

DIAGNOSTIC MEDICAL SONOGRAPHY, ASSOCIATE OF APPLIED SCIENCE



The Associate of Applied Science degree prepares the student for an entry-level position as a Diagnostic Medical Sonographer for employment in hospitals and other health care agencies. The Diagnostic Medical Sonographer produces, evaluates, and correlates ultrasound images and related data. Sonographers provide a summary of their technical findings to the qualified interpreting physician to aid in rendering a medical decision. The curriculum consists of on-campus didactic and lab instruction, as well as off-campus clinical applications at our affiliated health care institutions. The program offers specialty training in adult echocardiography and vascular technology. The Diagnostic Medical Sonography program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). Upon completion of the Diagnostic Medical Sonography program, graduates are eligible to apply for the national credentialing exams by the American Registry of Diagnostic Medical Sonography (ARDMS) in the exam offerings of their specialty option. **Final acceptance into the Diagnostic Medical Sonography program is contingent upon the results of the required background check.**

Program contact: Learn more

Learn more about how certificate credits apply to the related degree.

Related Degrees and Certificates

- Diagnostic Medical Sonography (Abdomen Extended and Obstetrics Gynecology Sonography), Associate of Applied Science

Program Admissions Requirements

The DMS program application is online and found on the program web page at <http://www.tri-c.edu/sonography> along with comprehensive admissions and program information. Please refer to the website for application timelines.

- GPA calculated using only the Tri-C specific admission course credit hours listed.
- Non-native English speaking applicants: Admission into Cuyahoga Community College is premised on a complete and accurate initial application to the College, including, if applicable, proof of English Language Proficiency Requirements for admission as indicated on the English Language Proficiency Requirements for Admissions to the College, and available on the web at: <http://www.tri-c.edu/get-started/international-students/english-language-proficiency-requirements-for-admission.html>.

To be accepted into any selective admission programs, students must successfully complete English as a Second Language (ESL) course/s, as referenced above, if deemed necessary by the College at the time of enrollment. Admission is conditioned upon achieving the necessary grade point average (GPA), English language proficiency requirements and any specific pre-requisite courses, and by meeting program accreditation or licensing requirements as evidenced in the Program Handbook for the specific program.

- Complete the following Program Admissions requirements with a "C" grade or higher in each:

| Code | Title | Credit Hours |
|------------------------------|--|--------------|
| BIO-2331 | Anatomy and Physiology I ^{1,2} | 4 |
| BIO-2341 | Anatomy and Physiology II ¹ | 4 |
| DMS-1071 | Concepts of Physics in Diagnostic Sonography ³ | 2 |
| DMS-1303 | Introduction to Sonography ³ | 2 |
| DMS-1320 | Introduction to Sonographic Scanning ³ | 1 |
| DMS-1351 | Patient Care Skills | 1 |
| MATH-1410 | Elementary Probability and Statistics I (or higher) ⁴ | 3 |
| Select one of the following: | | 3 |
| ENG-1010 | College Composition I | |
| ENG-101H | Honors College Composition I | |

¹ Minimum 3.0 GPA for BIO-2331 and BIO-2341 (total 8 credits). GPA calculated using only the Tri-C specific admission course credit hours listed above.

² Requires appropriate placement score on Biology placement test or grade of "C" or higher in BIO-1100 to enroll in this course.

³ Minimum 3.0 GPA for DMS-1303 Introduction to Sonography, DMS-1320 and DMS-1071 (total 5 credits). GPA calculated using only the Tri-C specific admission course credit hours listed above.

⁴ MATH-1240 Contemporary Mathematics taken before Fall 2024 will be accepted in place of MATH-1410 Elementary Probability and Statistics I to meet the math requirement for this program.

Other Information

- Criminal background check required. Also see General Application Procedures for Health Careers.
- Enrollment in DMS-1320 is by departmental approval only. Students will receive departmental approval upon successful completion of DMS-1303 and DMS-1071.
- Only a maximum of two repeats to improve from a previous attempt(s) are permitted. Students may repeat one admission course twice OR two admission courses once to improve the GPA. A "W" is counted as an attempt.
- Applicant must submit evidence of good health by fulfilling health requirements of the DMS Program and verification of current CPR certification prior to clinical assignment. Complete information provided during the first semester of the Program.
- Enrollment in DMS-1320 is by departmental approval only. Students will receive departmental approval upon successful completion of DMS-1303 and DMS-1071.

Program Learning Outcomes

This program is designed to prepare students to demonstrate the following learning outcomes:

1. Exhibit an awareness of continuity of care through effective, empathetic communication and interpersonal skills.
2. Display sensitivity to all aspects of diversity.
3. Seek and accept opportunities for improvement by being a team player that is confident, flexible, and passionate about what they do.
4. Exercise discretion, knowledge, and independent judgment in performing sonographic procedures, accessing medical information systems, and in seeking assistance.
5. Integrate pertinent patient history, supporting clinical data, and data obtained using ultrasound and related diagnostic technologies to provide a summary of findings to the physician.
6. Become a credentialed sonographer that continually educates oneself in sonography and in issues affecting the healthcare industry in recognition of the value of other modalities and professions.

Note: Students must select to pursue either option a or option b to complete this degree program. Letters in parenthesis refer to options (a) or (b).

