



University of Findlay

Sonography Programs

Prospective Student Handbook

2023 - 2024

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University of Findlay

Diagnostic Medical Sonography

Faculty and Staff

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401 Trenton Avenue, Room 114
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UF Mission Statement

The mission of the University of Findlay is to equip our students for meaningful lives and productive careers.

Sonography Programs Mission Statement

The University of Findlay Sonography Programs are committed to providing an intellectually stimulating environment to develop highly skilled, patient-focused professionals through competency-based education.

Sonography Programs

Curriculum and educational objectives of the programs are based upon standards of integrity, professionalism, and patient care as defined by multiple sonography professional organizations to include the Society of Diagnostic Medical Sonographers (SDMS) and the American Institute of Ultrasound (AIUM). Recognized Practice Standards and Scope of Practice parameters have also been included in the didactic, experiential learning, and clinical components of the curricula.

Program offerings include two Associate Degree Programs, two Baccalaureate Degree Programs and two Certificate Programs in the following concentrations: General Sonography and Echocardiography.

Sonography students participate in 1400 hours of clinical education under the direct supervision of credentialed sonographers.

The programs modeled the institution's mission when developing the curriculum as well as program goals, which are:

- To prepare competent entry-level general sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.
- To prepare competent entry-level adult cardiac sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.

Lawful and Non-Discriminatory Practices

All activities associated with the program, including student and faculty recruitment, student admission, and faculty employment practices, are non-discriminatory and in accordance with federal and state statutes, rules, and regulations.

Society of Diagnostic Medical Sonography: Scope of Practice and Clinical Practice Standards

Students and sonographers must comply with the ethical behavior expected of a healthcare professional.

Students are expected to review these standards and abide by them:

<https://www.sdms.org/about/who-we-are/scope-of-practice>

What Is Sonography?

Sonography is a medical imaging modality that uses sound waves to identify and evaluate soft tissue structures in the human body for disease and pathology.

What Does a Sonographer Do?

The Sonographer is a healthcare professional who performs diagnostic ultrasound examinations under a physician's supervision. To perform imaging evaluations on patients in the clinical setting, sonographers are required to integrate medical knowledge of anatomy and physiology, pathology, and ultrasound physics. Among the parts of the body most evaluated with sonography are the heart, blood vessels, abdominal organs, superficial structures, pelvic organs, and the developing fetus.

Sonographers have extensive direct patient contact that may include performing some invasive procedures. They must be able to interact compassionately and effectively with people who range from healthy to critically ill.

The professional responsibilities include, but are not limited to:

- obtaining and recording an accurate patient history
- performing diagnostic procedures and obtaining diagnostic images
- analyzing technical information
- using independent judgment in recognizing the need to extend the scope of the procedure according to the diagnostic findings
- providing an oral or written summary of the technical findings to the physician for medical diagnosis
- providing quality patient care
- collaborating with physicians and other members of the health care team

Sonographers must be knowledgeable about and limit the risk from possible exposure to blood and bodily fluids. Many sonographers also assist in scheduling, recordkeeping, and image archiving. Additionally, sonographers may have managerial or supervisory responsibilities.

Professional Qualities of a Sonographer

A sonographer must demonstrate attributes pertaining to all three domains of learning: cognitive, affective, and psychomotor (Bloom's Taxonomy). While the academic program provides cognitive and psychomotor education through academic preparation and clinical performance, a student's affective behavior plays an equally important function in the educational process and in future employment in the healthcare setting.

Affective behavior encompasses the ability to function as a caring, ethical individual. It covers such areas as professionalism, attitude, judgment, honesty, and integrity. It pertains to the student's ability to relate to the patient's needs and abilities and to work as a contributing member of the health care team to provide quality patient care.

In keeping with the profession's Scope of Practice and Code of Ethics, program students and graduates are expected to have and demonstrate the necessary skills in all three domains of Bloom's Taxonomy. To this end, program faculty may work with the student to develop and

reinforce the necessary affective behaviors required by the profession. Students may be counseled regarding their behavior and attitude as evident during the didactic and clinical education sessions. The Sonography Programs also reserve the right to place a student in the disciplinary process prior to acceptance.

Career Opportunities for Sonographers

Sonography is a dynamic profession that has grown significantly over the past 30 years. The U.S. Bureau of Labor Statistics states that employment of diagnostic medical sonographers is expected to grow by 10% from 2022 – 2032, which is faster than the average for all occupations.

With rapidly developing new technologies and increased use of diagnostic ultrasound procedures, growth is projected to continue in the future with employment opportunities for qualified sonographers nationwide. Graduates of our sonography programs can choose to work in clinics, hospitals, private practice physician offices, public health facilities, laboratories, and other medical settings performing examinations in their areas of specialization. Career advancement opportunities exist in higher education, administration, research, and with commercial companies in roles such as educators, application specialists, or sales representatives.

