protocols of Sonography Imaging

2 hrs., 2 crs.,

(Offered summer). Prerequisite: *SON1000. A basic introduction to sonographic scanning of the abdomen, pelvis, vascular systems with laboratory practice and application.

SON 1111, Abdominal Sonography I Abdominal Sonography I

3 hrs., 3 crs.,

(Offered fall). Prerequisites: *SON1100. This course is designed to correlate the sonographic anatomy, physiology, and pathology, including but not limited to, the abdominal cavity, organs and abdominal vasculature. The course will emphasize features and characteristics of normal and abnormal anatomy including pathologies while integrating clinical and diagnostic procedures common to and specific to each organ.

SON 1112, Abdominal Sonography II Abdominal Sonography II

3 hrs., 3 crs.,

(Offered spring). Prerequisite: *SON1111. This course is a continuation of SON1111. Focus will be on review and supplemental pathological findings of intra- and retroperitoneal organs, clinical and diagnostic procedures common to and specific to each organ, neonatal and pediatric abdominal imaging, and neonatal hips and neurosonography. Advancements in sonographic imaging to include new innovations in equipment and techniques will also be included.

SON 1121, OB/GYN Sonography I OB/GYN Sonography I

3 hrs., 3 crs.,

(Offered fall). Prerequisite: SON1100. This course is designed to give the sonography student an understanding of the anatomy, physiology, and pathology of the gravid and non-gravid female pelvis. The student will be introduced to the first trimester of pregnancy including its related anatomy, physiology, possible pathology and/or complications. Embryology, early fetal development, sonographic identification and imaging of the embryo and fetus, trans-abdominal and trans-vaginal scanning techniques will be included.

SON 1122, OB/GYN Sonography II OB/GYN Sonography II

3 hrs., 3 crs.,

(Offered spring). Prerequisite: *SON1121. This course is a continuation of OB/GYN Sonography I and is designed to give the student detailed instruction as to the role of Sonography during the second and third trimesters of pregnancy. Fetal development, physiology, all major anomalies, and maternal complications directly related to the second and third trimesters of pregnancy will be discussed in detail.

SON 1144, Superficial Structures Superficial Structures

1 hr., 1 cr.,

(Offered summer). Prerequisite: SON1112. The course is an overview emphasizing the sonographic features and characteristics of normal and abnormal anatomy of the superficial structures. These include, but are not limited to, the male pelvis and scrotum, breasts, neck and thyroid while integrating clinical and diagnostic procedures pertinent to each area.

SON 1170, Sonography of the Circulatory System Sonography of the Circulatory System**2 hrs., 2 crs.,**

(Offered summer). Prerequisite/Corequisite: *SON2113. An introduction to the hemodynamics of the circulatory systems and the sonographic imaging and Doppler assessment of the cardiac and vascular structures.

SON 1211, Medical Sonography Physics Medical Sonography Physics**3 hrs., 3 crs.,**

(Offered spring). Prerequisites: Program acceptance. This course is designed to present the Sonography student with detailed explanations of sound physics and instrumentations. The fundamental properties of diagnostic ultrasound stressing the operation of diagnostic ultrasound equipment, images and Doppler system, pulse wave, and continuous wave transducers, artifacts, focusing characteristics, tissue interactions, biological effects, and quality assurance methods will be discussed and evaluated.

SON 1214, Practical Aspects of Sonography Practical Aspects of Sonography**1 hr., 1 cr.,**

(Offered spring). Prerequisite: Program acceptance. A study of the principles of diagnostic ultrasound and practical aspects of scanning techniques, image critique, image identification, and patient care and handling as related to sonographic examination. Stressing operation of diagnostic equipment and routine images obtained.

SON 1804, Clinical Education I Clinical Education I**6 hrs., 1 cr.,**

\$264.00 lab fee (Offered summer). Prerequisite: SON1214. This course introduces the patient/sonographic role in a simulated clinical environment. It is designed to subject the students to clinical situations as they become familiar with the role and responsibilities of a sonographer. A portion of the clinical hours will take place in the college campus sonography setting.

