

Dear Prospective Diagnostic Medical Sonography Student:

We are pleased that you are considering the Diagnostic Medical Sonography program. This "FAQ" page will answer many of the common questions about the program. It may also raise additional questions which can be answered during a counseling session or by contacting the Diagnostic Medical Sonography faculty in the Health and Wellness Sciences Division (Ext. 7189).

Craig Peneff, MHHS, RDMS, RVT, Professor,
Program Director, Diagnostic Medical Sonography
Health and Wellness Sciences Division
Lorain County Community College

Program Information

As a diagnostic medical sonographer, you will be responsible for completing general sonographic procedures, including abdominal, obstetrics, gynecologic and vascular studies under the direction of a physician. The Diagnostic Medical Sonography program at LCCC offers you the opportunity to integrate classroom theory instruction with College laboratory application and practices, as well as hands-on experience in local health care agencies. In the agencies, a mentoring registered sonographer will provide instruction, guidance and supervision. The curriculum for the diagnostic medical sonography program consists of didactic, laboratory and clinical instruction in abdominal, obstetric/gynecologic, and vascular studies as well as ultrasound physics, instrumentation and Doppler principles.

The Diagnostic Medical Sonography Program is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP) through the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS). Entry into the program does not require any previous medical background. An Associate of Applied Science Degree is awarded upon graduation.

Upon completion of the 18-month program in Diagnostic Medical Sonography, you will be eligible to take national certifying examinations through the American Registry of Diagnostic Medical Sonography (ARDMS) and work as a sonographer. Options beyond graduation include continuing your education in other specialties in sonography.

What personal characteristics are needed to be successful in Diagnostic Medical Sonography?

Students who are successful in Diagnostic Medical Sonography are emotionally mature, academically able, highly motivated, self-disciplined and willing and able to devote a considerable amount of time to their program. They are patient and enjoy working with and serving people. They are able to physically move patients. They are able to follow directions provided by their supervisor, radiologists and physicians.

Based upon job performance tasks, the entry-level graduate sonographer will be utilizing all of his or her sensory perceptions as well as mental and intellectual skills in the verbal, written and mathematical areas. Certain physical characteristics of the profession will have physical demands placed on the sonographer.

To expand on this, the following general attributes (technical standards) are necessary for entry-level positions in Diagnostic Medical Sonography.

Language Arts/Communications

Verbal

The sonographer:

- speaks clearly, concisely and employs correct vocabulary and grammar for communication with staff, physicians, students, faculty, patients and the public.
- gives verbal instructions to patients.
- explains procedures to patients and responds to patients' questions and concerns.
- presents an oral summary of the ultrasound exam.

Written

The sonographer:

- writes Preliminary Reports dictated by the radiologist.
- describes in writing various types of incidents that occur to the patient.
- writes on patient charts and requisitions using correct grammar, spelling, punctuation, sentence structure and appropriate medical terminology.
- writes a summary of the ultrasound exam.
- writes legibly.

Sensory Attributes

Visual

The sonographer:

- confirms the patient's identity from the identification band and x-ray number.
- reads the physician's orders and requests, as well as the patient's clinical history from the request and chart.
- finds and reads the laboratory results in the patient's chart.
- observes the patient for shock or respiratory distress.
- identifies normal and abnormal anatomical structures on the various diagnostic imaging procedures.
- identifies subtle tissue variations on the image display.
- adjusts various equipment settings to create optimal images.
- works in a dimly lit room watching a TV monitor for long periods at a time.
- performs safety checks on the equipment.

Auditory

The sonographer:

- uses a stethoscope to take blood pressure and hear blood flow.
- acquires a brief medical history from the patient and records the verbal responses of the patient.
- listens to Doppler flow patterns during vascular studies.
- answers telephones and acquires pertinent information.
- listens and follows verbal directions from physicians, supervisors, and other medical personnel to acquire pertinent information and orders.

Touch

The sonographer:

- touches the patient with the ultrasound probe to obtain images.
- touches the patient to provide moving assistance and patient care.
- touches the patient to palpate masses in assessing the patient.

Body Mechanics and Physical Characteristics

The sonographer:

- moves patients by lifting and sliding.
- pushes mobile sonographic equipment from the sonography department to the operating room, emergency room and to the patient's room.
- moves patients for proper positioning on the exam cart.
- uses eye-hand coordination to perform the sonographic exam and make equipment adjustments.
- stands and/or sits for extended periods of time while performing sonographic examinations and other responsibilities of the job.
- must have full use of both hands, wrists and shoulders to hold the ultrasound probe, type on a keyboard and adjust machine controls and monitor.
- grips the ultrasound probe for extended periods of time (often exceeding 30 minute intervals).
- presses, angles, and slides the ultrasound probe to obtain required images.
- reaches to full arm extension for extended periods in order to obtain required images.