Suggested Semester Sequence

| Program Admissions Requirements Semester | | Credit Hours |
|--|--|--------------|
| BIO-2331 | Anatomy and Physiology I ¹ | 4 |
| BIO-2341 | Anatomy and Physiology II | 4 |
| DMS-1071 | Concepts of Physics in Diagnostic Sonography | 2 |
| DMS-1303 | Introduction to Sonography | 2 |
| DMS-1320 | Introduction to Sonographic Scanning | 1 |
| DMS-1351 | Patient Care Skills | 1 |
| MATH-1410 | Elementary Probability and Statistics I (or higher Approved Ohio Transfer 36 Mathematics course) | 3 |
| Select one of the following: | | 3 |
| ENG-1010 | College Composition I | |
| ENG-101H | Honors College Composition I | |
| Credit Hours | | 20 |
| First Semester | | |
| DMS-1311 | Initial Sonographic Scanning | 2 |
| DMS-1381 | Cardiac Diagnostic Procedures | 3 |
| Select one of the following: | | 4 |
| DMS-1602 | Echocardiography I (Option A) | |
| DMS-1701 | Vascular Sonography I (Option B) | |
| Credit Hours | | 9 |
| Second Semester | | |
| DMS-1940 | Field Experience I | 1 |
| DMS-2301 | Intermediate Sonographic Scanning | 2 |
| MA-1010 | Introduction to Medical Terminology ² | 2 |
| Select one of the following: | | 4 |
| DMS-2602 | Echocardiography II (Option A) | |
| DMS-2702 | Vascular Sonography II (Option B) | |
| Select one of the following | | 3 |

| | | |
|------------------------------|---|--------------|
| ENG-1020 | College Composition II | |
| ENG-102H | Honors College Composition II | |
| Credit Hours | | 12 |
| Summer Session | | |
| DMS-1950 | Field Experience II | 2 |
| DMS-2350 | Sonographic Instrument/Physics | 3 |
| HTEC-1110 | Ethics for Health Care Professionals ³ | 1 |
| Credit Hours | | 6 |
| Third Semester | | |
| DMS-2940 | Field Experience III | 3 |
| DMS-2985 | Physics Review | 1 |
| DMS-2991 | Sonography Capstone | 1 |
| Select one of the following: | | 3 |
| PSY-1010 | General Psychology | |
| PSY-101H | Honors General Psychology | |
| Credit Hours | | 8 |
| Fourth Semester | | |
| DMS-xxxx | DMS Elective ⁴ | 1-2 |
| DMS-2950 | Field Experience IV | 1 |
| DMS-2981 | Specialty Registry Review | 1 |
| Select one of the following: | | 1-3 |
| DMS-2650 | Pediatric Cardiac Sonography (Option A) ⁴ | |
| DMS-2760 | Transcranial Doppler Sonography (Option B) ⁴ | |
| PSY-1060 | Cross-Cultural Competency for Health Care Providers | 1 |
| Credit Hours | | 5-8 |
| Total Credit Hours | | 60-63 |

¹ Requires appropriate placement score on Biology placement test or grade of "C" or higher in BIO-1100 to enroll in this course.

² MA-1020 Medical Terminology I Medical Terminology I will be accepted in place of MA-1010 Introduction to Medical Terminology Introduction to Medical Terminology.

³ PHIL-2050 Bioethics Bioethics will be accepted in place of HTEC-1110 Ethics for Health Care Professionals Ethics for Health Care Professionals.

⁴ Course selection can only be used once toward a graduation requirement.

Options

(A) Echocardiography Option

Take the following courses to complete Option A:

| Code | Title | Credit Hours |
|----------------------------|------------------------------|--------------|
| DMS-1602 | Echocardiography I | 4 |
| DMS-2602 | Echocardiography II | 4 |
| DMS-2650 | Pediatric Cardiac Sonography | 3 |
| Additional program courses | | 51-52 |
| Total Credit Hours | | 62-63 |

(B) Vascular Option

Take the following courses to complete Option B:

| Code | Title | Credit Hours |
|----------------------------|---------------------------------|---------------------|
| DMS-1701 | Vascular Sonography I | 4 |
| DMS-2702 | Vascular Sonography II | 4 |
| DMS-2760 | Transcranial Doppler Sonography | 1 |
| Additional program courses | | 51-52 |
| Total Credit Hours | | 60-61 |

Electives

Technical Electives

Select from the following courses to fulfill DMS elective option:

| Code | Title | Credit Hours |
|-------------|---|---------------------|
| DMS-2330 | Sonographic Pathology | 3 |
| DMS-2450 | Breast Sonography | 2 |
| DMS-2650 | Pediatric Cardiac Sonography | 3 |
| DMS-2750 | Principles of Vascular Imaging for Abdomen and Cardiac Sonographers | 3 |
| DMS-2760 | Transcranial Doppler Sonography | 1 |
| DMS-2960 | Supplemental Field Experience | 2 |
| DMS-2983 | Supplemental Speciality Registry Review | 1 |

MATH-1140, MATH-1141, MATH-1200, MATH-1270, and MATH-1280 can no longer count towards fulfilling the college-level mathematics requirement. These courses were re-classified as developmental mathematics by the state of Ohio in 2016. Tri-C established a 5-year transitioning window for students who had completed these courses prior to 2016 to apply them towards meeting graduation requirements, which expired in Summer 2021. It is highly recommended to see a counselor to determine the appropriate math required for your current major.