

St. Cloud Technical College & Community College

"Placing you first..."

Sonography Program Handbook 2019-2020



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Mission Statement

St. Cloud Technical & Community College is the college of choice for quality career, technical and transferable education, focused on highly-skilled employment and life-long learning opportunities.

Vision

St. Cloud Technical and Community College is the college of choice for quality career, technical and transferable education, focused on highly-skilled employment and life-long learning opportunities.

Sonography Program Philosophy

Students in the Diagnostic Medical Sonography Program at the SCTCC learn their profession through didactic and hands-on training. Student success is accomplished from faculty and students working together in a friendly and positive learning environment. Integrating student learning experiences with existing knowledge creates exceptional educational outcomes. Students are encouraged to broaden their profession through lifelong learning.

Core Values

- Student success through collaboration and cooperation
- Student centered from prospect to alumni
- Staff development and success
- A team oriented environment
- Relationships with industry and the community
- Quality and continuous improvement
- Innovation, creativity and flexibility
- Contextual and technologically driven driving learning

College Outcomes

- Demonstrate Personal and Social Accountability
- Think Critically
- Communicate Effectively
- Understand Society and Global Perspectives
- Apply Knowledge

Program Outcomes

- Define the role of the diagnostic medical sonographer as it relates to the sonography field.
- Identify the physical principles and parameters of sound waves in the production and processing of ultrasound imaging.
- Identify normal sonographic anatomy of the human organs, musculoskeletal and vascular systems.
- Recognize normal and pathological ultrasound images of the human organs, musculoskeletal and vascular systems.
- Demonstrate scanning proficiencies in a simulated clinical laboratory setting of the human organs, musculoskeletal and vascular systems.

- Complete clinical internships and be proficient in the scanning of the human body under the guidance of registered sonographers.
- Be prepared to take the American Registry for Diagnostic Medical Sonography (ARDMS) specialty examinations in Physics, Abdomen and OB/GYN.
- To prepare competent entry-level general sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.

St. Cloud Technical and Community College Equal Opportunity Statement

Also found in the SCTCC Student Handbook

St. Cloud Technical and Community College is committed to providing equal education and employment opportunities to all persons regardless of race, color, creed, sex, age, religion, marital status, sexual orientation/affectional preference, national origin, mental or physical disability, status with regard to public assistance or any other group or class against which discrimination is prohibited by State or Federal law. Further, the college will not tolerate acts of sexual harassment/assault within its area of jurisdiction. St. Cloud Technical and Community College will continue to remain in full compliance with: Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1990 and the 1992 Crime Bill. Inquiries, complaints or grievances concerning the application of affirmative action, equal opportunity or

Title IX at SCTCC should be referred to SCTCC's Designated Officers:

Student Complaints:

Dr. Jan Doebbert, Vice President of Student Affairs, office 1-401, office 320-308-5030
Director of Campus Life, Missy Majerus, office 1-401Y, office: 320-305-5922

Employee Complaints:

Deborah Holstad, Human Resources Director, office 1-403c, office: 320-308-3227

Inquiries about services offered under Section 504 of the Rehabilitation Act of 1973 or the Americans with Disabilities Act of 1990 should be referred to the Accommodation Specialist for students with disabilities, Melanie Matthews, room 1-401 or telephone 320-308-5096, melanie.matthews@sctcc.edu .

Cloud Technical and Community College Discrimination/Harassment Policy

Also found in the SCTCC Student Handbook

St. Cloud Technical and Community College and Minnesota State Colleges and Universities system are committed to a policy of nondiscrimination in employment and education opportunity. No person shall be discriminated against in the terms and conditions of employment, personnel practices, or access to and participation in, programs, services, and activities with regard to race, sex, color, creed, religion, age, national origin, disability, marital status, status in regard to public assistance, or sexual orientation. In addition, discrimination in employment based on membership or activity in a local commission as defined by law is prohibited.

Harassment on the basis of race, sex, color, creed, religion, age, national origin, disability, and marital status, status with regard to public assistance or sexual orientation is prohibited. Harassment may occur in a variety of relationships, including faculty and

student, supervisor and employee, student and student, staff and student, employee and employee, and other relationships with persons having business at, or visiting the educational or working environment. Harassment may include, but is not limited to, verbal harassment or abuse, implied or overt threats, or physical acts of aggression, etc., which have the effect of substantially or unreasonably interfering with an individual's employment, education, use of college services or participation in college events or activities.

This policy is directed at verbal or physical conduct that constitutes discrimination/harassment under the state and federal law and is not directed at the content of speech. In cases in which verbal statements and other forms of expression are involved, SCTCC will give due consideration to an individual's constitutionally protected right to free speech and academic freedom. However, discrimination and harassment are not within the protections of academic freedom or free speech. The system office, colleges, and universities shall maintain and encourage full freedom, within the law, of expression, inquiry, teaching and research. Academic freedom comes with a responsibility that all members of our education community benefit from it without intimidation, exploitation or coercion.

This policy shall apply to all individuals affiliated with Minnesota State Colleges and Universities, including but not limited to, its students, employees, applicants, volunteer, agents, and Board of Trustees, and is intended to protect the rights and privacy of both the complainant and respondent and other involved individuals, as well as to prevent retaliation or reprisal. Individuals who violate this policy shall be subject to disciplinary or other corrective action.

