

The mission of Central Ohio Technical College is to meet the technical education and training needs of students and employers in the area.

## Diagnostic Medical Sonography Technology

### General Major • Cardiovascular Major

#### Program Summary

COTC awards the Associate of Applied Science degree to graduates of Diagnostic Medical Sonography Technology. The college offers two majors:

- **General** (Abdominal, Obstetrical and Gynecological)
- **Cardiovascular** (Adult Echocardiography and Vascular)

#### Learning Outcomes

Upon successful completion of the Diagnostic Medical Sonography program, the student will be able to:

- Apply knowledge of anatomy, physiology, pathology, physics, instrumentation, to sonographic imaging techniques;
- Accurately analyze sonographic images to determine normal and abnormal *abdominal, gynecological, obstetrical and superficial anatomical structures* **OR**;
- Accurately analyze sonographic images to determine normal and abnormal *cardiac and vascular anatomical structures*;
- Obtain, review, and integrate pertinent patient history and supporting clinical data to facilitate optimum diagnostic results;
- Perform appropriate procedures recording and processing sonographic data for interpretation by a physician;
- Provide patient care and comfort;
- Demonstrate the safe limits of equipment operation and report malfunctions to the proper authority when necessary;
- Exercise independent judgment and discretion in the technical performance of sonographic procedures; and,

- Practice legally and ethically within the framework of the diagnostic medical sonography profession.

#### Career Opportunities

Starting salaries usually range from \$43,000-\$46,999 a year.

Graduates find work with:

- Hospitals
- Outpatient centers
- Physician offices
- Private imaging centers
- Mobile companies
- Research centers
- Colleges & universities
- Equipment manufacturers

#### Important Student Characteristics

- Communication skills
- Detail-oriented mind
- High people skills
- Enjoyment of the sciences & algebra
- Team player

#### Sonography Lab

COTC maintains a dedicated lab with sonographic equipment, so that students are able to practice real-time scanning skills. The lab also has Ultrasim, an ultrasound simulator, which is currently focused for practice on obstetrical and gynecological exams.

#### Selection

Students must apply and be *selected* for COTC's highly competitive Diagnostic Medical Sonography program. Selection occurs *once a year* in June.

#### Before Selection

Prior to being selected into the program, students can enroll in courses that will count

toward degree completion (see Sample Curriculum on reverse). These include general education as well as some medical courses which can enhance students' skills, enabling them to become more competitive. Before being selected, students may enroll part or full time. Some courses are offered evenings or Saturdays.

#### After Selection

Beginning in the autumn quarter after selection, students begin an eight-quarter program in courses specific to their major: General or Cardiovascular. Program courses are sequential and conducted during daytime only. These courses are lockstep; they must be completed in the quarter they are offered. Five clinical courses provide students with ample hands-on training at hospital sites. In addition, after shadowing a registered diagnostic medical sonographer, students perform the same procedures under the sonographer's guidance. Therefore, COTC students graduate with confidence grounded in experience.

#### Requirements for Selection

- Application to COTC;
- COTC placement assessment or proof of waiver;
- Official high school transcript and copy of G.E.D certificate if applicable;
- Official college transcripts from all colleges and universities attended;
- Attendance at a Sonography/Radiographic information meeting;
- Eight hours of documented observation for each major at a Cardiovascular and/or General Sonography site;
- Completed clinical observation evaluation form (completed by clinical facility)
- One unit of high school biology with

grade "C" or better, or college equivalent with "C" or better, or COTC's 1705 Intro to Human Biology with grade "C" or better;

- Proof of completion of 1710 General Organic Chemistry, or 1713 Chemistry Fundamentals, or other college equivalent with a grade of "C" or better;
- Proof of completion of 1210 College Algebra, or other college equivalent with a grade of "C" or better;
- Proof of completion of 1535 Composition I or other college equivalent with a grade of "C" or better;
- Official scores of the PSB exam [www.psbtests.com](http://www.psbtests.com);
- Official score from the COTC Allied Health COMPASS Algebra test;
- Completion of written interview questions and two professional references submitted on COTC forms;
- Documentation of Bureau of Criminal Investigation (BCI) background check (available at the COTC Security Office);
- Signed Sonography Application Form postmarked on or before June 15, 2009.

