SON: Sonography

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**SON 1000C. Introduction to Medical Sonography**

Prerequisite: Acceptance into A.S. Diagnostic Medical Sonography Program. An introduction to the profession of sonography and the role of the sonographer. Emphasis on basic ultrasound procedures, medical terminology, ethical aspects, and professional issues relating to registry, accreditation, professional organizations, and history of the profession. This course has a hands-on lab. (Special Fee: $8.00).

**SON 1001C. Abdominal Sonography**

Prerequisites: SON 1000C and RTE 2762. This course is an in-depth study in the sonographic imaging of the abdominal viscera and the pathological processes that affect this area of the body. This course also includes sonographic terminology and correlation of the ultrasound findings with clinical laboratory tests. This course includes a hands-on lab with activities designed to ensure competence in the basic use of computers and to enhance scanning skills. (Special Fee: $2.00).

**SON 1002C. Methods of Patient Care**

Prerequisite: Acceptance to Sonography A.S. Degree Program. Content is designed to provide the basic concepts of patient care including consideration for physical, and psychological, legal, and ethical needs of the patient and family. Routine and emergency patient care procedures are described, as well as infection control procedures using standard precautions. Basic concepts of pharmacology/drug administration and theory and practice of venipuncture techniques are presented. Introduces basic theories, skills, and techniques of quality patient care. Includes communication, assessment skills, aseptic technique, drug administration, emergency situations, and AIDS education. Presents theoretical and practical knowledge to make sound clinical judgments and carry out patient care activities. A minimum grade of C is required to pass this course. (Special Fee $13.00).

**SON 1003L. Sonography Practice Lab**

Prerequisite or Corequisite: SON 1000C. This course is designed to provide extended hands-on lab opportunities to further enhance basic skills prior to starting the clinical rotation. Multiple credit course. May be repeated for credit for a maximum of four credits, but grade forgiveness cannot be applied. (Special Fee: $8.00).

**SON 1112C. Abdominal Sonography II**

Prerequisites: RTE 2762, SON 1001C, and SON 1804L. Corequisites: SON 1614 and SON 1814L. This course is a continuation of Abdominal Sonography I. It is an in-depth study in the sonographic imaging of the abdominal viscera and the pathological processes that affect this area of the body. The course also includes correlation of the ultrasound findings with clinical laboratory tests and a hands-on lab. (Special Fee: $3.00).

**SON 1614. Sonographics Physics I**

Prerequisites: SON 1001C. Corequisites: SON 1112C, SON 1814L. A study of the properties of diagnostic ultrasound and the effective utilization of them to produce quality scans. This course covers propagation of sound through a medium, transducer construction, different types of scan heads, and the different display modes.

**SON 1804L. Clinical Sonography I**

Prerequisites: SON 1000C and RTE 2762. Corequisites: RTE 2762 and SON 1001C. Supervised clinical experience and competency evaluation of professional interaction and performance of routine sonographic procedures with emphasis on patient care, ultrasound computer equipment orientation, cross-sectional imaging planes, and performance of quality exams. This course includes learning activity designed to ensure competence in the basic use of computers. (Special Fee: $3.00).

**SON 1814L. Clinical Sonography II**

Prerequisites: SON 1804L. Corequisites: SON 1112C and SON 1614. A continuation of supervised clinical experience and competency evaluation of performance of routine sonographic procedures, usage of computerized ultrasound equipment and professional interaction. Emphasis is placed on critical thinking skills as related to exam performance and patient care in the clinical setting.

**SON 2061. Seminar in Sonography**

Prerequisites: SON 2122. Corequisite: SON 2880. This course is a comprehensive review of all aspects of the Sonography curriculum to prepare the students for the Board Exams. Also included in the preparation of employment resumes.