Salaries for Sonographers

In addition to excellent career opportunities, salaries for sonographers are competitive with, or higher than other professionals with similar levels of education. According to the US Department of Labor Statistics, the Diagnostic Medical Sonographer has an annual median salary of \$78,210.

Why Choose the University of Findlay Sonography Programs?

Sonography faculty have extensive backgrounds in higher education, teaching and advising, and working with a diverse student population. The faculty are passionate about mentoring students, ensuring their success, and cultivating their potential. Additionally, the unique program design provides students a balance between educational excellence and enhanced hands-on experiences.

Program Accreditation

The University of Findlay Diagnostic Medical Sonography Programs are accredited by the Commission on Accreditation of Allied Health Education Programs (www.caahep.org) upon recommendation of the Joint Review Committee on Education in Diagnostic Medical Sonography (JRC-DMS).

Commission on Accreditation of Allied Health Education Programs
9355 113th St North #7709
Seminole, FL 33775
727-210-2350
www.caahep.org

Technical Standards for Sonography Students Essential and Critical Demands of Performance

The faculty of the University of Findlay Sonography Programs are responsible for the welfare of individuals treated or otherwise affected by students enrolled in these Programs as well as for the educational welfare of its students. To fulfill this responsibility, the Sonography Programs are providing this document to inform prospective students of the performance expectations related to each Program.

The purpose of this document is to clarify Sonography students' personal, physical, emotional, sensory, and cognitive essential functions that are necessary for successful completion of the didactic and clinical components of the University of Findlay's Sonography Programs. These technical standards apply to the entire Sonography curriculum and include activities held in the classroom, lab sessions, and/or during clinical experiences.

All Sonography students are required to meet these essential functions with or without reasonable accommodations. Accommodations will not be considered reasonable if they affect the substance of the Sonography Programs, compromise the University's educational standards, and/or negatively affect the safety of students and/or other people, including patients, with whom they may come into contact during their studies. If accommodations are provided, this information will be kept in strict confidence.

All students admitted to the Sonography Programs must be able to demonstrate these abilities during classroom, lab, and clinic. Inability to comply with these technical standards may result in course failure. All Sonography applicants must review the technical standards described in this document and perform a self-evaluation to determine if they are able to maintain compliance with them.

A signed copy of this form must be returned to the Sonography Program office signifying the standards have been read and certifying compliance.

Technical Standards

The following criteria define the technical standards applicants are expected to meet to participate and function in the laboratory, classroom, and clinical settings. These technical standards are necessary and essential to provide for the health and safety of students and of the patients receiving care.

All students in the Diagnostic Medical Sonography Programs must possess the intellectual ability to learn, integrate, analyze, and synthesize data. Students must have functional use of the senses of vision, hearing, and motor function capabilities to meet the demands of the profession.

Students must:

1. Observe patients, manipulate equipment, and evaluate image quality.
 - A. Observe changes in patient condition
 - B. Utilize equipment, including computers, for maximum diagnostic results
 - C. Differentiate primary colors, shades of gray, and real-time images, as well as delineate spatial relationships, borders, visual comparisons, and pathological entities in two- and three-dimensional planes

2. Demonstrate sufficient hearing to assess patient needs and communicate verbally with other health care providers.
 - A. Acquire information
 - B. Perceive nonverbal communication
 - C. Differentiate Doppler signals
 - D. Hear audible alarms

3. Demonstrate sufficient verbal and written skills to communicate needs promptly and efficiently in English.
 - A. Must verbally instruct patients
 - B. Speak in a way that is clearly understood by the average person at close range
 - C. Foster mature, sensitive, and effective relationships with patients, colleagues, and other health care professionals
 - D. Demonstrate patient confidentiality and medical ethics

4. Demonstrate sufficient gross and fine motor coordination to respond promptly and ensure patient safety.
 - A. Safely perform imaging procedures
 - B. Assess and comprehend the condition of the patient
 - C. Ability to lift 50 pounds
 - D. Ability to stand and walk up to 8 hours a day
 - E. Ability to exercise a full range of body motions with intermittent lifting, bending/stooping, squatting, kneeling, pushing/pulling, and rotation/twisting
 - F. Ability to reach above shoulder level
 - G. Use hands repetitively including carrying, using a firm grasp, and/or manual dexterity