Intellectual and Mental/Emotional

Intellectual

The sonographer:

- uses algebra in solving physics problems.
- uses equipment in quality control.
- uses rote memorization and recall in fulfilling exam protocols.
- performs patient assessments.
- uses cognitive skills to assure proper operation and adjustment of sonographic equipment.
- uses cognitive skills to recognize normal and abnormal sonographic patterns, and integrates this knowledge with patient's history, to assist the physician with diagnoses.
- uses cognitive skills for abstract concepts in applying physics principles to perform sonographic and Doppler examinations.
- demonstrates knowledge of normal anatomy, physiology and disease processes.
- integrates laboratory test results and/or patient history with orders for sonographic procedures.
- uses independent judgment and decision making to image pertinent structures to demonstrate the presence or absence of pathology.
- uses independent judgment and decision making to modify an exam based on patient condition, situation, and/or pathologic findings.
- correlates the ordered exam with patient's clinical symptoms and laboratory results.
- assesses the patient's ability to tolerate procedures.
- evaluates any contra-indications to the procedure, such as medications, insufficient patient preparation or the patient's inability or unwillingness to tolerate the procedure.
- performs measurements and calculations according to protocols.
- uses independent judgment and systematic problem-solving methods to produce high quality diagnostic information and optimize patient care.

Mental/Emotional

The sonographer:

- performs procedures in the emergency room, operating room, and intensive care unit.
- participates in procedures related to fetal malformations, fetal death, and invasive procedures such as biopsies and fluid aspirations.
- is required to make independent decisions and accept a high level of responsibility.
- interacts with trauma patients, chronically ill patients, acutely ill patients, and terminally ill patients of all ages.
- provides service to all patients, regardless of age, sex, race, national origin, religion, or physical condition and disease process.

These attributes are also integrated into our educational process in the form of academic and clinical performance objectives. If you feel that because of a learning disability, physical disability, or mental/emotional condition you would have a problem accomplishing these entry-level skills, then please make an appointment with the following: an academic counselor, the coordinator of the Accessibility Services, and a faculty member of the Diagnostic Medical Sonography program. Having a special need may not preclude you from entering the program.

What basic academic skills are needed in the Diagnostic Medical Sonography program?

Students who are successful in Diagnostic Medical Sonography have good skills in reading, writing, mathematics and science. It is imperative that one has a very strong math and science background. Anatomy & physiology, Algebra, physics, college composition, basic patient care skills and basic medical terminology at the College level are required for admission to the program.

What can I do if I have not had these courses or my skills are weak?

The College offers course work in developmental education if the College placement assessment process or high school transcripts indicate remedial work to be necessary to satisfy academic deficiencies. Your counselor can recommend specific courses to fit your situation.

How long will it take before I can start the clinical portion of my program?

Because there are more applicants to the Diagnostic Medical Sonography program than spaces available, it is necessary that you complete a **Program Application** with a counselor or academic advisor. Until you are notified of a place in the class, we recommend that you do not make major changes in your life, such as quitting a job or moving.

When does the first Diagnostic Medical Sonography course begin?

The initial Diagnostic Medical Sonography course (SONO 111) begins in the second half of the fall semester. Only one class of students is admitted each academic year.

How can I be eligible to apply for the Diagnostic Medical Sonography program?

The application procedure for the Diagnostic Medical Sonography program is as follows:

1. Apply to the college
2. All official, high school or GED and all college/program transcripts (if applicable) are on file in the LCCC Records office.
3. If you have any prior college coursework/degree, complete a Transcript Review Request. Allow a minimum of 12 weeks from the date that these documents are received by the LCCC Records office, for the completion of the transcript evaluation and GPA audit.
4. Meet with a counselor in the Connections Center (Admissions) after you are notified of your transcript evaluation results.
5. Demonstrate proficiency in Writing, Reading and Algebra by taking the Compass or Asset placement assessment. All required developmental courses (as indicated by your results) must be completed with a minimum grade of "C." Specific requirements for waiver of assessment are provided in the current LCCC Catalog. (Note to transfer students: All transcripts must be evaluated before the need for assessment can be determined).
6. Complete all pre-admission course requirements (or college level equivalents) with a minimum grade of "C" or better. Pre-admission course requirements include:
 - Career Exploration in Diagnostic Medical Sonography (ALHN 107)
 - Introduction to Medical Terminology (ALHN 112)
 - Introduction to Patient Care (ALHN 113)
 - Anatomy & Physiology I (BIOG 121)
 - College Composition (ENGL 161)
 - Statistics (MTHM 168)
 - Physics for Allied Health (PHYC 115)
 - The College Experience (SDEV 101)
 - Please Note: Anatomy & Physiology II, BIOG 122, must also be completed by the application deadline, as this is used in the initial ranking of applicants.
7. Complete the HESI A2 Admission test with a minimum composite score of 75.

When am I able to submit an application for the Diagnostic Medical Sonography program?

A Program Application may only be submitted once all pre-admission requirements have been fulfilled. The yearly application deadline for students seeking admission to the Sonography program is **January 5** to be considered for program admission the following year.

