

SONOGRAPHY

St. Catherine University's sonography department is grounded in the liberal arts and a commitment to compassion, community and caring.

Students will be led into a fascinating profession that challenges their analytical ability and in-depth knowledge of the human body. Students will develop their skills through a combination of professional courses and clinical training. Small class and lab sizes ensure students get individualized attention to prepare them for their career.

Major

- Sonography - BA, BS (<http://catalog.stkate.edu/undergraduate/health/sonography/ba-bs>)

The courses listed below apply to the associate of applied science program, which is no longer admitting students. The courses for the baccalaureate program are in development and will be posted when approved by faculty committee.

SON 1500 Communication for the Sonography Professional – 2 credits

This course is designed to help students understand the theory and develop the skills necessary for effective communication. The course explores verbal/non-verbal communication, interpersonal listening and feedback, passive and active listening, team development, and managing conflict. Offered in the College for Adults.

SON 1605 Abdomen I – 4 credits

This course is the beginning anatomy/physiology and pathology of the abdomen sequence. This course will provide the beginning student with an understanding of the anatomy and pathology of the liver, gallbladder, and biliary systems.

SON 1615 Abdominal I Lab – 1 credit

This course is an introduction to scanning the anatomy of the liver, gallbladder, pancreas and kidney. Students will gain experience through participation in scanning labs. Offered in the College for Women.

SON 1705 Reproductive Systems in Sonography – 4 credits

In this course, the student will learn the foundational knowledge of the male and female reproductive anatomy, physiology and pathology. The student will learn identification and location of pelvic structures and surrounding landmarks commonly imaged on Ultrasound.

Corequisite: SON 1710.

SON 1715 Reproductive Systems Skills Lab – 1 credit

This course establishes the basic foundation for the imaging technique and interpretation of the female pelvis. Students will gain experience through lab participation. Offered in the College for Women.

SON 1805 Abdomen II – 4 credits

This course will provide the intermediate student with an understanding of the anatomy and pathology of the pancreas, spleen, urinary system, and abdominal vasculature. This is a continuation of the skills and knowledge acquired in Abdominal I (SON 1605).

Prerequisite: SON 1605.

Corequisite: SON 1810.

SON 1815 Abdominal II Lab – 1 credit

This course provides students with greater understanding of scanning the abdominal section. This is a continuation of the skills and knowledge acquired in SON 1610. Students will gain greater experience and knowledge through participation in the scanning labs. Offered in the College for Women.

Prerequisites: SON 1615, SON 2015.

Corequisite: SON 1805.

SON 2015 Ultrasound Physics and Instrumentation – 4 credits

This course will focus on the underlying principles of physics and basic concepts critical for developing skills in the use of diagnostic ultrasound. Emphasis will be on basic acoustical physics and acoustical waves in human tissue, ultrasound transmission in soft tissues, attenuation of sound energy, parameters affecting sound transmission, and resolution of sound beams. Also discussed will be image artifacts, Doppler, ultrasound bio-effects, safety, and quality assurance.

Prerequisite: PHYS 1050.

SON 2205 Obstetrical-Neonatal Sonography – 4 credits

This course builds upon the knowledge gained in Reproductive Systems. It will begin with discussions and materials presented on first, second, and third trimester normal fetal and maternal anatomy as it applies to ultrasound.

Prerequisite: SON 1705.

SON 2210 Obstetrical/Neonatal Skills Lab – 1 credit

This course will provide the intermediate student with the knowledge to scan an obstetric patient. Scanning the fetus will be discussed as it relates to patient history and laboratory data, transducer selection, and scanning protocols. This is a continuation of the skills and knowledge acquired in Reproductive Systems in Sonography.

Prerequisite: SON 1705.

SON 2305 Elementary of Vascular Sonography – 4 credits

This course will introduce students to the foundational discipline-based knowledge and skills necessary to practice vascular ultrasound. Foundational knowledge in vascular physics, Doppler and hemodynamics will be introduced. Knowledge of lower and upper extremity vasculature, cerebrovascular structures, abdominal and transplant vascular will be discussed and practiced, in conjunction with SON 2310 Elements of Vascular Sonography Lab. This includes arterial and venous anatomy, physiology and pathology of both upper and lower extremities, cerebrovascular, abdominal vascular, transplant structures, and arterial-venous fistulas.

Prerequisite: Successful completion of all previous sonography courses.

Corequisite: SON 2310.