5. Demonstrate satisfactory intellectual and emotional functions to exercise independent judgment and discretion in the safe technical performance of sonographic imaging procedures.
 - A. Function effectively under stress
 - B. Adapt to changing environments and exhibit independent judgment and critical thinking
 - C. Demonstrate professionalism, compassion, altruism, empathy, integrity, concern for others, interest, and motivation

6. Intellectual and Communication Skills
 - A. Ability to work in a noisy environment with many interruptions
 - B. Ability to explain procedures and patient preparations clearly, verbally or written
 - C. Ability to apply critical thinking skills when obtaining a clinical history from the patient and accurately correlate that information with exam findings
 - D. Demonstrate respect for a diverse patient population

7. Maintain CPR/BLS certification

Classroom Expectations

The following is not intended to be an exhaustive list but is representative of the typical requirements expected. **The student is required throughout the academic program to:**

Attend class approximately 35+ hours per week, to include the following:

- Lecture
- Laboratory
- Reading, studying, and retaining classroom materials
- Actively participating in classroom discussions
- Carrying out assessment procedures using sound judgment and safety precautions
- Applying critical thinking processes to the academic learning experience in
 - ✓ Lecture
 - ✓ Laboratory
 - ✓ Clinical education
- Addressing problems or questions to the appropriate person at the appropriate time
- Maintaining personal appearance and hygiene conducive to professional student setting
- Maintaining work area, equipment, and supplies in a manner conducive to efficiency and safety
- Modeling socially appropriate behaviors
- Managing time effectively
- Communicating with peers, faculty, and staff effectively and professionally
- Treating peers, faculty, staff, patient/clients with respect
- Conducting him-/herself in an honest manner in dealing with faculty, staff, guest speakers, patients, and peers
- Assuming personal responsibility for professional conduct and growth
- Is responsible for abiding by the rules and regulations of the Sonography Program, clinical site, and profession

In an average academic day, a student must be able to:

- Sit: 2-6 hours
- Stand: 2-4 hours
- Walk/travel: 2 hours

Clinical Expectations

- Traveling or relocating to clinical site
- Adhere to the technical standards of the site, as each site may have additional technical standards beyond those listed above
- Manage time effectively
- Comply with deadlines
- Follow appropriate chain of command
- Follow all policies and procedures required by sites in addition to Program policies and procedures
- Complete all assignments
- Maintain patient/client confidentiality
- Comply with dress code

- Meet attendance requirements
- Demonstrate professional standards of practice and adhere to professional code of ethics
- Maintain work area, equipment, and supplies in a manner conducive to efficiency and safety
- Model socially appropriate behaviors
- Document all required information
- Effectively adjust communication for intended audience
- Demonstrate problem-solving skills in patient care
- Gather information needed prior to assessment
- Administer assessment procedures accurately
- Use sound judgment in maintaining professionalism when communicating with peers and patients or their caregivers
- Respect diversity and the values of others
- Maintain CPR/BLS certification

Request for Accommodations

If a student cannot demonstrate the technical standards described previously, it is the responsibility of the student to request an appropriate and reasonable accommodation. The University will provide a reasonable accommodation if it does not fundamentally alter the nature of the program offered and does not impose an undue hardship such as those that cause a significant expense, difficulty, or are unduly disruptive to the educational process. Accommodations do not lower course standards or alter degree requirements but instead give students an equal opportunity to demonstrate their abilities.

A student seeking accommodations may do so at any time, though a request for accommodations should be received as soon as possible. At least two weeks prior to beginning a course is ideal. Complete information regarding the process of obtaining accommodations during the academic portion of the program, as well as additional documentation that may be required, can be obtained from the:

Office of Accommodation and Inclusion

Location: Academic Support Center, Old Main (basement)

Phone: 419-434-5532

Procedure

1. Following admission to the Sonography Programs at the University of Findlay, but prior to beginning academic coursework, all students must sign a form acknowledging that they have read, understand, and meet the technical standards outlined within this document.
2. Per the procedures outlined in the University catalog and student handbook, if a student feels that he/she requires reasonable accommodation for any component of the Program, he/she must contact the UF Office of Accommodation and Inclusion before any accommodations can be made.
 - a. Approved accommodations in a classroom setting are not guaranteed and may not translate to the laboratory or clinical setting.

Due to the time it takes to properly evaluate a student's needs and to implement reasonable accommodations, it is recommended that students request accommodations as early as possible, preferably at least two weeks before the start of a course.

Program Overview

The University of Findlay offers an Associate of Arts Degree and a Bachelor of Science Degree with a major in Diagnostic Medical Sonography or Echocardiography.

An Associate of Arts Degree with a major of Diagnostic Medical Sonography or Echocardiography requires completion of 106 credit hours to include CORE+ curriculum requirements, program prerequisites, and major requirements.