- A 3.0 comprehensive grade point average for college-level courses is required for application and admission to the program. All undergraduate, transfer/transient grades will be included in the calculation of the grade point average.
- A maximum of 2 physical education grades will be included in this calculation
- Forgiven, repeated, and Developmental Education course grades will be excluded. This means that those courses will be subtracted off of the student's overall GPA (recalculated GPA). Please be aware that if one has several Developmental Education courses with grades higher than the college level courses, the recalculated GPA may bring the GPA below the required 3.0.
- An applicant who fails to maintain a comprehensive 3.0 grade point average will be removed from the admission pool and will not be considered for program admission. Once removed from the pool, the applicant must then meet all program pre-admission requirements prior to completing a new application.
- Changes in grade point average and/or credits posted made after the deadline will not be considered when the application is reviewed for admission.
- Completion of HESI A2 test with a minimum composite score of 75 (vocabulary and general knowledge, reading comprehension, grammar, basic math, biology, anatomy and physiology, physics, critical thinking and the learning style inventory). Can be taken after completion of BIOG 121, MTHM 168 and PHYC 115. May remediate and wait one month to repeat and must be completed within six months of initial test date. Scores will be valid for a three year period; therefore a three year wait is required prior to the third attempt. A composite score below 75 on the retest will disqualify the program application.

What if I am already a health-care professional such as an x-ray technologist or a registered nurse?

Graduates of allied health and nursing programs in other fields may be eligible for credit through prior learning assessment. Prior to the submission of a program application, these individuals must: (1) be a graduate of a recognized, accredited allied health science program that is patient-care related, and hold certification/licensure/registry in the profession, i.e., Radiologic Technology, Registered Nursing, etc., (2) complete Physics for the Allied Health Sciences (PHYC 115 or an equivalent course) and Statistics (MTHM 168 or an equivalent course) with a minimum grade of "C," (3) obtain official transcripts from each college/university attended, and (4) schedule an appointment with the Program Director, Craig Peneff, (Health Sciences Building, Room 223, 1-800-995-5222, ext. 7189).

- Registered Nurses and Licensed Practical Nurses may be exempt from Introduction to Medical Terminology (ALHN 112) and Introduction to Patient Care (ALHN 113), upon review of their transcripts by the Program Director.
- Radiologic Technologists may likewise be exempt from Introduction to Medical Terminology (ALHN 112), Introduction to Patient Care (ALHN 113), Physics for the Allied Health Sciences (PHYC 115), and Imaging Modalities (SONO 122) upon review of their transcripts by the Program Director.
- Applicants with prior professional experience/training not specifically cited here may be eligible for exemptions/substitutions and are strongly encouraged to contact the Program Director for an individual evaluation.

All applicants must meet the same criteria and are considered with all other applicants in the applicant pool.

How are students selected for admission into the Diagnostic Medical Sonography Program?

Selection for program entry is competitive and based on a combination of factors including grade point average, performance in selected science courses, interview, composite score of an allied health admission test, completion of program support courses and a writing sample. Only selected candidates (initially based on support coursework completed, GPA, science course performance and allied health admission test performance) will be asked to interview and submit a writing sample.

Initial Evaluation

Applicants received will be scored by:

- Completion of program support courses beyond preadmission courses (BIOG 122, BIOG 123, ALHN 121, PSYH/SOCI 151, PEFT 151) 12 credit hours –
- Please Note: Anatomy & Physiology II, BIOG 122, must also be completed by the application deadline, as this is used in the initial ranking of applicants.

Maximum 4 points

- 12 credit hours completed = 4 points
- 10 hours completed = 3 points
- 8 hours completed = 2 points
- 6 hours completed = 1 point
- Less than 6 hours completed = 0

- Anatomy & Physiology GPA (BIOG 121 & BIOG 122) – scored by the GPA of the 2 courses and the total number of attempts (includes for D, F or W) on the courses – **Maximum 5 points**

- 2 attempts(no repeated courses) = APGPA + 1 point
- 3 attempts (repeated 1 course 1 time) = APGPA + .5 point
- 4 attempts (repeated 1 course twice or repeated each course once) = APGPA - .5 point
- > 4 attempts = APGPA – 1 point

- HESI A2 Score – Points awarded based on the student’s composite score:

- Composite score of 90% or higher = 3 points
- Composite score of 80% - 89.9% = 2 points
- Composite score of 75% - 79.9% = 1 point
- Composite score below 75% (disqualifies application) = 0 points

Final Evaluation

Interview & Writing Sample

- Applicants with the highest total of the above categories will be invited for an interview by LCCC student email. The program will decide the number of students that are interviewed each year, which will typically be twice as many students that can be accepted. The program reserves the right to change the number of interviews based on clinical seats available, number of applications received, or other factors. The students that are not selected for interviews will be notified by LCCC student email. The selection will also include a writing sample from each student interviewed completed on the same day of the interview. The interviews and writing sample will be scored. The maximum points for this portion of the selection process are 12 points.