Investigation and Resolution

This procedure is designed to further implement Minnesota State Colleges and Universities policies relating to nondiscrimination by providing a process through which individuals alleging violation of Board Policy 1B.1 Nondiscrimination in Employment and Education Opportunity may pursue a complaint. This includes allegations of retaliation, or discrimination or harassment based on sex, race, age, disability, color, creed, national origin, religion, sexual orientation, marital status, or status with regard to public assistance. In addition, discrimination in employment based on membership or activity in a local commission as defined by law is prohibited.

Any individual who believes she or he has been or is being subjected to conduct prohibited by Board Policy 1B.1 is encouraged to report the incident to the SCTCC designated officer. The report/complaint should be brought as soon as possible after an incident occurs.

Any student, faculty member or employee who knows of, receives information about or receives a complaint of discrimination/harassment is strongly encouraged to report the information or complaint to the designated officer.

Student Complaints:

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Director of Campus Life, Missy Majerus, office 1-401Y, office: 320-305-5922

Employee Complaints:

Deborah Holstad, Human Resources Director, office 1-403c, office: 320-308-3227

Reasonable Accommodations

To be eligible for a reasonable accommodation under the American with Disabilities Act and the Minnesota Human Rights Act, a student must be qualified to perform the essential functions of the course with or without accommodation, and have a qualifying disability that limits a major life function. Essential functions in some required SCCTC Sonography Program courses include heavy lifting, pushing and pulling weight.

Statement of Accommodations:

St. Cloud Technical and Community College is committed to providing reasonable accommodations for all persons with disabilities. Accommodations are provided on an individualized, as-needed basis, determined through appropriate documentation of need. In order to develop your Accommodations Plan, please contact the Student Support Manager, located in Northway Building, Office # 1-401. Office Phone # (320) 308-5096. The accommodations authorized in your plan should be discussed with your instructor. All discussions will remain confidential. Accommodations are not provided retroactively so it is essential to discuss your needs at the beginning of the semester.

Request Accommodations

Students who wish to disclose a disability and discuss appropriate accommodations need to:

- Complete an Application for Disability Services requesting needed accommodations. Forms are available by clicking the Getting Started link at sctcc.edu/disability or by contacting Lisa Miller
- Provide documentation and the application to Disability Services
- Schedule an appointment to meet with Melanie Matthews

Melanie Matthews, LSW Accommodations Specialist for Students with Disabilities, 320-308-5096, melanie.matthews@sctcc.edu TTY users may use MN Relay at 711 to reach the campus.

Faculty:**Jeff Gunderson, MS, RDMS, RVT, RTR**

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Introduction to the Ultrasound Field

The use of ultrasound for medical diagnosis has been used over the last three decades. A Sonographer also known as an Ultrasound Technologist performs diagnostic ultrasound examinations under physician supervision. The sonographer directs non-ionizing ultrasound waves (high frequency sound waves) into the patient body with the use of an ultrasound machine and transducers.

Ultrasound equipment sends and receives reflected echoes to form an image. Abdomen organs, superficial structures (breast, scrotum, thyroid), gynecological, obstetrical and blood vessels are among the many body structures commonly evaluated with ultrasound.

Sonographers need knowledge of human anatomy, physiology, instrumentation and physics to obtain ultrasound images. The sonographer interprets the ultrasound images, records and presents ultrasound findings to a reading physician most commonly a Radiologist. Sonographers need to use independent judgment during a sonographic exam to accurately differentiate between normal and pathologic findings.

When performing ultrasound procedures patient communication and interaction is of extreme importance. Many patients requiring ultrasound exams are very ill, emotional and excited about pending results. This presents the sonographer with physical and emotional challenges.

Psychomotor skills required to perform sonographic exams include, perceptual, spatial orientation, manual dexterity and hand-eye coordination. Transducer manipulation requires repetitive motion involving fingers/hand, elbow and shoulder.

Most sonographers work in Radiology Departments located in hospitals. Other job locations include outpatient clinics and mobile services. After a few years of experience sonographers can branch into management, teaching, research, application specialist or sales (hired by an ultrasound manufacture). Sonography

Sonography

Diagnostic Medical Sonography-Generalist (64 Credits)

Program Description

The Sonography Program provides students with academic study, laboratory and clinical experience in diagnostic medical sonography. Students receive comprehensive training and experience performing scanning procedures in abdominal, superficial structures, gynecological, obstetrical, and vascular ultrasound. Students are affiliated with health-care facilities during the clinical ultrasound internship courses. Diagnostic Medical Sonographers perform and analyze ultrasound images through the use of high frequency sound waves in a variety of medical settings.

After reviewing comparable Minnesota State college programs, this program exceeds 60 credits for one or more of the following reasons: national or international program certification, national or international standards including skill standards, standards recommended by a primary employer or multiple employers, national specialized program accreditation, state licensure requirements, and/or national practices or standards.

Degree Specific Program requirements: A background check, including fingerprinting, will be completed as a requirement of this program. At the time of the background check submission, students must provide documentation as required by the MN Department of Human Services. If you have been arrested, charged or convicted of any criminal offense, you should investigate the impact that the arrest, charge or conviction may have on your chances of employment in the field you intend to study, or on your ability to obtain federal, state, and other higher education financial aid. Students who have earned a grade of “C” or better, in all required classes, as well as an overall GPA of 2.0 or better will have satisfied the program requirements for the AAS degree.