SON 2310 Elements of Vascular Sonography Skills Lab – 1 credit

This course provides students with comprehensive scanning skills in all areas of the arterial and venous circulation systems. Noninvasive vascular instrumentation, protocols and techniques are introduced. Students will optimize their scanning abilities through participation in the labs. Offered in the College for Adults.

Prerequisite: SON 2015.

SON 2610 Clinical Ultrasound I – 3 credits

These courses provide the opportunity to apply didactic knowledge to the clinical environment. Students will work under the guidance of registered sonographers in hands-on ultrasound scanning in abdominal, OB/GYN, vascular and superficial parts ultrasound. Students will be at their clinical internships three days per week in SON 2610, four days per week in SON 2620 and five days per week in SON 2630. Offered in the College for Adults.

Prerequisites: Admission to the sonography program and successful completion of prior courses in the program progression. Courses must be taken in this order: SON 2610, SON 2620, SON 2630.

SON 2620 Clinical Ultrasound II – 4 credits

These courses provide the opportunity to apply didactic knowledge to the clinical environment. Students will work under the guidance of registered sonographers in hands-on ultrasound scanning in abdominal, OB/GYN, vascular and superficial parts ultrasound. Students will be at their clinical internships three days per week in SON 2610, four days per week in SON 2620 and five days per week in SON 2630. Offered in the College for Adults.

Prerequisites: Admission to the sonography program and successful completion of prior courses in the program progression. Courses must be taken in this order: SON 2610, SON 2620, SON 2630.

SON 2630 Clinical Ultrasound III – 6 credits

These courses provide the opportunity to apply didactic knowledge to the clinical environment. Students will work under the guidance of registered sonographers in hands-on ultrasound scanning in abdominal, OB/GYN, vascular and superficial parts ultrasound. Students will be at their clinical internships three days per week in SON 2610, four days per week in SON 2620 and five days per week in SON 2630. Offered in the College for Adults.

Prerequisites: Admission to the sonography program and successful completion of prior courses in the program progression. Courses must be taken in this order: SON 2610, SON 2620, SON 2630.

SON 2681 Directed Study – 1 credit

Directed study is provided for students whose unusual circumstances prohibit taking a regularly scheduled course but who need the material of that course to satisfy a requirement. Availability of this faculty directed learning experience depends on faculty time and may be limited in any given term and restricted to certain courses.

SON 2682 Directed Study – 2 credits

Directed study is provided for students whose unusual circumstances prohibit taking a regularly scheduled course but who need the material of that course to satisfy a requirement. Availability of this faculty directed learning experience depends on faculty time and may be limited in any given term and restricted to certain courses.

SON 2683 Directed Study – 3 credits

Directed study is provided for students whose unusual circumstances prohibit taking a regularly scheduled course but who need the material of that course to satisfy a requirement. Availability of this faculty directed learning experience depends on faculty time and may be limited in any given term and restricted to certain courses.

SON 2684 Directed Study – 4 credits

Directed study is provided for students whose unusual circumstances prohibit taking a regularly scheduled course but who need the material of that course to satisfy a requirement. Availability of this faculty-directed learning experience depends on faculty time and may be limited in any given term and restricted to certain courses.

Prerequisites: Faculty, department chair and dean approval.

SON 3300 Clinical Practicum I – 8 credits

The clinical internship provides the opportunity to apply didactic knowledge to the clinical environment. Students will work at off-campus clinical sites under the guidance of registered Sonographers.

SON 3305 Small Parts – 1 credit

This course will introduce you to the sonographic anatomy, physiology and pathology of the thyroid, breast, and GI tract. Musculoskeletal ultrasound will be introduced. Knowledge of these structures will be discussed and practiced in conjunction with SON 3310 Small Parts Lab.

Prerequisite: SON 1805.

SON 3310 Small Parts Lab – 1 credit

This course will introduce you to the scanning principles, techniques and protocols of the thyroid, breast, and GI tract. Musculoskeletal ultrasound will be introduced. Knowledge of these structures will be discussed and practiced in conjunction with SON 3305 Small Parts lecture.

Prerequisite: SON 1810.

SON 3400 Clinical Practicum II – 10 credits

The clinical internship provides the opportunity to apply didactic knowledge to the clinical environment. Students will work at off-campus clinical sites under the guidance of registered Sonographers.

SON 4010 Capstone Project – 1 credit

This course will provide the senior student the ability to apply the knowledge and skills learned in the previous courses and clinical internships that comprise the sonography program. The student's project will have a theoretical/academic and applied components.

Prerequisite: IPE 4200W.