A Bachelor of Science Degree with a major of Diagnostic Medical Sonography or Echocardiography requires completion of 124 credit hours to include CORE+ curriculum requirements, electives, program prerequisites, and major requirements.

A Certificate of Completion may be offered to those who have earned a previous college degree. Program prerequisites and all sonography coursework must be completed to be awarded the Certificate.

The Sonography Programs at the University of Findlay offer a unique and innovative approach to sonography education. Students will spend approximately 35+ hours per week on campus in the classroom and laboratory settings over the summer and fall semesters. Upon completion of the academic portion of the program, students will spend 35 weeks in a clinical education site at 40 hours per week to equal 1,400 hours. In the clinical setting, students will apply knowledge acquired on campus in direct patient care settings.

Location/Facilities

The Sonography programs are in the Diagnostic Services Building located at 401 Trenton Avenue. The Sonography Programs have dedicated classrooms and labs that house state-of-the-art equipment and instructional aides.

University facilities that may be of interest to Sonography students include: The Ralph and Gladys Koehler Fitness and Recreation Complex (indoor track, basketball, volleyball, tennis courts, Student Recreation Center), Croy Physical Education Center (gymnasium, swimming pool, and basketball court), the Gardner Fitness Center (exercise and weight rooms), Shafer Library, Alumni Memorial Union, Bucher Center (enrollment services, counseling services), Buford Center for Diversity and Service, and the Cosiano Health Center.

Credit for Previous Sonography Education

Previous sonography coursework is not considered to fulfill the requirements of the courses within the Sonography Programs.

Student Observation Hours

Prior to applying, students are required to spend a minimum of four hours of observation in General Sonography and four hours of observation in Echocardiography, totaling eight hours. Observation time must be completed in a hospital-based department. Hours must be documented on the Student Observation Form. Students are required to return the signed forms to the Sonography Programs Office.

Prospective students must demonstrate professional attributes during the observation process, to include attitude, judgment, honesty, integrity, and attire. Students who demonstrate unprofessional behavior may be denied the opportunity to continue in the admissions process.

Program Prerequisites

The following curriculum prerequisites must be met prior to conditional acceptance into the sonography programs:

Prerequisite Course	University of Findlay Equivalent
Human Anatomy and Physiology I w/Lab	BIOL 222/222L, 322/322L
Human Anatomy and Physiology II w/ Lab	BIOL 223/223L, 323/323L
General Physics I w/Lab	PHYS 150/150L, 250/250L
Algebra, statistics, or higher math	MATH 138, MATH 123, or higher
Communication skills	ENGL 106, COMM 110, or similar

The courses listed above must be completed with a “C” or higher, and the grade point average for these courses must be 2.5 or higher out of 4.0.

Courses taken at other colleges or universities may be deemed equivalent to courses taken at the University of Findlay by the Office of the Registrar. It is strongly recommended that prerequisite courses taken more than five years ago be repeated.

Admission Process – Due January 1st; Summer Start Only

In their junior year of study, **University of Findlay students** currently enrolled in the Sonography Programs majors will be considered for admission to the upcoming cohort upon submission of:

- Patient Confidentiality Agreement Form
- Two Observation Forms (four hours in General and four hours in Echo)
- Any additional requirements as communicated by Program faculty and/or on the website

The above forms may be found on the Sonography website at <https://www.findlay.edu/health-professions/sonography/admission-information>. Please send these as **one submission** via email to dms@findlay.edu.

Note: Any student who switches majors or submits the above documentation following the January 1st application deadline may not be considered.

Non-UF, transient (visiting), or non-degree/certificate-seeking students:

Above student types must first apply to the University of Findlay. To apply, visit: <https://www.findlay.edu/admissions/apply-now>.

Please select **Summer** as the entry term you intend to begin classes. Sonography program courses are offered only with Summer start dates. Select the "**Non-Degree/Certificate Seeking**"

option in the application, then select either "Diagnostic Medical Sonography" (General Sonography) or "Echocardiography." As a part of your application to the University of Findlay, you will be asked to submit a non-refundable \$50 application fee, which may be paid online.

To be considered for admission to the upcoming cohort, you must also submit:

- Patient Confidentiality Agreement
- Two Observation Forms (four hours in General and four hours in Echo)
- Any additional requirements as communicated by Program faculty and/or on the website

The above forms may be found on the Sonography website at <https://www.findlay.edu/health-professions/sonography/admission-information>. Please send these as **one submission** via email to dms@findlay.edu.

Please also submit current, official transcripts by having them emailed to admissions@findlay.edu.