Accreditation Information: This program is nationally accredited by the Commission on Accreditation of Allied Health Educational Programs (CAAHEP), 25400 US Highway 19 North Suite 158 Clearwater, FL 33763 P:727-210-2350 F:727-210-2354

E: mail@caahep.org and by Joint Review Committee in Diagnostic Medical Sonography, 6021 University Blvd., Suite 500, Ellicott City, MO 21043, (443) 973-3251, Fax: (866) 738-3444, www.jrcdms.org . Upon completion of the program, graduates are eligible to take the national registry exams in Ultrasound Physics, Abdominal Ultrasound, and Obstetrical and Gynecological Ultrasound following American Registry for Diagnostic Medical Sonography (ARDMS) prerequisite guidelines.

The general education courses may transfer and are part of the Minnesota Transfer Curriculum (MnTC).

Upon completion of the program, graduates are eligible to take the national registry exams in Ultrasound Physics, Abdominal Ultrasound, and Obstetrical and Gynecological Ultrasound following American Registry for Diagnostic Medical Sonography (ARDMS) prerequisite guidelines. Graduates of this program will be able to obtain, review and integrate pertinent and supporting clinical data to facilitate optimum diagnostic results, analyze and process anatomic, pathologic and/or physiologic data for interpretation by a physician.

Acceptance Requirements

HLTH1440	Medical Terminology	1 Credits
MNTC Goal Area 1 Communications-Written **ENGL1302: Analytical Writing RECOMMENDED**		
	Goal Area 1 Communications - Written	4 Credits
MNTC Goal Area 1 Communications-Oral **CMST2300: Public Speaking RECOMMENDED**		
	Goal Area 1 Communications - Oral	3 Credits
BLGY2310	Human Anatomy/Physiology I	4 Credits
BLGY2320	Human Anatomy/Physiology II	4 Credits
PHYS1305	Conceptual Physics	4 Credits
Choose the above course OR the below course		
PHYS2300	General Physics I	4 Credits
MATH1300	College Algebra	3 Credits

* Applicants may only apply to the Sonography program after successful completion of the acceptance requirements.

*Current Healthcare Provider certificate, CPR/AED required before beginning the Sonography program. Students are required to maintain this certificate throughout the program.

Suggested Technical Studies Semester I

DMSG1401	Introduction to the Sonography Field	1 Credits
DMSG1402	Ultrasound Cross-Sectional Anatomy I	3 Credits
DMSG1404	Diagnostic Medical Sonography I	3 Credits
DMSG1405	Ultrasound Physics	3 Credits
DMSG1406	Clinical Ultrasound Lab I	3 Credits

Suggested Technical Studies Semester II

DMSG1409	Professional Development and Growth in Sonography	1 Credits
DMSG1410	Ultrasound Cross-Sectional Anatomy II	3 Credits
DMSG1411	Diagnostic Medical Sonography II	3 Credits
DMSG1412	Clinical Ultrasound Lab II	5 Credits

Suggested Technical Studies Semester III

DMSG2415	Clinical Ultrasound Internship I	10 Credits
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Suggested Technical Studies Semester IV

[DMSG2407](#) Sonography Board Reviews 1 Credits

[DMSG2420](#) Clinical Ultrasound Internship II 5 Credits

Estimated cost for books and supplies: \$6,160

PLEASE NOTE: All program plans are preliminary and curriculum may change without notice.

Career Choices

Types of Careers

- Hospital Setting
- Clinic Setting
- Mobile Setting
- Specialization in Obstetrics, Vascular, Pediatrics, Musculoskeletal & Breast
- Sales & Marketing
- Application Specialist
- Management
- Education
- Research

Potential Employers

- Hospitals
- Clinics
- Imaging Services
- Ultrasound Companies
- Temporary Services
- Colleges
- Vascular Centers
- Breast Centers
- Obstetric Centers

Sonography Course Descriptions

1. **Introduction to the Sonography Field-DMSG 1401**
This course will introduce students to the sonography field, covering the origins and evolution of Diagnostic Medical Sonography. The student will learn the sonographer profile, sonographer safety; legal, ethical, and legislative issues; current sonographic examinations; and basic patient care skills.
2. **Ultrasound Cross-Sectional Anatomy I – DMSG 1402**
This course focuses on a detailed study of the normal anatomy and physiology of the abdomen, neck, musculoskeletal, neonatal brain and non-cardiac chest using ultrasound. Emphasis will focus on structure orientation and its significance in cross-sections of anatomy. Students will be able to determine normal sonographic appearances and recognize variances and sizes of organs and vessels. This course will introduce the hemodynamics patterns and spectral waveforms found in the abdominal vasculature.
3. **Diagnostic Medical Sonography I – DMSG 1404**
Students will be exposed to different pathologies of the abdomen organs, blood vessels, thyroid, and neonatal head. This course will focus on ultrasound findings, scanning techniques, patient history, laboratory data, and other imaging modalities to help better understand how to interpret pathology. Emphasis will focus on descriptive and anatomical terminology, clinic data, grayscale imaging and Doppler characteristics as seen with various pathologies.
4. **Ultrasound Physics-DMSG 1405**
A study of the physical principles and mathematical equations required to understand diagnostic ultrasound. Course includes parameters of sound waves, pulsed and continuous wave principles, laws of reflection and refraction and the role of piezoelectricity in the production and processing of ultrasound.
5. **Clinical Ultrasound Lab I – DMSG 1406**
Introduction to the aspects of sonography in a hospital or simulated clinical laboratory setting. Emphasis will be placed on instrumentation, imaging, and identification of anatomy of the abdomen and thyroid.
6. **Professional Development and Growth in Sonography-DMSG 1409**
This course is designed to transition students from the classroom and lab setting into a clinical setting. Students will be able to recognize the functional skills required to be a diagnostic medical sonographer. Students will observe the day-to-day operations of different ultrasound departments and share their personal reflections.
7. **Ultrasound Cross-Sectional Anatomy II-DMSG 1410**
This course focuses on a detailed study of the normal anatomy and physiology of the male and female reproductive system, obstetrics covering all trimesters, breast sonography and vascular systems as it relates to the ultrasound field. Students will be able determine normal sonographic appearances and recognize variances and

sizes of organs and vessels. This course will explore the hemodynamics patterns and spectral waveforms found in the male and female pelvis and obstetrics.