- Interview, maximum 8 points
- Writing sample, maximum 4 points

After all interviews are completed, the interview and writing sample points will be added to the first round points (maximum 24 points total). The students with the highest scores will be offered seats in the sonography program and notified through LCCC student email, for fall semester, and invited to a required orientation/registration meeting. At this time, the student will be required to confirm their acceptance in the program.

Alternates: A limited number of alternates with the next highest scores will also be invited to the required orientation meeting as alternates in case any of the accepted students cannot enter the program in October. Alternates that do not enter the program in October will be automatically qualified for the next year’s interview process, but they must submit a new application for the following year. The alternates will receive an additional 2 point bonus added to their points for the first round. Their first round points will be recalculated.

Students who were interviewed but were not selected for admission or as alternates will be notified by LCCC student email.

Admission Point Summary

Initial Evaluation

Criteria	Maximum Points Possible
Support courses completed	4
APGPA	5
HESI A2 Composite Score	3
Total	12

Final Evaluation

Criteria	Maximum Points Possible
Points from initial evaluation	12
Interview Score	8
Writing Sample Score	4
Total	24

Additional Notes:

Students that are not accepted one year may apply in subsequent years. Students may be able to raise their scores by completing more support courses and/or raising their GPA

It is possible that a student could apply in a subsequent year and be selected even if they were not selected previously. The program will generally try to interview approximately twice as many students as it is able to accept. The points needed to be selected may vary from year to year depending on the number of applicants in a given year.

Scores received by individual students will not be disclosed. Students that are not selected may meet with the program director to determine how to raise their score and improve their chances for selection in a subsequent year.

What if I have completed my support courses many years ago?

It is strongly recommended that applicants, who have not completed Physics for Allied Health Sciences (PHYC 115), Statistics (MTHM 168), and Anatomy & Physiology II (BIOG 122) within

the last five years, consider auditing them as a refresher. Applicants who have not completed Statistics (or an equivalent course) must take the Mathematics portion of the Compass placement assessment; and complete all required courses as indicated by the assessment scores with a minimum grade of "C."

Are there courses that must be taken before other courses?

Yes. These courses are called prerequisites and they are marked on the curriculum sheet. Course prerequisites are listed in the College catalog. A College catalog is available on the college's website. Please note: Students who do not meet the prerequisites will not be permitted to continue in the Diagnostic Medical Sonography program.

Please be aware that completion of ALHN 112, ALHN 113, PHYC 115, MTHM 168, BIOG 121, BIOG 122, ENGL 161, and SDEV 101 are required prior to submitting an application for the diagnostic medical sonography program.

What are some things I should be aware of as I am scheduling the pre-admission and support courses for the Diagnostic Medical Sonography program?

If the Math Assessment test determines that you need additional math courses before being eligible for Statistics (MTHM 168), it is best to plan the math courses first, then the Anatomy & Physiology courses.

After the Math and the Anatomy & Physiology courses are planned, build the remaining support courses around them to complete your schedule for each semester. As you plan your course schedule, **please note:**

- **Cross-sectional Anatomy (BIOG 123), Physics for Allied Health Sciences (PHYC 115), and Career Explorations in Diagnostic Medical Sonography (ALHN 107) courses are not offered during the summer.**

These tips should help you complete all of the support courses in a timely fashion and improve your chances for program entry.

What courses should I begin and how many?

- Career Exploration in Diagnostic Medical Sonography, ALHN 107 should be one of the first courses to take. This course provides an overview of the profession of the diagnostic medical sonography field as well as the expectations of the diagnostic medical sonography program at LCCC. This course will also include a full day of directed observation at a clinical facility so students are able to see specific tasks a sonographer is required to do each day. Other courses should be based on if any remedial courses in Math or English are needed in order to be eligible for the required preadmission courses. A schedule should be discussed with your counselor, taking into consideration your educational background, work and personal obligations, and when you will enter the clinical part of the Diagnostic Medical Sonography program. Please note that you must meet the criteria listed on the **Program Application** to be considered for admission to the program.

How will I know when I have been accepted into the Program?

- Admission notification into the sonography program is expected to occur by the end of spring semester. You will be notified by your LCCC e-mail account and there will be a deadline date by which you must respond. The acceptance letter will provide a date regarding an orientation meeting. The orientation meeting will provide instructions on the registration process.

After being accepted into the Diagnostic Medical Sonography program, what other things must I have before starting classes?

- All students entering the diagnostic medical sonography program must complete a **background check** through an outside agency and processed through the Ohio Bureau of Identification and Investigation with the results available to any potential clinical agency. Those who have not been Ohio residents for five years will also need to have an FBI Web Check. Any infractions showing on the background check may result in the student being potentially denied placement in any clinical agency and result in the student being unable to progress to completion in the program. Furthermore the certification agency may reject anyone for who has a positive background check for examination eligibility. Students will be

given specific information regarding the background check at the program orientation meeting.