Student Selection Process

The Sonography Programs will review all applicants who have submitted a complete file. Please see "Selection Criteria" below for further information. Please note that applications received after the deadline may only be considered if time and program availability permit.

A completed file includes:

- UF acceptance
- A minimum cumulative GPA of 2.5
- Submission of official transcripts from all post-secondary institutions attended
- Documentation of observation hours (four hours each in General and Echo)
- Patient Confidentiality Agreement
- Completion of program prerequisites with a "C" or higher

In the event a student is not selected for admission into a Sonography Program, the student must notify the Sonography Program Office if they would like to be reevaluated for the next program start date or if they would like their file closed. Students who do not respond will have their file closed and must repeat the application process for any future program admission.

A student under academic/disciplinary suspension or dismissal from the University of Findlay, another college/university, or an accredited diagnostic medical sonography program will not be considered for enrollment.

The number of accepted students is determined by the number of available clinical education sites available for each concentration.

The following criteria will be used to rank students for acceptance:

- Cumulative GPA will be multiplied by 15 for a maximum of 60 points
- Points for any remaining courses required for degree completion will be awarded as follows:
 - The maximum 40 points will be given to students who have all required degree

- courses completed (excluding the sonography program courses)
- 35 points will be given for students having 1-2 courses remaining
- 28 points will be given for students having 3-6 courses remaining
- 15 points will be given for students having 7-10 courses remaining
- No points will be given for students having 11 or more courses remaining
- Two points will be given to current UF students
- In the event students earn the same number of points, selection will be determined by the earliest submission date for forms and/or transcripts

All students are ranked using the above point system. Program applicants will be placed into one of three categories as follows: *conditionally accepted*, *alternate*, or *denied*. The top point earners in each concentration will move forward in the acceptance process.

Students are placed on the *alternate* list if there is limited clinical site availability. Status as an *alternate* may change to *conditionally accepted* if a clinical site becomes available.

Denied students may seek readmission and must notify the program office of their intentions to reapply.

Prior to the beginning of the academic component, students are required to submit verification of a complete physical examination, current immunization requirements, and undergo a background check. All costs are the student's responsibility.

Once a *conditionally accepted* student completes all health requirements, a background check with no adverse findings, and secures clinical site placement, he or she will be considered a *fully accepted* student.

The University of Findlay Sonography Programs conduct all aspects of each program without regard to race, color, gender, gender expression, gender identity, age, religion, disability, political orientation, sexual orientation, ethnicity, or national origin.

Approximate Program Timeline*

January 1 st	Completed file due <ul style="list-style-type: none"> ● Patient Confidentiality Agreement ● Observation Form x2 (4 hours Echo, General) ● All current post-secondary transcripts ● Minimum cumulative GPA of 2.5 on a 4.0 scale ● Completion of all prerequisites with "C"/higher ● UF acceptance ● Any additional requirements per faculty or the website
January 15 th	Admissions Committee will review student files
February 5 th	Determination letters sent to students
February 10 th	Seat acceptance verification is due
February 15 th	Students receive clinical interview process information
April 15 th	Students must have clinical site secured

*All dates are approximate. Please contact dms@findlay.edu with any specific questions.

Clinical Sites

The Sonography Programs are associated with many approved clinical sites. Clinical education must be completed within the United States under the supervision of credentialed sonographers.

Clinical Site Interview Process

Students are not permitted to solicit any clinical site for placement. If a student has an interest in attending a clinical site that is not listed, he or she should reach out to a faculty member.

All students must have secured a clinical site to begin the academic component in May. Students will receive a list of available sites to rank their order of preference for clinical site placement. The form must be returned by the deadline. **Points earned for admission will also determine which students interview at their top choice(s).**

The program cannot guarantee that students will be placed at their top choice(s). Clinical site placement is dependent upon availability and the final decision is made by the site's Clinical Supervisor. Each clinical site reserves the right to accept or decline a student for an interview or clinical site placement.

Students are not permitted to contact clinical sites for an interview until instructed to do so by the Sonography Program's Clinical Coordinator.

The program will notify the student as soon as possible of his/her confirmation by the facility for clinical education once all students have completed the interview process and the program receives follow up information from the sites.

After the clinical interview for placement, if a student is not chosen by the hospital, students are not permitted to contact the department for any reason. Failure to abide by the policy will result in the initiation of the disciplinary process.

The student must submit to the clinical site all required documents related to each site's specific requirements. Supporting documentation may include all official transcripts, health forms, drug screen, and background check information. There also may be site-specific forms or health requirements for individual locations.

Total Program Clinical Hours

Clinical Education Hours	1320
<u>Personal Time</u>	<u>80</u>
Total Clinical Hours	1400

Students receive clinical education at one or more clinical sites for a period of 1320 contact hours. The student receives instruction and participates in the performance of all types of clinical sonography procedures, patient care, administrative duties, equipment usage, and quality control.