8. **Diagnostic Medical Sonography II – DMSG 1411**
Students will be exposed to different pathologies of the male and female reproductive systems, obstetrics covering all trimesters, breast and vascular systems. This course will focus on ultrasound findings, scanning techniques, patient history, laboratory data, and other imaging modalities to help better understand how to interpret pathology. Emphasis will focus on descriptive and anatomical terminology, clinic data, grayscale imaging, protocols, and Doppler characteristics as seen with various pathologies.
9. **Clinical Ultrasound Lab II – DMSG 1412**
Practical training in a hospital or simulated clinical laboratory will focus on completing and becoming proficient in scanning of the human body. Emphasis will be placed on instrumentation, protocol, record findings along with associated calculations, and anatomy identification of the abdomen, thyroid, pelvis, obstetrics, breast and vascular systems.
10. **Clinical Ultrasound Internship I– DMSG 2415**
Students are assigned to various clinical rotations where they gain hands-on experience under the direction and supervision of assigned clinical preceptors. Students will focus on becoming proficient in the scanning of, abdominal organs, superficial structures, pelvis, obstetrics, and vascular systems. Students will expand scanning and patient care skills and as the semester progresses more clinical responsibilities will be given.
11. **Sonography Board Reviews-2407**
This course will help students prepare to take the American Registry for Diagnostic Medical Sonography (ARDMS) specialty examinations in Physics, Abdomen and OB/GYN in a simulated atmosphere. It is designed to be used as an edition to your regular study and as a method to determine your strengths and weaknesses so that you can study more effectively. This course will cover test taking skills and preparation on the computer. Students will be able to better recognize pathology better through case study presentations.
12. **Clinical Ultrasound Internship I- DMSG 2420**
This is the final course in the Sonography Program. The student will focus on becoming proficient in the scanning of the human body. Students will perform under the guidance and supervision of assigned preceptors, in hands-on scanning in abdominal, superficial structures, OB/GYN, and vascular systems. Upon completion of this internship, students will be able to perform routine duties and be ready for the workplace as a Diagnostic Medical Sonographer.

Pre-requisite (“Core”) Coursework

In an effort to produce quality sonograms, certain guidelines regarding course sequences must be followed. Within the “core” sonography curricula courses may not be skipped or “made-up” at a later date. Students that fail or withdraw from core course in any semester within sonography must retake the specified course prior to advancing to the next semester of the sonography program. Due to the skill specific nature of this program, coursework completion according to the scheduled sequence is essential for skill development and proficiency.

YEAR ONE: CORE COURSE SEQUENCE

Fall Semester:

- **Introduction to the Sonography Field-DMSG 1401**
- **Ultrasound Cross-Sectional Anatomy I-DMSG 1402**
- **Diagnostic Medical Sonography I –DMSG 1404**
- **Ultrasound Physics-DMSG 1405**
- **Clinical Ultrasound Lab I-DMSG 1406**

Spring Semester:

- **Professional Development and Growth in Sonography-DMSG 1409**
- **Ultrasound Cross-Sectional Anatomy II-DMSG 1410**
- **Diagnostic Medical Sonography II –DMSG 1411**
- **Clinical Ultrasound Lab II-DMSG 1412**

YEAR TWO: CORE COURSE SEQUENCE

Fall Semester:

- **Clinical Ultrasound Internship I-DMSG 2415**

Spring Semester:

- **Clinical Ultrasound Internship II-DMSG 2420**
- **Sonography Board Reviews-DMSG 2407**

Clinical Internship (Overview & Expectations)

Clinical internship is the final phase of "clinical" and the final classes of the Sonography Program. The student will utilize all of the knowledge acquired throughout the program within the clinical environment, on real patients.

In order to provide the necessary "hand's-on" time for the students, clinical internship sites are selected according to their ultrasound procedure volumes and site staffing. Unfortunately, this necessitates that some of our clinical internship sites may not be within daily driving distance.

The Sonography Program requires clinical internship of several months duration towards the end of the program. These internships may require placement at a site outside the St. Cloud area or outside of Minnesota. This may create financial hardship and separation of families during the internship period. The College will make every effort to secure sites within the state and the five surrounding states; however, for reasons beyond the control of the College other sites may be used.

Clinical sites may vary year-to-year in accordance with the sites ability to provide a quality-learning environment for the student (site staffing dynamics).

The Program Director and Clinical Coordinator will assign student(s) to a clinical facility, matching the student(s) with the internship site. Consideration will be given to the site's needs and student's desires. The clinical site will be notified and given the name of the student assigned to their respective site.

Exceptions may be made should a student have family out of state, and wish to pursue clinical outside of the normal 5-state area. Clinical facilities must meet standard volume requirements and have adequate staffing to facilitate clinical instruction.