- **Drug Screening** - Some clinical facilities may require a drug screen prior to being allowed at the facility for the clinical experience. Students will be given the necessary forms from the Health and Wellness Sciences Division office. Students will have to pay 38.25 that is billed through their MyCampus account. Students will also be required to sign a release form to have the results sent to the Health and Wellness Sciences Division Office.
- A **physical examination** is a requirement for entrance into the clinical part of the Diagnostic Medical Sonography program and must be completed at the student's expense. Students will be given specific information regarding the physical examination at the program orientation meeting.
- All students must hold the **American Heart Association (Basic Life Support and AED) certification** as a Health Care Provider prior to beginning the sonography classes. This requirement may be completed at LCCC by taking HLED 153, Basic First Aid & Safety (2 cr.) or HLED 154, Cardio-pulmonary Resuscitation (1 cr.) Additionally, NEMS 150, BLS for the Healthcare Provider (CPR) or NEMS 151, BLS for the Healthcare Provider (CPR) Refresher are offered at LCCC on a non-credit basis. The student must be re-certified by taking and passing a refresher course, if the certification expires while enrolled in the sonography courses. The re-certification must occur before the current certification expires or the student will not be able to attend the clinical facility.
- It is best to wait until you are notified of your acceptance into the program before obtaining the Health Care Provider certification
- CPR Certification through the Red Cross **will not** be accepted

How many seats are available in the program?

- The program accreditation limits the program to a maximum of 16 students. The total number of students entering the program may be less than 16 depending on the number of approved clinical facilities available for student experience.

Can I re-enter the program if I withdraw?

- Yes. Students who withdraw from the program without completing the first Diagnostic Medical Sonography courses (SONO 131/SONO 221) should immediately file a new Program Application. These student applications will be considered with others in the applicant pool. Students who complete the first Diagnostic Medical Sonography courses or beyond and withdraw should see the Allied Health and Nursing counselor immediately if they wish to be considered for re-entry. Re-entry students are admitted, as seats become available. Due to the skills required in the program, re-entry students will be required to satisfactorily complete all open lab activities to align their skill level equivalent to that point in the program. Students who do not re-enter the year after withdraw will be required to reapply to the program and audit any core sonography courses previously completed. Students must meet program health requirements prior to re-entry. Students should not withdraw from the program without discussing their situation with a member of the Diagnostic Medical Sonography faculty and the Allied Health and Nursing counselor. Formal withdrawal procedures must be followed.

Can I take the Diagnostic Medical Sonography courses on a part-time basis?

- No. Due to the development of necessary skills, integration of the material as one progresses through the professional portion of the program, and the limited number of clinical seats, it is not possible for students to go through the program on a part-time basis.

Are sonography courses available during the evening or weekend?

- The didactic and clinical coursework are primarily given during the day. However, some courses may be given during the late afternoon/early evening to coincide with the required clinical hours. For example, during the fall semester Ultrasound Physics and Instrumentation II (SONO 222) course is typically offered from 4-6, one day a week. This allows the students to attend the clinical facility during the morning hours. It is also important to note that sonography students have required open laboratory hours each semester that may require the student to attend during the evening hours or on Saturdays. Typically only one section of the sonography courses is available, thus students do not have an option to schedule

alternative lecture sections such as an evening or weekend section. However, many of the preadmission and support courses have evening and/or weekend sections offered.

What facilities are used for the Diagnostic Medical Sonography clinical experience?

- The Diagnostic Medical Sonography program uses hospitals and other medical facilities in northern Ohio; these may include Lorain, Cuyahoga, Medina, Summit, and Erie counties. The general guide for selection of facilities is that the facility be approximately within a one-hour drive from LCCC. The facilities of Cleveland Clinic, University Hospitals, University Hospital, Elyria, Mercy Hospital Lorain, Southwest General Hospital, and MetroHealth Medical Center have been used.

Will I do all my training at one hospital?

- No. The vast majority of your training will normally take place at various facilities. The types of patient exams and clinical opportunities vary at each clinical facility. In order to provide each student with variety of clinical experiences as well as providing equity of the experiences offered to each student, it is necessary to have students rotate to various clinical sites.

Is transportation provided to the hospital?

- No. Students must provide their own transportation. Students must have a reliable car to drive to their assigned clinical site, which may be some distance from LCCC. Students may be required to pay for parking at some facilities.

What kind of time investment does this program involve?

- The Diagnostic Medical Sonography program requires a considerable investment of time. It is estimated that approximately 3 hours of studying is required for every hour of instruction. Throughout the program, students are obligated to approximately 40 hours per week from the combination of lecture, clinical, lab and open lab hours. The courses often require completion of assignments and projects in addition to studying. The program requires completion of 1,230 hours of clinical education in addition to all classroom and college laboratory time. This means that in addition to classes, clinical education is equal to twenty-one 40-hour work-weeks. Throughout the clinical education, all learned procedures must be tested and competency must be demonstrated.

How is the Diagnostic Medical Sonography program set up?