Students may take up to 80 hours of vacation/sick time during their clinical education. Time off in excess of 80 hours must be made up prior to the student being able to graduate. Permission to complete additional hours at a specific location is at the discretion of the clinical site.

Estimated Cost of the Sonography Programs:

Tuition	\$ 22,650.00	
Student Activity Fee	300.00	(non-refundable)
General Service Fee	1010.00	(non-refundable)
One-Time Registration Fee	100.00	(non-refundable)
One-Time Orientation Fee	150.00	
Learning Resource Fee	150.00	(non-refundable)
DMS Lab Fee	150.00	
Trajecsys	100.00	
ARDMS SPI Exam	225.00	
One ARDMS Specialty Exam	250.00	
Total (without Housing/Board)	\$ 25,085.00	
Housing (didactic only)	\$5,200.00	
Board (didactic only)	2,550.00	and up (if a meal plan is required*)
Total (with Housing/Board)	\$32,835.00**	and up

All official billing is handled by the Business Office. These amounts are subject to change.

*Diagnostic Services Department (DIAG) housing will include a kitchen with appliances; as such, **eligible** students may choose to waive the meal plan and prepare their own meals. Please refer to the meal policy for details: <http://catalog.findlay.edu/current/Undergraduate-Catalog/Copy-of-University-Policies/Meal-Plan-Participation-Requirement>

**Tuition will be billed at the 2023-2024 rate of \$453 per credit hour, with a total of 50 credit hours. Students will be charged for 12 credit hours each for the summer and fall academic portions of the program. Students will then be billed for 12 ½ and 13 ½ credit hours, respectively, for spring and summer, during which they are in the clinical portion of the program.

Other Expenses

- An estimated cost of textbooks and software programs is approximately \$1,000.00.
- The Trajecsys Clinical Reporting System used during the clinical component of the program. This electronic documentation software may be purchased for approximately \$100 at the University of Findlay Bookstore or through direct payment to Trajecsys.
- Each student must undergo a physical exam, background check, provide proof of vaccinations, and complete a drug test. All costs are the responsibility of the student.
- The student will also incur expenses during clinicals which may include (but not be limited to) room and board, transportation, uniforms, and other miscellaneous expenses.
- Seminars and registry preparation materials.
- Students are required to apply and pay the dues associated with the professional society membership(s) that would pertain to the student's field of concentration. Faculty members will distribute the application for completion. The applications and fees will then be collected and sent to the appropriate society, as a group, by the program office.

Society of Diagnostic Medical Sonography (SDMS) – Current membership benefits and dues can be found at: <http://www.sdms.org/membership/join-sdms/member-benefits/student-benefits>.

American Society of Echocardiography (ASE) – Current information concerning applying for and the benefits can be found at: <http://asecho.org/wordpress/wp-content/uploads/2016/11/1154ASE-New-Members-App-FNA.pdf>.

Calendar

The Sonography Programs accept students for a summer (May) start date.

The University of Findlay and the Sonography Programs honor the following legal holidays:

New Year's Day	Independence Day
Martin Luther King Day	Labor Day
Good Friday	Thanksgiving Day
Memorial Day	Christmas Day

During the academic semesters, the academic calendar is followed.

The University of Findlay and the Sonography Programs reserve the right to adjust this calendar when necessary.

Housing

On-campus housing is offered during the Sonography Programs. It is available on a first come, first-served basis and will be discussed in the letter of conditional acceptance into the program. Houses are non-coed, will be rented only to Diagnostic Services Department (DIAG) students, and are located nearby so students can easily walk to class. These are not new homes, but they are safe, clean, and inexpensive.

Each student will have a private bedroom that can be secured. The kitchen, living room area, and bathroom(s) will be shared. The bedroom will have an extra-long twin bed, a desk, dresser, and a place to hang clothes. The living room will have furniture, and the kitchen will contain a stove, refrigerator, microwave, table, and chairs. A washer and dryer will also be supplied. Students should bring their own linens, towels, personal items, lamps, dishes, cookware, etc. Utilities, including cable and internet, are included. Students are responsible for cleaning their own living spaces. The full rental amount will be billed to student's account and may be paid through the Business Office along with tuition. For questions about housing, contact the Housing and Residence Life at (419) 434-6995.

Housing Requirements:

<https://www.findlay.edu/offices/student-affairs/housing-residence-life/frequently-asked-questions>

Insurance

Health Insurance – All students are required to have health insurance coverage throughout their time in the Sonography Program, including both the academic and clinical components. Students are responsible for purchasing their own health insurance and providing proof of coverage prior to the beginning of the first didactic component of the program.