Once a student is assigned to a site for clinical internship, he/she must conform to that specific sites code of dress and conduct. Failure to adhere to clinical site regulations may result in immediate removal from the clinical internship site, and subsequent academic disciplinary actions.

Under no circumstances may a student contact clinical sites to secure placement. A student who violates this provision is subject to dismissal from the Sonography Program.

Students must have the following PRIOR to starting clinical internship:

1. Basic Life Support Certification
2. Physical exam with proof of immunizations
3. (State) criminal background check to include fingerprinting

It is strongly recommended that students have access to a computer and Internet access during clinical internship. This will allow for transmission of papers/coursework and clinical logs to be readily communicated to instructors. Otherwise fax-transmission may be utilized.

Clinical Assignments

SCTCC Sonography Program places students in clinical settings in separate medical facilities for a key portion of the learning experience. In some circumstances, a student may be denied placement by a medical facility, and a result, unable to complete the Program. SCTCC does not guarantee a student an alternative placement under these circumstances. For example:

- **Criminal Background Record & Finger Printing**

Students are required to complete a criminal background check and finger printing before attending clinical experiences. Based on the background report, a student may be prohibited from entering a clinical experience. A student disqualified from placement at a clinical setting will be unable to complete the program. A criminal background check is done yearly and it is the student's responsibility to keep current. Students are responsible for the fees assigned to a background check and finger printing.

“A background check and finger printing will be completed as a requirement of this program. At the time of the back ground check submission, students must provide documentation as required by the MN Department of Human Services. If you have been arrested, charged or convicted of any criminal offense, you should investigate the impact that the arrest, charge or conviction may have on your chances of employment in the field you intend to study or on your chances to obtain federal, state, and other higher education financial aid.”

- **Patient Privacy**

The importance of maintaining patient privacy is a core academic outcome in the Sonography Program. Students are taught to maintain the confidentiality of all persons receiving services. A student who breaches confidentiality may fail the immediate lesson or the entire course, depending on circumstances.

A student who fails a clinical course will not have priority registration to repeat the course. As student who fails a course due to breach of patient confidentiality may be unable to find a placement for a future clinical course, and therefore, unable to complete the Program.

Student Service Work

While performing tasks as part of the required clinical educational experience, students may not take either the responsibility or the place of qualified staff. After demonstrating competency, however, students may be permitted to undertake certain defined clinical activities under appropriate supervision and direction.

Students do not receive compensation for services they perform in the clinical courses. Occasionally students are employed at the same institution where they attend clinical courses. As part of their employment, the students receive pay and are subject to standard employee policies. SCTCC does not require student to accept employment, nor does it prohibit such employment, subject to the following conditions:

1. The work is performed outside regular educational hours.
2. The work is separate from and does not interfere with the student's academic responsibilities

Students must attend required classes, complete required clinical objectives and clinical hours and maintain at a passing grade to remain in the Program.

Academic Progress (Starfish)

Starfish provides you with one central location to find the people on campus who can help you succeed. You might also see recommendations and tips for improvement displayed on your Starfish homepage or sent to you by email. You can get to Starfish directly by logging on to [Desire2Learn \(D2L\)](#) and clicking the “Starfish” link.

Once logged in you can set up your profile, view recommendations for improvement or kudos from instructors, and make appointments with advisors and instructors, and more.

What if I need more help?

Contact the IT Helpdesk in the open computer lab, 1-405, or at 320-308-6445.

Academic Standards

1. Students’ academic and clinical performance will be evaluated at the end of each semester.
2. Academic grades must be 80 % or better on a 100 % scale. An 80 % average must be maintained in all academic core courses to pass. Lab and clinical courses are pass/fail. Grading criteria is listed in the lab and clinic handbooks.
3. The academic grading system is the following:

94-100%	A
87-93%	B
80-86%	C
73-79%	D
72% and below	F

Delay in Program Completion

In some cases, students experience an interruption in their educational program. Students are encouraged to contact the Program Director as early as possible to arrange reinstatement. The Program Director, with the assistance of faculty, will determine the appropriate sequencing of course work upon reentry. The Sonography Program teaches skills that may erode if not used. Depending on the point at which a student leaves the Program, and the length of time a student is away from the Program, a student may need to repeat some courses upon reinstatement. Assessments will be made on a case by case basis.

Repetition of Courses

A Sonography Student who receives a “W”, “D”, or “F” in any course is considered to be making unsatisfactory progress in the Sonography Program. It is possible for a Sonography student to drop from a course and not receive a “W” if they drop on or before a set drop date. Students who do this will be considered as attempting to take the course.

If a student fails (1) course in a semester, they may be considered for a second attempt if space is available. If a grade of “W”, “D”, or “F” is obtained on the second attempt, the student will be dismissed from the Sonography Program. Students must repeat all core courses passed for that semester. An 80 % average must be maintained in all academic core courses to pass. Lab and clinical courses are pass/fail.

Students who fail (2) or more core courses in a semester will automatically be dismissed from the program.

If a student fails (2) performances or (1) performance and the final in Clinical Ultrasound Lab I or II they will fail the course. Student will be allowed to repeat the lab the following year if space is available. If a student fails > (2) performances or > (2) performances and a final or withdraws from Clinical Ultrasound Lab I or II, there will be no option to repeat that lab and they will automatically be dismissed from the program.

Students, who fail a clinical internship course, will not be allowed to repeat that course and will be dismissed from the program.