- (1) Day lectures are held at the College two days a week in the Diagnostic Medical Sonography major courses. Evening classes may be required in non-professional (support) courses as well as required open laboratory hours.
- (2) Day college laboratory sessions are held, during which you will learn and practice basic procedures with your instructor. The number of hours and days depend on how far along you are in the program.
- (3) Clinical experience is held throughout the program. One day a week during the first semester but increases to 3 to 4 days per week as the student progresses through the program. Clinical experience is primarily scheduled for day hours; evening and weekend hours may also be offered or required depending on the facility.
- (4) Required practice labs are scheduled to provide students an additional 1-2 hours each week for skills practice.
- (5) In addition to this, it is important to have good skills in time management because you must add to your schedule: study time, independent library time, and practice in the College sonography laboratory.

An example schedule for a sonography student is listed below. Please keep in mind that course times are possible to change depending on faculty and room availability:

Fall Semester – (2nd 8 weeks) - Lecture SONO 111 - Orientation to DMS

Spring Semester – Monday: 8-10:20 SONO 131 - Introduction to sonography lecture;
11-2 – Lab (Group 1)

Tuesday - Clinical (8 hrs) (Group 1 & 3); 9-12 Lab (Group 2)

Wednesday: 8-10:20 SONO 131- Introduction to sonography lecture; SONO 221 – Ultrasound Physics & Instrumentation 10:30 – 12:30; Lab 1 – 4 (Group 3)
Thursday: Clinical (8 hrs. – Groups 2 & 3); 9 – 12 Lab (Group 1)
Friday: 9-12 Lab (Group 3); 1-4 Lab (Group 2)
Open Lab – 2 hours 1 evening or Saturday (may not be consecutive hours)

Summer Semester (10 weeks)

Monday, Wednesday and Friday- Clinical 8 hrs (24 hrs/week)
Tuesday & Thursday – 8-11:50 SONO 215 Abdominal Pathology Lecture; 1 – 2:30 SONO 122 Imaging Modalities Lecture
Lab – 3:00 –5:30 (Tuesday or Thursday)
Open Lab – 2 hours 1 evening or Saturday (may not be consecutive hours)

Fall Semester –

Monday, Wednesday, Friday, and Tuesday or Thursday morning – Clinical 28 hrs/wk

Tuesday or Thursday - 10 – 12 – Lab; 1-3:30 SONO 223 OB/GYN Pathology

Tuesday - 4-6 SONO 222 Ultrasound Physics and Instrumentation II

Open Lab – 2 hours 1 evening/week or Saturday (may not be consecutive hours)

Spring Semester –

Monday, Tuesday, Wednesday, and Friday – Clinical (30 hours/wk)

Thursday - 9-12 SONO 224 Advanced Ultrasound Studies Lecture; 1-2 SONO 229 Professional Issues in Diagnostic Medical Sonography; 2-3 Lab

Open lab – 2 hours 1 evening/week or Saturday (may not be consecutive)

Will I have to go to summer school?

- Yes. There are two required Diagnostic Medical Sonography courses in the summer between the first and second years of the program. This includes 13.5 hours of class and 24 hours of clinical education each week for 10 weeks.

Will I be able to schedule required support courses (non-Diagnostic Medical Sonography) at times near or convenient to my Diagnostic Medical Sonography classes?

- Because the number of contact hours of the Diagnostic Medical Sonography courses and clinicals, it is often necessary for students to schedule support courses at times that are not convenient. Students may have to take a required support course in the evening.
- Because the Diagnostic Medical Sonography program is very demanding on one's time with lecture, laboratory, clinical and studying, it is recommended to complete as much of the required support courses (non-diagnostic medical sonography) prior to starting the Diagnostic Medical Sonography program.

What suggestions do you have that would increase the likelihood of my being successful in Diagnostic Medical Sonography?

First: Make up whatever deficiencies you have in the basic skills of reading, writing, math and science. Your counselor will help you determine these.

Second: Take as many of the non-sonography (support) courses as possible before entering the Diagnostic Medical Sonography program. If it is not possible to take all of the courses, try to complete the science courses. It is recommended that students complete their science requirements no more than one academic year prior to admission to the clinical program. It is required that students achieve at least a grade of "C" in their science and mathematics courses. Remember, the academic courses must be taken before, or along with, the Diagnostic Medical Sonography courses -- not afterward.

Third: Develop good study and time management skills.

Fourth: It is recommended that students work in or volunteer at a patient care setting for a minimum of 200 hours.

Fifth: Have the support and assistance of your family to minimize other responsibilities while in the program.

Students who are still in high school and who wish to enter the Diagnostic Medical Sonography Program must apply to the College and complete the required pre-admission courses for the

Diagnostic Medical Sonography program. High school students may also wish to consider the College Credit Plus program as a way of taking a few academic courses at the College while they are still in high school. A high school counselor can advise you if you qualify for the program.

How much does the program cost?

- As of 2017-18 academic year, the tuition and lab fees including non-major courses is approximately \$11,400 (for Lorain County residents).
- Other costs of the program, including textbooks, uniforms, etc. are estimated to be an additional \$2,500 to \$3,500.
- The following is a breakdown of program costs based on the tuition and fee rates as of July 2017.