**SON 2121. OB/GYN Sonography I**

Prerequisites: RTE 2762 and SON 1001C. Corequisites: SON 2121, SON 2150 and SON 2824L. This course is a continuation in the study of the female pelvis with emphasis on the sonographic appearance of its structures and the numerous pathological processes that may affect it. The course will continue with early pregnancy and its complications.

**SON 2122. OB/GYN Sonography II**

Prerequisites: SON 2121, SON 2150, SON 2618, and SON 2824L. This course includes an in-depth study of the female pelvis with emphasis on the sonographic appearance of its structures and the numerous pathological processes that may affect it. The course will continue with early pregnancy and its complications.

**SON 2150. Neurosonology and Superficial Structures**

Prerequisites: SON 1112C. Corequisites: SON 2121, SON 2618, and SON 2824L. This course is a study of the sonographic imaging of the premature infant brain and the pathological processes that affect it. Also included are the sonographic evaluations of the prostate, scrotum, thyroid gland, and breast.

**SON 2155. Neurosonology and Superficial Structures**

Prerequisites: SON 1112C. Corequisites: SON 2121, SON 2618, and SON 2824L. This course is a study of the sonographic imaging of the premature infant brain and the pathological processes that affect it. Also included are the sonographic evaluations of the prostate, scrotum, thyroid gland, and breast.

**SON 2161. Sonographics Physics II**

Prerequisites: SON 1114. Corequisites: SON 2121, SON 2150, and SON 2824L. This course is a continuation in the study of the properties of diagnostic ultrasound and their role in the production of quality ultrasound images of patients’ internal organs. Also covers hemodynamics, the basic mathematical principals and instrumentation of Doppler/color flow imaging, and components of the ultrasound system.

**SON 2165. Sonographics Physics III**

Prerequisites: SON 2161. Corequisites: SON 2122 and SON 2834L. This course is a continuation in the study of the properties of diagnostic ultrasound and their role in the production of quality images, which includes resolution and attenuation artifacts, routine maintenance of the ultrasound equipment, and the biologic effects of ultrasound on body tissues. Also included is a review for the Acoustical Physics and Instrumentation Registry Exam.
SON 2824L. CLINICAL SONOGRAPHY III. 3 0 24
CLINICAL SONOGRAPHY III Prerequisites: SON 1814L Corequisites: SON 2121, SON 2150, and SON 2618 A continuation of supervised clinical experience and competency evaluation of performance of routine sonographic procedures, computerized ultrasound machine skills and professional interaction. Emphasis is placed on critical thinking skills as related to exam performance and patient care in the clinical setting. Students will be required to research selected case studies and prepare oral presentations to be presented to the radiologist. (Special Fee: $17.00).

SON 2834L. CLINICAL SONOGRAPHY IV. 3 0 24
CLINICAL SONOGRAPHY IV Prerequisites: SON 2824L Corequisites: SON 2122 and SON 2619 This course is a continuation of supervised clinical experience and competency evaluation of performance of routine sonographic procedures, computerized ultrasound machine skills and professional interaction. Emphasis is placed on critical thinking skills as related to exam performance and patient care in the clinical setting. Students will be required to research selected case studies and prepare oral presentations to be presented to the radiologist.

SON 2882L. MEDICAL SONOGRAPHY CLINICAL PRACTICUM 2 0 32
MEDICAL SONOGRAPHY CLINICAL PRACTICUM Prerequisite: SON 2834L Corequisite: SON 2061 This is the final course in the clinical education sequence. Students will perform routine procedures with minimal supervision. Emphasis is placed on critical thinking skills as related to exam performance and patient care in the clinical setting. Students will be required to research selected case studies and prepare oral presentations to be presented to the radiologist.

SON 2930. SELECTED TOPICS IN SONOGRAPHY 1-3 variable
SELECTED TOPICS IN SONOGRAPHY Prerequisite: Department approval Selected topics in sonography based on the needs and areas of interest of the class and professor. May include laboratory work as part of the class. Multiple credit course. May be repeated for up to 3 hours of credit, but grade forgiveness cannot be applied.