Graduation Requirements

1. Complete and pass all recommended Sonography courses prior to graduation following course sequence.
2. Complete the required number of days in each clinical rotation.

Physical Demands

Manual Dexterity: Sonography requires a moderate amount of hand-eye coordination. This manual dexterity is utilized to manipulate the ultrasound transducer according to the image displayed on the ultrasound display to obtain optimal images.

Physical Strength: Physical strength is needed to move ultrasound platforms to and from inpatient rooms within the hospital environment and mobile settings, assist patients to and from the examination table in the outpatient environment and properly position patients on the exam table to obtain ultrasound images. Typically lifting, pulling, and pushing requirements will not exceed 50 pounds of force.

Visual Acuity: Sonographers rely on computer displays to obtain adequate recordings of human body in a semi-dark environment. Sonography modalities require the ability to differentiate shades of blue, red, yellow, and green and gray.

Potential Physical Hazards

Ultrasound Exposure: To date, diagnostic medical ultrasound has shown no adverse effects on the adult human population.

Repetitive Motion: Although scanning techniques may vary between patients, transducer manipulation requires repetitive motion involving the scanning fingers/hand, elbow and shoulder.

Ergonomic Considerations: Proper ergonomics should be utilized whenever possible to reduce the stress to the body. Infrequently however, due to the nature of the hospital/clinical environment, stretching, lifting and reaching are required when performing ultrasound procedures. When moving or lifting a patient it is important to use the correct technique to prevent injury.

Biohazard Exposure: Patients requiring ultrasound exams present with various medical illnesses potentially presenting the sonographer with biohazards (i.e. infectious diseases). When performing ultrasound procedures, personal precaution measures and follow universal precautions should be utilized at all times.

Eye Strain: Ultrasound imaging is typically performed in a semi-dark environment, viewing the computer screen of the ultrasound machine.

Student Health

- **Immunizations**

Students are required to provide physician certification of up-to-date immunization status before attending clinical internship. A form is provided by the college. Students are responsible for maintaining current immunization status. Some clinical facilities require students to provide the facility with this documentation as well.

- **Student Illness**

Students must report to the Program Director any personal health condition that could compromise the health and safety of the student, their colleagues or the patients to whom they provide care. Students missing more than two days will need a doctor's note to return to course work. The Program Director will meet with the student and college or clinic administration to discuss a plan on how the student can complete the program.

- **Reasonable Accommodations**

To be eligible for a reasonable accommodation under the American with Disabilities Act and the Minnesota Human Rights Act, a student must be qualified to perform the essential functions of the course with or without accommodation, and have a qualifying disability that limits a major life function. Essential functions in some required SCTC Sonography Program courses include heavy lifting, pushing and pulling weight.

- **Leave of Absence During Pregnancy**

If a student so decides, she may elect to leave the Program during her pregnancy. If the student decides to elect this option and leave the Program, she must notify the Program Director in writing. An incomplete will be awarded for the course(s) in progress. The remaining course work may be completed upon the student's return, subject to space availability. It may not be feasible for the student to re-enter the Program immediately since some courses are offered sequentially and only once a year.

Pregnant students are encouraged to notify the Program Director as soon as possible to make any necessary arrangements. The Program Director will meet with the student to discuss a plan on how she can complete the Program.

Class Participation and Attendance

Core Sonography classes are typically fast paced and challenging. Attendance is very important. Should it become absolutely necessary to miss a class, please contact the instructor as soon as possible. Students are responsible for obtaining lecture information from classmates or the instructor before or after class hours.

Absences: Sonography students are allowed 5 days of instructor approved absences per Semester. Students missing more than 5 days of approved absences in a Semester will receive a grade of incomplete for courses offered that Semester, and will have to repeat those courses to advance in the program. Repeating a course depends on space availability and with all faculty approval. Students missing more than 5 days of un-approved absences will be dismissed from the program with no repeat option. All laboratory/clinical hours missed are required to be made up before the end of the Semester to pass. Tardiness: Prompt attendance is required. Excessive tardiness will not be tolerated. Every 2 days of tardiness will be the equivalent of 1 absence. This will count towards the 5 day absence maximum.

Classroom & Laboratory Areas

Classroom and laboratory areas are to be kept neat and clean at all times. Students may bring food and/or drink into the lecture classroom, but food and drink are prohibited in scanning areas and around equipment.

Appropriateness of Clinical Examinations

During courses of instruction, students will be required to perform general ultrasound examinations on other students and volunteer "patients". This scanning does not in any way, replace or augment examinations required by medical necessity.

Furthermore, the student (and volunteer simulated patients) must acknowledge, in writing, that they understand that all scanning performed within clinical classes and "open scan labs" is for the student's educational purposes only and not for diagnosis. No physician will interpret, diagnose, or treat as a result of these examinations.

Patient/Student Privacy

During clinical courses and “open scan labs”, students and volunteer patients will be required to expose a particular area of the human body. This is necessary for the performance of routine ultrasound examinations. Male and female students alike will perform clinical scanning in a rotational order. At no time during the examination will the student or volunteer patient be unnecessarily exposed. Maintenance of the simulated patient’s privacy is a priority necessitated by professionalism within the field of ultrasound and strictly mandated by St. Cloud Technical and Community College.

Any/all information obtained through the practice of routine ultrasound exam on all students and volunteer patients is confidential and will not be shared and/or released by St. Cloud Technical and Community College to any other person or institution.