Enrollment Fees	Program Credits SONO courses (35 credits x \$118.34/Credit Hour) (In County Rate)	4,141.90
	Science & Other Required Credits (30 credits x 118.34/credit hour (Non-Technical courses, In county Rate)	3,550.20
	General and Technology Fees (6.50/credit hour) x 65	422.50
	Career Advantage Fee (4.29/credit hour) x 65	278.85
	Laboratory Fees & Malpractice Insurance ALHN 107 - \$50 SONO 111 - \$165 ALHN 112 - 25 131 - 442 ALHN 113 - 50 221 - 377 BIOG 121 - 52 215- 400 BIOG 122- 52 222- 377 PEFT 151- 45 223- 400 PHYC 115 - 52 224- 400	2,887.00
CPR	CPR Training (Non-Credit course)	65.00
Admission Test	HESI A2 Test	50.00
Medical/Drug screen Fees	Physical exam, immunizations, (*estimated)	400.00
Uniform Costs	Uniforms *estimated	200.00
Books	Science & Other Texts (*estimated)	1000.00
	Sonography Texts (*estimated)	1400.00
	Optional study guides/Review books	300.00
Professional Membership	SDMS/AIUM Membership (optional)	70.00
Professional Meetings	Local/State Meetings	100.00
TOTAL COSTS	ESTIMATED)	\$14,865.45

Notes:

- Out of county tuition = 141.49/credit hour; out of state tuition = 280.84/credit hour as of 7-2017 and could change in future academic years.
- Lab fees determined from what is currently available as of 7-2017 and could change in future academic years.
- Some clinical facilities may be an hour away from campus. Students are expected to have their own transportation.
- Some clinical facilities may require students pay for parking and /or drug screening.
- \$200 of fees from SONO 221 & SONO 222 are used for student's 1st certification exam – Sonographic Principles and Instrumentation which students take during winter break of last year.

Post-Graduation	ARDMS Certification exam fees Each specialty exam = \$250.00 Graduates are prepared for 3 specialties: Abdomen, OB/GYN, and Vascular Technology	\$750.00
-----------------	--	-----------------

Is financial aid available for Diagnostic Medical Sonography students?

- Financial aid is available to qualified students through the Financial Aid Office. Allied Health and Nursing students are urged to make inquiry to determine if they are eligible. Many scholarships/grants are available through the State of Ohio as well as the LCCC Foundation. Contact a financial services representative in the LCCC Financial Services Center, located in the first floor of the Library/Learning resources building (ext. 4034) <https://www.lorainccc.edu/paying-for-college/financial-aid/> . Also, scholarships are available through the Society of Diagnostic Medical Sonography Education Foundation (1-800-229-9506) or <http://www.sdms.org>.

Can I work while I am in the program?

- A general College guideline indicates that students taking 12 or more hours (full-time) may work a maximum of 15 to 20 hours per week. Due to the demands of clinical hours, laboratory hours, lectures and studying, most Diagnostic Medical Sonography students find that they are not able to work at all while they are taking Diagnostic Medical Sonography courses.

How many hours of outside study will I need per week?

- A general College guideline indicates that, on an average, students need two to three hours of outside study for each hour in class.

What accommodations are there for students with special needs?

- Accessibility Services exists to serve the needs of students with disabilities - physical, learning and/or emotional. If you are a person who needs accommodations or assistance, contact Accessibility Services located in Room 234 in the College Center. Phone – (440) 366-4058 or (800) 995-5222, ext. 4058 or accessibility@lorainccc.edu

Does the college have child care services?

- Yes. Inquiries should be made at the LCCC Children’s Learning Center, (440) 366- 4038 or (800) 995-5222, ext. 4038. <https://www.lorainccc.edu/support-services/childrens-learning-center/>

What additional sources of information are there about Lorain County Community College and the Diagnostic Medical Sonography program?

- You may contact Mr. Peneff, the Diagnostic Medical Sonography Program Director at (440) 366-7189 or (800) 995-5222, extension 7189, if you have additional questions after reading the FAQ.
- Additional information about the field of Diagnostic Medical Sonography can be obtained from the Society of Diagnostic Medical Sonography at <http://www.sdms.org>.

What happens if I become pregnant during the Diagnostic Medical Sonography program?

- The Program’s Pregnancy Policy is:

A student may proceed through the program if she becomes pregnant. Any restrictions indicated by her physician must be provided in writing to the Program Director. After delivery, a release note must be provided from her physician, identifying any activity restriction or stating when the student is permitted to resume normal activity. If the restrictions (during the pregnancy or post-delivery) are determined to be too limiting for the student to meet the course requirements

(outcomes), she may be counseled to withdraw from a SONO course. Additionally, if complications with the pregnancy/delivery occur and she is not able to fulfill the course requirements, the student will be counseled to withdraw. Any pregnant student, who withdraws from a SONO course due to her pregnancy, will be allowed to re-enter the following year in the SONO course from which she withdrew, subject to the re-entry policy.