*Selection into the Sonography program is a competitive process based on completion of all application requirements, composite test scores, GPA, interview questions and references.*

*\*High school students are encouraged to take 1710 or 1713 chemistry, 1210 College Algebra, 1535 Composition I as post secondary or concurrent enrolled COTC students prior to graduation.*

## Sample Curriculum

For more detailed information and pre-requisites see COTC Plan of Study

### First Year

Quarter 1	Credits
Composition II	4
Medical Terminology	2
Human Anatomy & Physiology I	5
Human Anatomy & Physiology I Lab	1
Principles of Diagnostic Medical Sonography	1

Quarter 2	Credits
General Psychology	5
Human Anatomy & Physiology II	5
Human Anatomy & Physiology II Lab	1
Patient Care in Sonography	2
First Aid	2

Quarter 3	Credits
Cultural Diversity	3
Public Speaking	3
Cross-Sectional Anatomy	3

Principles of Clinical Sonography G**	2
Principles of Cardiovascular Clinical C**	2
Non-Technical Elective	3

Quarter 4	Credits
Principles of Computing	1
General Physics	5
Gynecological Sonography G	3
Sonography Scan Lab G	2
Cardiovascular Sonography Scan Lab	2

Second Year	Credits
Quarter 5	
Sonographic Physics & Instrumentation I	4
Obstetrical Sonography I G	3
Abdominal Sonography I G	3
Clinical Sonography I G	4
Cardiovascular Clinical I C	4
Echocardiography I C	3
Vascular Sonography I C	3

Quarter 6	Credits
Sonographic Physics & Instrumentation II	3
Obstetrical Sonography II G	4
Abdominal Sonography II G	3
Clinical Sonography II G	4
Cardiovascular Clinical II C	4
Echocardiography II C	3
Vascular Sonography II C	3

Quarter 7	Credits
Current Issues in Allied Health	2
Sonographic Physics & Instrumentation III	2
Superficial Structures G	3
Clinical Sonography III G	3
Cardiovascular Clinical III C	4
Introduction to Pediatric Echocardiography C	2
Echocardiography III C	2
Vascular Sonography III C	2
Breast Sonography G	2

Quarter 8	Credits
Sonography Seminar G	2
Clinical Sonography IV G	6
Cardiovascular Clinical IV C	6
Cardiovascular Seminar C	2

\*\*G denotes General Major  
\*\*C denotes Cardiovascular Major

## How do I Start?

If you are a new student, you may apply online at [www.cotc.edu](http://www.cotc.edu). You may also contact the **Gateway - Office of Admissions** for more information:

E-mail: [cotcadmissions@cotc.edu](mailto:cotcadmissions@cotc.edu)

Newark Campus	740.366.9494
	800.963.9275 Ext. 494
Coshocton Campus	740.622.1408
Knox Campus	740.392.2526
Pataskala Campus	740.964.7090

Returning COTC students should contact the **Gateway- Office of Academic Advising** at 740.366.9422 or 800.963.9275 Ext. 422.

For specific questions regarding Diagnostic Medical Sonography contact:

- Academic Advising Office at [cotcadvising@cotc.edu](mailto:cotcadvising@cotc.edu)
- Cathie Scholl, BS, RDMS, RVT, Assistant Professor, Program Director, Diagnostic Medical Sonography at [cscholl@cotc.edu](mailto:cscholl@cotc.edu)
- Michelle Hunt, RDMS, RVT, General Clinical Coordinator, Diagnostic Medical Sonography, [mhunt@cotc.edu](mailto:mhunt@cotc.edu)
- Kelley Cupp, BS, RDCS, RVT, Cardiovascular Clinical Coordinator, Diagnostic Medical Sonography, at [kcupp@cotc.edu](mailto:kcupp@cotc.edu)

## Accreditation

Accredited by the Commission on Accreditation of Allied Health Education Programs.

Central Ohio Technical College is accredited by The Higher Learning Commission and is a member of the North Central Association.

Phone: 312.263.0456

[www.ncahigherlearningcommission.org](http://www.ncahigherlearningcommission.org)



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