Exceptions

A valuable part of the clinical experience is the patient’s perspective. Should a student not be able to perform as a simulated volunteer patient, the instructor should be notified as soon as possible. If a student is unable to be a simulated volunteer patient in the lab, their grade and evaluations will not be affected by this. It is the responsibility of the program to provide volunteers if students refuse to be scanned.

Scanning Volunteer Patients for Educational Purposes in the SCTCC Clinical Lab

All scans in the clinical lab scans are for educational purposes only and are not diagnostic.

Before receiving a scan, each volunteer patient must read and sign a consent form and provide the name of their primary clinic and/or primary physician on the consent form.

If a sonography student finds an abnormality while performing a scan in the clinical lab, the student must not inform the volunteer patient of their findings. Students must report any abnormal findings to program faculty. Program faculty will inform the volunteer patient that an official ultrasound should be done for clarification at a medical facility. In addition, program faculty will offer to call the volunteer patient’s primary clinic and/or primary physician to suggest that an official ultrasound be performed. If a volunteer patient does not have a primary clinic or physician, Program faculty will consult with the Medical Director for recommendations.

Under no circumstances **may** the sonography students perform obstetrical scanning of any pregnant woman in the St. Cloud Technical and Community College clinical lab without permission and supervision of the Program faculty. Every pregnant woman scanned in the SCTCC clinical lab must have had a prior ultrasound scan at a medical facility before being scanned in the SCTCC clinical lab.

Dress Codes

SCTCC Environment: Students must abide by the SCTCC dress code guidelines located in the SCTCC student handbook. Students will wear scrubs in Clinical Ultrasound Lab I & II. Scrub colors are either blue or gray.

Hospital or Clinic Environment: It is mandatory for students to wear their college ID at all clinical settings. Dress codes vary at medical facilities, students must abide by clinical dress codes.

General Policies and Procedures

Sonography students must abide by the general policies and procedures that are provided in the St. Cloud Technical and Community College Student Handbook.

Professional Conduct

Integral to the profession of diagnostic medical sonography is a concern for the welfare of the sick, injured, and vulnerable and for social justice; therefore, students enrolled in the Sonography Program at the SCTCC accept the moral ethical responsibilities that have been credited to the profession of diagnostic medical sonography and are obligated to uphold and adhere to the professions Code of Ethics. The Society of Diagnostic Medical Sonography (SDMS) 2006 Code of Ethics for the Profession of Diagnostic Medical Sonography outlines the goals, values, and ethical principles that direct the profession of diagnostic medical sonography and is standard by which ethical conduct is guided and evaluated by the profession. The Sonography Program at St. Cloud Technical and Community College has an obligation to graduate students who will provide safe and competent patient care and uphold the moral and ethical principles of the profession of diagnostic medical sonography.

In situation where student may be in violation of the SCTCC Student Code of Conduct, a citation will be filed with the Vice President of Student Affairs.

PRINCIPLES (SDMS)

- Be truthful and promote appropriate communications with patients and colleagues.
- Respect the rights of patients, colleagues and yourself.
- Avoid conflicts of interest and situations that exploit others or misrepresent information.
- Accurately represent his/her experience, education and credentialing.
- Promote equitable access to care.
- Collaborate with professional colleagues to create an environment that promotes communication and respect.
- Communicate and collaborate with others to promote ethical practice.
- Engage in ethical billing practices.
- Engage only in legal arrangements in the medical industry.

- Report deviations from the Code of Ethics to institutional leadership for internal sanctions, local intervention and/or criminal prosecution. The Code of Ethics can serve as a valuable tool to develop local policies and procedures.
- Refrain from the use of any substances that may alter judgment or skill and thereby compromise patient care.
- Protect patients and/or study subjects by adhering to oversight and approval of investigational procedures, including documented informed consent.
- Acknowledge personal and legal limits, practice within the defined scope of practice, and assume responsibility for his/her actions.
- Maintain confidentiality of acquired patient information, and follow national patient privacy regulations as required by the "Health Insurance Portability and Accountability Act of 1996 (HIPAA)."
- Promote the privacy, dignity and comfort of the patient by thoroughly explaining the examination, patient positioning and implementing proper draping techniques.
- Recognize the patient's individuality and provide care in a non-judgmental and non-discriminatory manner.

Behaviors that violate academic, moral, and ethical standards include, but are not limited to, the following:

- Knowingly furnishing false information
- Falsifying written information or documentation
- Cheating
- Plagiarism
- Theft
- Crossing professional boundaries
- Unsafe behavior in a clinical setting
- Breaching of confidentiality
- Unprofessional behavior (verbal and physical)
- Disruptive behaviors in classrooms, labs and clinical settings
- Foul language in classrooms, labs clinical settings, and/or during faculty conference

The Diagnostic Medical Sonography Program reserves the right to dismiss any student who does not meet the moral, ethical, or professional behavioral standards of the Sonography Program. Students who have been dismissed from the sonography program for the above reasons are not eligible for re-admission.

Parking

SCTCC: While attending classes at SCTCC, parking passes are required and may be purchased at the business office. The parking rate is calculated at a base rate per credit and will be included on tuition statement under student fees. Students will receive a parking fine without a parking pass. Students may park in any designated area. When a student is attending a clinical rotation, abide by the medical facilities parking requirements.

Accreditation

The Sonography Program at the St. Cloud Technical and Community College has been reviewed by the Joint Review Committee on Education in Diagnostic Medical Sonography (JRCDMS) and granted accreditation by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). The next comprehensive evaluation of the program, including an onsite review is scheduled to occur in 2019. The Sonography Program at SCTCC is committed to maintaining accreditation.

