



School of Health and Patient Simulation
Diagnostic Medical Sonography Degree Program Information Packet

Application Deadline March 31st

Minimum Prerequisites:

- High School-level Chemistry with a Lab (grade of “C” or better)
- College-level Math (100 level or higher) (grade of “C” or better)
- College-level Biology with a Lab (grade of “C” or better)
- College-level English (100-level or higher) (grade of “C” or better)
- College-level Physics with a Lab (grade of “C” or better)
- College-level Medical Terminology (grade of “C” or better)
- A short (one-page) essay stating why you want to be a sonographer

If a student has not taken the above courses or has earned less than a “C”, the following S.T.C.C. courses will meet the academic prerequisites:

Math:	Tech Math 1 – MAT-124	Physics:	Physics 1 – PHY-221
Chemistry:	Survey of Chemistry 1 – CHM-101	English:	English Comp. 1 – ENG-101
Biology:	Anatomy & Physiology 1 – BIO-231	Medical Terminology:	Medical Term. 1 – MED-100

- All prerequisites must be completed by the deadline date or be in progress with mid-term grades available in your application folder in the Admissions Office. There is no requirement that any or all prerequisites be taken at S.T.C.C. Your application must be complete, i.e. all necessary transcripts and your essay must be in your application file, by the deadline date.
- SAT scores are optional and are not used in the admissions process.
- If the potential applicant is taking prerequisites at S.T.C.C., be aware that MAT-124 is a prerequisite for PHY-221. If you have already taken a different college-level math course, i.e. MAT-122, MAT-101 or MAT-115, you will need to take MAT-124 also.
- The admissions process is competitive, with at least 100 applicants for the ten places available every fall. Applications are accepted beginning in the fall for the next fall. There is no waiting list that carries over from year to year. If a student is not accepted for a given fall, they must reapply to be considered for the following year. The program only starts in the fall.
- **Note:** Students with certain pre-existing musculoskeletal conditions or repetitive motion disorders (carpal tunnel syndrome, arm/shoulder tendonitis or bursitis, rotator cuff disease, disc disease, etc.) may find that a career in ultrasound scanning will exacerbate these conditions. Consult your physician with any questions.



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Additional Program Information

This is a two-year (including summer semesters) full-time day program that must be completed in a sequential manner. There is no availability of part-time, evening, or weekend components. There are clinical internships at area hospitals that may require driving fifty or more miles from the S.T.C.C. campus, so reliable transportation is a must. Clinical rotations are assigned and not chosen by the student.

The program is currently CAAHEP-accredited for general ultrasound which means that upon successful completion of the program, students are eligible to apply for the A.R.D.M.S. credentialing exams in Sonography Principles and Instrumentation as well as the specialty exams in both abdominal and OB/Gyn ultrasound. In order to obtain an A.R.D.M.S. credential you must pass both the SPI exam and a specialty exam. There is no vascular or echocardiography concentration at this time.

Feel free to email the Program Director (elee@stcc.edu) or call (413.755.4915) with any additional questions. The College website, <http://www.stcc.edu> is also a resource for additional admissions-specific information. Online applications are available there also.

Technical Standards:

Although these standards are not used in the admissions process, a sonography student must be able to meet the following technical standards:

- Assist with patient handling, i.e. helping to lift patients who may be comatose, paralyzed, or otherwise disabled from wheelchairs or beds to the examination table and vice versa, repeatedly.
- Assist patients with dressing and undressing and helping them with personal hygiene.
- Use fine motor skills and manual dexterity in patient positioning.
- Use fine motor skills and manual dexterity in manipulating a wide range of sonographic and medical equipment and peripherals.
- Tolerate repeated bending and stretching as well as holding extreme leg, arm and back positions for an extended amount of time.
- Using either or both hands for scanning and equipment manipulation.
- Discriminate between blacks, grays, whites, and the entire color spectrum on various display devices.
- Discriminate between subtle tones in stereo produced by various types of Doppler instrumentation.
- Communicate effectively, both orally and in writing, to patients, other health care personnel, and physicians.
- Relate in a caring manner to patients of all ages in varying stages of illness.
- Relate in a caring manner to patients and their families in varying stages of grief.
- Relate to the concerns of family members.
- Relate to other health care personnel and physicians in a professional manner that emphasizes teamwork.
- Perform under pressure.



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What factors make the best candidate?

In our experience, coming as close as you can to this set of life experience, courses and grades will maximize your chances of getting accepted into the program due to the competitive nature of the admissions process

- Previous health care experience
- Previous degree
- Previous customer service experience
- Demonstrated good grasp of written grammar/spelling/punctuation
- Previous medical imaging experience
- Anatomy & Physiology 1 within five years (A- minimum)
- Anatomy & Physiology 2 within five years (A- minimum)
- College-level chemistry with a lab (A- minimum)
- College-level (100 level or higher) math (A- minimum)
- College-level (100 level or higher) English (A- minimum)
- College-level general physics (A- minimum)
- College-level Medical Terminology (A- minimum)

Please note:

We weight the grades received in the following College-level courses more heavily:

Physics

English

Chemistry

Anatomy & Physiology

If you have not taken all of these courses, you may want to consider it.



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Ultrasound (Sonography)

What is it?

A medical diagnostic imaging procedure that uses high frequency sound waves to image internal structures in the body. The sound waves are transmitted into the body by a hand-held transducer assembly that both sends out the sound and listens for returning echoes. These returning echoes are used by the scanner's computer to generate a two or three-dimensional image that is displayed on the screen as it is acquired in "real-time".

Who does it?

In most cases the patient's images are produced by a Sonographer. This is a specially trained and educated allied health professional. The sonographer is unique in that they must have a thorough knowledge of anatomy, ultrasound instrumentation and physics, and pathological processes because they are often responsible for choosing which images the interpreting physician sees. The interpreting physician (sonologist) may then elect to scan the patient themselves based on what the sonographer demonstrates.

What can be examined by ultrasound?

In general, any soft tissue is amenable to examination by ultrasound. Specifically sonography is used to examine structures including:

- | | |
|----------------------------------|-----------------------|
| Liver | Tendons and ligaments |
| Gallbladder and bile ducts | Appendix |
| Pancreas | Newborn brain |
| Spleen | Eyes |
| Kidneys | Thyroid |
| Pregnant and non-pregnant uterus | Breasts |
| Ovaries | Testicles |
| Arteries and veins | Prostate |
| Heart (Echocardiography) | |

Ultrasound is also used for biopsy and interoperative surgical guidance procedures.

What is a registered sonographer (R.D.M.S., R.D.C.S., R.V.T.)?

A registered sonographer is someone who has passed a series of credentialing exams administered by The American Registry for Diagnostic Medical Sonography (A.R.D.M.S.). You must pass the Sonography Principles and Instrumentation (SPI) exam and a specialty exam to become registered in a particular specialty. Most employers require A.R.D.M.S. registration for their sonographers. State licensure may be required in some states, although not in Massachusetts or Connecticut at this time.

How much will I make?

Salaries range from about \$25/hr. to \$42/hr. (or more) depending upon experience and specialties. Most sonographers make between \$28/hr. and \$35/hr.

Where can I learn more?

- <http://www.ardms.org>
- <http://www.sdms.org>

- The American Registry for Diagnostic Medical Sonography
- The Society of Diagnostic Medical Sonography