The student must make up all clinical time missed, complete all course requirements and clinical competencies not completed as a consequence of the pregnancy in order to complete a SONO course.

Will I be able to find a job when I graduate?

- The graduates of the LCCC Diagnostic Medical Sonography program are often hired shortly before or after graduating. Most employers hire new graduates for part-time or as needed (PRN) positions. Over the past several years, it has been unlikely for graduates to be hired for full-time positions. Graduates improve their chances of employment by obtaining their sonography professional certification as soon as possible after graduation. While a majority of graduates find employment in the Cleveland and Lorain-Elyria areas, many graduates are working throughout various parts of the country.
- The U.S. Bureau of Labor has stated that imaging professionals are in great demand and the need is increasing as medical imaging has seen a large increase of examination volume, due to an aging population and preventative care. Employment of diagnostic medical sonographers is expected to grow faster than the average for all occupations through 2018 as the population grows and ages, increasing the demand for diagnostic imaging and therapeutic technology.
- Hospitals are the principal employers of diagnostic medical sonographers. Additional job opportunities are occurring in physician offices, clinics and diagnostic imaging centers. These health-care facilities are expected to grow. This is due to the shift toward outpatient care made possible by technological advances that permit more procedures to be performed outside the hospital.

What is the salary range for a diagnostic medical sonographer

- According to the Society of --Diagnostic Medical Sonography (SDMS) (www.sdms.org) 2012 survey of hospitals and medical centers across the United States, sonographers earn between \$53,000 and \$84,000 per year. Salary depends upon location and employer, educational degrees, and the number of registry certifications attained.
- According the U.S. Department of Labor (<http://www.bls.gov>), median annual earnings of diagnostic medical sonographers were \$66,410 in 2013. Salaries ranged from \$45,840 to \$92,070.
- Mean annual earnings of diagnostic medical sonographers in 2013 were \$67,540 in hospitals and \$66,970 in physician offices and clinics.
- Mean annual earnings of diagnostic medical sonographers in 2013 in Ohio were \$60,690 (29.18 hourly)

What is the cost of certification for the sonography profession?

- Graduates of the program are eligible for certification by the American Registry for Diagnostic Medical Sonography (ARDMS). The program accreditation qualifies graduates for the sonographic principles and instrumentation (SPI) examination as well as the abdominal and obstetric/gynecologic specialty examinations. Additionally, the program prepares graduates for the ARDMS vascular specialty examination, however additional verification is required as the program is not accredited for vascular.
 - o The cost for the ARDMS SPI examination is \$200.
 - o Each specialty examination is \$250
 - In order to be considered certified or registered, one must pass the SPI examination **and** a specialty examination
 - The LCCC students are able to take the SPI examination during the winter break after successfully completing the SONO 221 and SONO 222 courses

- The ARDMS allows students to apply and take the specialty examination up to 60 days prior to graduation from the program. The certification is awarded after verification of graduation and successfully passing the examination.
 - See the ARDMS website for more information about the certification process at www.ARDMS.org
- Graduates of the sonography program are also eligible for the sonography examination from the American Registry of Radiologic Technologists (ARRT)
 - The application fee for the ARRT's sonography exam is \$200.
 - See the ARRT's website for more information about the certification process at www.ARRT.org

What should I do if I am not selected for the program?

- Your application will expire if you are not selected for admission to the program. Those not selected may reapply for the following year. The HESI A2 admission test score is valid for 3 years.
- Some options to consider while waiting to be accepted into the sonography program:
 - 1) Check out LCCC's University Partnership. Youngstown State University's Bachelor Degree of Science in Applied Science in Allied Health or Ohio University's Bachelor of Technical and Applied Studies. Students completing an Allied Health Associate of Applied Science degree program can enter the YSU or OU programs at junior status. YSU and OU have many required support courses of which most can be taken at LCCC and transferred. When you finish the Diagnostic Medical Sonography program, you will be even closer to a Bachelor Degree.
 - 2) Complete the LCCC phlebotomy program. The phlebotomy program is a one-year certificate program (that is only two-semester). Entering a certificate program will not nullify your application to the Diagnostic Medical Sonography program. (If you are accepted to and begin another associate degree allied health program at LCCC your name will be removed from the Diagnostic Medical Sonography Admission pool.) Phlebotomy skills will be useful as the FDA approves contrast materials for use. Diagnostic Medical Sonographers may be required to inject contrast materials in performing emerging function test with sonography. These materials have been used in Europe and Canada for several years.
 - 3) Complete the LCCC Nurse Aide Training program. This is also a certificate program and thus will not void your sonography application. Upon completion of the Nurse Aide Training program, you could take the state licensing exam and work as a State Tested Nurse's Aide (STNA) until entering the sonography program. This would give you valuable patient care skills as well as allowing you to work while waiting to enter the Diagnostic Medical Sonography program.
 - 4) Work in your current job and save as much money as possible for a nest egg once you begin the Diagnostic Medical Sonography program.