Certification

The majority of employers require sonographers to acquire national registry credentials through the American Registry of Diagnostic Medical Sonographers (ARDMS). There are several different prerequisites govern by ARDMS to be eligible to take the ARDMS registry. The Program Director will go over eligibility requirements during the beginning of the program. The Sonography Program at the SCTCC prepares students to take the following ARDMS examinations: Ultrasound Physics and Instrumentation, Obstetrics & Gynecology and Abdomen.

Professional Organizations

1. **American Institute of Ultrasound in Medicine (AIUM)**- A nonprofit organization dedicated to the growth and research of ultrasound. AIUM publishes the Journal of Ultrasound in Medicine. AIUM can be reached at www.aium.org or phone number 1-800-638-5352.
2. **Midwest Society of Diagnostic Medical Sonographers (MSDU)** - A nonprofit organization that meets several times a year to keep sonographers updated on changes in the profession. The organization also schedules educational meetings and conferences to help obtain continuing medical education credits required by ARDMS. MSDU can be reached at www.msdu.org.
3. **Society of Diagnostic Medical Sonographers (SDMS)**-A society that promotes educational information pertaining to the ultrasound field. SDMS publishes the Journal of Diagnostic Medical Sonography. SDMS can be reached at www.sdms.org or phone number 1-800-229-9506.
4. **Society of Vascular Ultrasound (SVU)**-A vascular society that promotes advanced education in vascular technology. SVU publishes the Journal of Vascular Technology. SVU can be reached at www.svunet.org or phone number 1-301-459-7550.

5. **American Registry of Diagnostic Medical Sonography (ARDMS)**-An organization that oversees the registry exams in diagnostic medical sonography. ARDMS can be reached at www.ardms.org or phone number 1-800-541-9754.
6. **Joint Review Committee on Education in Diagnostic Medical Sonography (JRCEDMS)**-The governing body of educational programs in sonography and makes accreditation recommendations to CAAHEP. JRCEDMS can be reached at phone number 1-443-973-3251.
7. **Commission on Accreditation of Allied Health Education Programs (CAAHEP)**-An independent body that oversees the accreditation of allied health education programs, including diagnostic medical sonography. CAAHEP can be reached at www.caahep.org.

Textbooks

Textbooks are required and recommended by the Program Director and Clinical Coordinator for each semester. Textbooks can be purchased in the SCTCC Bookstore. Upon graduation, it is highly recommended to keep all purchased core textbooks. The required textbooks will be a good reference during the first years of employment and can be used to study for the national registries.

Estimated cost for books and supplies: \$1925 for the two years. Most of the core textbooks are purchased within the first year and used throughout the Sonography Program. Students purchase Trajecsys Report System for clinic internship with a cost estimated at \$75-\$100.

Signature Page

I _____, have read and understand the contents of the Sonography Program's Handbook. I also understand that deviation from the guidelines set forth in the "Class Policies and Guidelines" and "Clinical Internship (Overview & Expectations)" sections of this handbook may result in the generation of an adverse academic progress report or the immediate termination from clinical internship and/or the Sonography Program.

Signed: _____ Date: _____

ST. CLOUD TECHNICAL & COMMUNITY COLLEGE
HEALTH, HUMAN SERVICE AND GENERAL EDUCATION

MEMO OF UNDERSTANDING

The Sonography Program, require clinical internships of several months duration towards the end of the program. These internships may require placement at a site outside the St. Cloud area or outside of Minnesota. This may create financial hardship and separation of families during the internship period. The College will make every effort to secure sites within the state and the five surrounding states; however, for reasons beyond the control of the College other sites may be used.

Assignment to a site will be done by the Program Director and Clinical Coordinator, matching the student with the internship site. Consideration will be given to the site's needs and student's desires. The clinical site will be notified and given the name of the student assigned to their respective site.

UNDER NO CIRCUMSTANCES MAY A STUDENT CONTACT CLINICAL SITES TO SECURE PLACEMENT. A STUDENT WHO VIOLATES THIS PROVISION IS SUBJECT TO DISMISSAL FROM THE PROGRAM.

By my signature below I acknowledge that I have read and understand this memo of understanding. I have received a copy of this document.

Printed name:

Date: _____

Signature:

ST. CLOUD TECHNICAL & COMMUNITY COLLEGE
CONFIDENTIALITY AGREEMENT

I, _____, a student at St. Cloud Technical & Community College, understand my responsibility to clients and have been sufficiently educated and trained about the significance of confidentiality and agree not to breach that confidentiality.

I will not access medical information that I do not need to perform my job/student responsibilities.

I will not inappropriately divulge information that I have obtained in the course my job/student responsibilities.

I understand that a breach of confidentiality will subject me to disciplinary action by the college, **which may range from a written warning to immediate termination**, and may subject me to legal action. I understand that the disciplinary action would become a part of my student file.

A breach occurs in the following instances, which are not intended to include all situations:

Discussing any information pertaining to clients with anyone (including my own family) who is not directly involved with such patients.

Discussing or displaying any information pertaining to clients where it can be overheard or seen by anyone not directly involved with such clients, including other clients and their families.

Describing client behavior which has been observed or learned through my affiliation with the college.

Sharing or failing to properly protect computer passwords or other information authorizing or providing access.

Transmitting client information to any individual, entity, or agency outside the college, except as authorized by law.

Signature: _____

Date: _____