SON 2942. INTERNSHIP IN SONOGRAPHY 1-4 variable
INTERNSHIP IN SONOGRAPHY Prerequisite: Satisfactory completion of all mandated courses in Reading, Mathematics, English, and English for Academic Purposes; a minimum 2.0 institutional or overall GPA; and 12 credits. The Program Director/Program Chair/Program Coordinator or Internship Placement Office has the discretion to provide override approval as it relates to the waiver of required program/discipline-related courses. This course is a planned work-based experience that provides students with an opportunity to fine-tune skill sets learned in course work and enhance workplace skills through supervised practical experiences related to their career objectives. Each earned credit of internship requires a minimum of 80 clock hours of work. Multiple credit course. May be repeated for credit, but grade forgiveness cannot be applied. (Internship Fee: $10.00).

SON 3172C. INTRODUCTION TO VASCULAR SONOGRAPHY 3 2 4
INTRODUCTION TO VASCULAR SONOGRAPHY Prerequisite: Admission into the BS in Radiologic & Imaging Sciences Program Vascular Ultrasound Concentration or ATC in Vascular Sonography. This course will present an introduction to vascular sonography. It will provide an in-depth exploration of the type of exams performed for the diagnosis of vascular disease. The course is designed to introduce the students to the anatomy, physiology, and scanning protocols for cerebral, peripheral (venous and arterial), and visceral vascular exams. Students will apply sonographic techniques to evaluate the vascular system. Students will be introduced to patient care issues specific to vascular sonography.

SON 3173. VASCULAR SONOGRAPHY II 3 3 0
VASCULAR SONOGRAPHY II Prerequisite: Minimum grade of C in SON 3172C Introduction to Vascular Sonography Corequisite: SON 3806L This course will provide in-depth exploration of the cerebrovascular and peripheral venous vascular sonography. It will explore pathophysiology, integration of data, report generation, and vascular sonography’s role in the treatment of vascular disease. Minimum grade of C required if used to satisfy Radiologic & Imaging Sciences B.S. degree requirement.

SON 3806L. VASCULAR SONOGRAPHY PRACTICUM I 2 0 16
PRACTICUM I.

SON 4174. VASCULAR SONOGRAPHY III 2 2 0
VASCULAR SONOGRAPHY III Prerequisite: Minimum grade of C in SON 3173 and SON 3806L Corequisite: SON 4816L This course will provide in-depth exploration of peripheral arterial and visceral vascular Sonography. It will explore pathophysiology, integration of data, report generation, and vascular sonographer’s role in the treatment of vascular disease. Minimum grade of C required if used to satisfy Radiologic & Imaging Sciences B.S. degree requirement.

SON 4816L. VASCULAR SONOGRAPHY PRACTICUM II 2 0 16
PRACTICUM II.

SON 4817C. VASCULAR SONOGRAPHY III 3 3 0
VASCULAR SONOGRAPHY III Prerequisite: Minimum grade of C in SON 3173 and SON 3806L Corequisite: SON 4816L This course will provide continued exposure to the vascular sonographic techniques in the clinical setting including observation, pre- and post-procedural activities, and supervised performance of basic vascular sonographic examination. Minimum grade of C required if used to satisfy Radiologic & Imaging Sciences B.S. degree requirement. Contact hours 16 hours per week; 240 hours clinical practice per semester.

SON 5174. VASCULAR SONOGRAPHY IV 2 2 0
VASCULAR SONOGRAPHY IV Prerequisite: Minimum grade of C in SON 3173 and SON 3806L Corequisite: SON 5174 This course will provide an advanced exploration of arterial and venous vascular sonography. It will explore pathophysiology, integration of data, report generation, and vascular sonographer’s role in the treatment of vascular disease. Minimum grade of C required if used to satisfy Radiologic & Imaging Sciences B.S. degree requirement. Contact hours 16 hours per week; 240 hours clinical practice per semester.