The University of Findlay does not provide insurance to cover students' personal possessions. It is suggested that the student consider extending his/her own policy to cover personal effects. The University of Findlay is not liable for damage to or theft of personal property.

Professional Liability Insurance – While in clinical education, students are provided with student liability insurance by the University of Findlay. The coverage is **not** effective if the student is determined to be functioning as a staff sonographer and/or receiving payment for services provided at any facility at any time during the program. In addition, students are encouraged to obtain their own professional liability insurance coverage. Students may be held liable for the cost of breakage of equipment due to negligence on their part.

International Students

Applicants receiving their post-secondary education outside the United States must have their credentials evaluated to show U.S. equivalency. The University of Findlay provides free in-house credential evaluations for all applicants. If an applicant already has a third-party credential evaluation report from a NACES-approved organization, the applicant may choose to do so. NACES-approved organizations can be found at this link: <https://www.naces.org/>. Official and original transcripts or marks sheets and degree completion certificates in English as well as the native language can be uploaded through the online application portal. In addition, an official TOEFL or IELTS examination taken in the past two years must be uploaded in order for the application to be considered complete.

If the TOEFL score is below 61 or if no score is provided, the applicant will need to successfully complete the Intensive English Language Program prior to entering a Sonography Program. The TOEFL-iBT score must be an 89 total and 26 speaking, 24 writing, 21 reading and 18 listening or the applicant will need to successfully complete the Intensive English Language Program prior to entering a Diagnostic Medical Sonography Program.

IELTS results must be an overall band score of 6.0 or higher or the applicant will need to successfully complete the Intensive English Language Program prior to entering a Sonography Program.

Tuition and Fees; Withdrawal and Refunds for Tuition and Fees

The sonography curriculum is all-inclusive. For this reason, withdrawal from one course requires withdrawal from the entire program. The student may reapply to the program the following year. Readmission is not guaranteed.

Contact the Business Office for information regarding payment options.

<https://www.findlay.edu/offices/business-affairs/student-accounts/>

<http://catalog.findlay.edu/en/current/Undergraduate-Catalog/Expenses/Withdrawal-Policy>

<http://catalog.findlay.edu/en/current/Undergraduate-Catalog/Expenses/Withdrawal-Policy/Tuition-Adjustments-and-Refund-Schedule>

Financial Aid

Information and applications concerning financial assistance may be obtained by contacting the Financial Aid Office at the University of Findlay.

Students at UF need to be aware that any institutional merit scholarship, need-based scholarship, or grant **will not be awarded for any part of the professional program year.**

Questions regarding Financial Aid forms should be directed to the Financial Aid Office at the University (419-434-4791).

Dean's List

Students who achieve a grade point average of at least 3.50 during the academic session may be named to the Dean's List for that semester.

University Policies

The Diagnostic Medical Sonography Programs abide by the policies of the University of Findlay.

Academic Integrity:

<https://findlay.smartcatalogiq.com/current/Undergraduate-Catalog/Student-Rights-and-Responsibilities-Statement/VIII-Academic-Integrity>

Academic Grievances / Grade Challenge:

<http://catalog.findlay.edu/en/current/Undergraduate-Catalog/Academic-Standards-Progress-and-Appeals/Grade-Challenge>

Alcohol:

<http://catalog.findlay.edu/current/Undergraduate-Catalog/Copy-of-University-Policies/Alcohol-Policy-for-Students-and-Student-Organizations>

Drug Policy:

<http://catalog.findlay.edu/en/current/Graduate-Catalog/University-Policies/Drugs>

FERPA / Family Education Rights and Privacy Act Information:

<http://catalog.findlay.edu/en/current/Graduate-Catalog/University-Policies/FERPA-Family-Educational-Rights-and-Privacy-Act-Information>

Student Rights and Responsibilities Statement:

<http://catalog.findlay.edu/current/Undergraduate-Catalog/Student-Rights-and-Responsibilities-Statement>

Notice of Non-Discrimination, Anti-Harassment, and Hostile Campus Environment Policy

The University of Findlay strives for an environment in which all individuals are treated with respect and dignity. Each individual has the right to study and work in an atmosphere which promotes equal opportunities and prohibits discriminatory practices and harassment based upon age, race, ethnicity, national origin, color, religion, sex, gender identity, handicap, sexual orientation, genetic information, veteran or military status and physical or mental disabilities. Harassment of any kind, whether verbal, physical, or environmental, is unacceptable and will not be tolerated.