SON 1814, Sonography Clinical Education II Sonography Clinical Education II**18 hrs., 3 crs.,**

\$62.00 lab fee (Offered fall). Prerequisite: SON1804. This course applies the principles learned in Abdominal OB/GYN I to actual clinical rotations. The student will receive sonographic instruction in the following ways: by performing a variety of sonographic examinations: initiation of affiliate protocols; appropriate operation of equipment; providing patient care; exam documentation; and evaluation by the clinical instructor. A portion of the clinical hours will take place in the college campus sonography lab setting.

SON 1824, Clinical Education III Clinical Education III**24 hrs., 4 crs.,**

\$272.00 lab fee (Offered spring). Prerequisite: SON1814. This course applies the principles learned in SON1112, SON1122, and SON2175 to actual clinical rotations. The student will receive sonographic instruction by performing a variety of sonographic examinations, demonstrating appropriate operation of equipment, providing patient care, and documenting exam results. A portion of the clinical hours will take place in the college campus sonography lab setting.

SON 2061, Sonography Review Sonography Review**2 hrs., 2 crs.,**

(Offered fall). This course provides a comprehensive review of the entire Sonography Program content. Physics review will include all material covered in SON1211, SON1170, SON2171, SON2175, and includes a physics mock registry exam(s). Abdominal review includes all material covered in SON1111, SON1112, SON1144, and includes an abdomen mock registry exam(s). Obstetrics and Gynecology includes material covered in SON1121, SON1122, and includes an OB/GYN mock registry exam(s).

SON 2113, Cross-Sectional Anatomy Cross-Sectional Anatomy**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: Program acceptance. This course is designed to prepare the student to identify internal structures including organs and vasculature that are important to the objectives of Diagnostic Medical Sonography. The students will build upon their entry level gross anatomy knowledge base to develop their cross-sectional anatomic recognition skills. Sonographic scanning protocols will be included relative to the anatomy being studies, which will serve as a linkage to the clinical environment.

SON 2171, Introduction to Vascular Sonography Introduction to Vascular Sonography**3 hrs., 3 crs.,**

(Offered fall). Prerequisite: *SON1170. This course introduces the fundamental theory and skills necessary for the evaluation of vascular disease using noninvasive technique. Hemodynamics, instrumentation, vascular anatomy, physiology and physical principles are emphasized. Cerebrovascular, peripheral arterial and venous testing are included in this course.

SON 2175, Vascular Sonography Vascular Sonography**3 hrs., 3 crs.,**

(Offered spring). Prerequisite: *SON2171. This course is a continuation of the material covered in SON1170. Sonographic imaging and Doppler assessment/analysis of both normal and abnormal flow patterns of the cerebrovascular and peripheral vascular systems are emphasized as well as interpretation of test results.

SON 2834, Clinical Education IV Clinical Education IV**24 hrs., 4 crs.,**

(Offered summer). Prerequisite: SON1824. Working under indirect supervision, the student will apply knowledge and scanning skills learned in superficial structures. Student will apply appropriate scanning techniques to obtain diagnostic images of the male reproductive system, breasts and thyroid. Students will continue to apply knowledge and scanning skills of abdominal, OB/GYN and vascular exams while exercising independent judgment relative to the entirety of the sonographic examinations being performed.

SON 2844, Sonography Clinical Education V Sonography Clinical Education V**30 hrs., 5 crs.,**

(Offered fall). Prerequisite: *SON2834. Students will perform under indirect supervision while exercising independent judgment relative to the entirety of the sonographic examinations being performed and to generally progress to the point of being recognized as a competent entry level sonographer. The student will apply didactic knowledge and performance scanning skills to obtain and complete the required ARRT competency sonographic exams, further mastering of all skills gained and emphasizing OB/GYN, Superficial Structures, Vascular and Abdominal examination techniques. The student must demonstrate patient preparation, exam protocol and image evaluation to include identifying normal and abnormal anatomy.

SON 2930, Special Topics in Sonography Special Topics in Sonography**1 hr., 1 cr.,**

Prerequisite: Must be currently enrolled in a sonography program, a practicing sonographer, or have consent from the program coordinator. This course introduces the fundamental theory and skills necessary for the evaluation of selected topics. Selection of the topic will be determined by student and clinical needs.