As required by state and federal law, the University does not engage in discrimination in its programs, activities and policies against students, prospective students, employees or prospective employees. The University prohibits and will not tolerate any such discrimination or harassment at its facilities, programs, and activities. Inquiries about sex discrimination, sexual harassment, and other questions about the application of Title IX and its implementing regulations may be referred to the Title IX Coordinator, the U.S. Department of Education's Office of Civil Rights' Assistant Secretary, or both.

The University's Non-Discrimination Policy can be found here:

<https://www.findlay.edu/offices/student-affairs/title-ix/non-discrimination>

Inquiries regarding non-discrimination in employment may be directed to:

U.S. Equal Employment Opportunity Commission
800-669-4000

Ohio Civil Rights Commission
888-278-7101

Sex Discrimination, Sexual Harassment, and Other Forms of Sexual Misconduct; Designation of Title IX Coordinator

Title IX prohibits the University from discrimination on the basis of sex in the education programs or activities that it operates. This prohibition extends to admission and employment. The University has adopted a policy that provides for the prompt and equitable resolution of complaints alleging any action prohibited by Title IX and explains the process that the University will use for doing so. A copy of this policy is available on the University's website at: <https://www.findlay.edu/offices/student-affairs/title-ix/title-ix-policy>.

The Title IX Coordinator has been designated and authorized to coordinate the University's efforts to address concerns relating to discrimination and harassment on the basis of sex, gender, gender identity, and sexual orientation. Any person may report sex discrimination, including sexual harassment (whether or not the person reporting is the person who experienced the conduct that could constitute sex discrimination or sexual harassment), at any time including non-business hours by contacting the Title IX Coordinator as follows:

Charles Ludwig
Director for Equity & Title IX
Civil Rights/Title IX Coordinator
Old Main Office #45
1000 N. Main Street
Findlay, Ohio 45840
Telephone: (419) 434-4038
Email: charles.ludwig@findlay.edu

Inquiries about Title IX may also be directed to the U.S. Department of Education's Office for Civil Rights by contacting 1-800-421-3481 or emailing ocr@ed.gov.

Visit the UF website for the most current academic catalog, calendar, policies and procedures.
<https://www.findlay.edu/>

Curriculum:

Sonography students are highly encouraged to complete all degree requirements prior to the start of the program.

All students enrolled in a Sonography Program will complete the following courses:

DMSA 400 Introduction to Sonography

This course focuses on defining the scope of practice of the sonographer in the clinical setting and the basic skills required for patient care. Topics will include communication skills, basic vital signs, medical emergencies, invasive procedures and isolation techniques, history of sonography, career options, and professional societies. Scanning planes are presented to include correlation with other imaging modalities. Equipment knobology, sonographic characteristics, and scanning principles will be introduced.

DMSA 405 Clinical Anatomy

Exploration of cross-sectional anatomy in the human body with an emphasis on ventral body cavities and organs of sonographic interest. Pathogenesis of common disease processes and alteration of organ morphology and function will be discussed. Correlation of pertinent patient history, laboratory data, and imaging information will be emphasized to support development of analytical skills necessary for clinical practice. Emphasis will be placed on common pathologies encountered by the sonographer.

DMSA 410 Language of Sonography

This course is the study of the terminology used routinely in the medical environment and specifically in the field of diagnostic medical sonography. The information will be presented according to anatomical systems. This course is designated for students who are accepted into one of the diagnostic medical sonography programs or for those who are pre-diagnostic medical sonography students.

DMSA 415 Physics and Instrumentation

Discusses the fundamental principles of ultrasound physics along with the design and operation of the ultrasound equipment. Topics include wave characteristics, artifacts, propagation, acoustic variables, the Doppler effect, color flow mapping, hemodynamics, volume rendering, biological effects, and review of mathematical skills. Students will be expected to sit for the American Registry of Diagnostic Medical Sonographers (ARDMS) Sonography Principles and Instrumentation (Physics) Examination prior to the end of the course.

DMSA 425 Capstone

This course will introduce the student to basic interview skills, professional portfolio and resume development. Emphasis will be placed on the Society of Diagnostic Medical Sonographers (SDMS) scope of practice and career options.

All students enrolled in General Sonography will complete the following courses in addition to the DMSA courses listed previously:

DMSG 400 General Sonography I – Discusses the normal anatomy and physiology related to the major abdominal organs, major abdominal vessels, and superficial structures in the adult and pediatric patient. Topics include sonographic appearance, clinical assessment, evaluation protocols, technical factors and image quality.

DMSG 405 General Sonography II – Discusses the normal anatomy and physiology related to the non-gravid female and pediatric pelvis and normal obstetrics. Topics include sonographic appearance, clinical assessment, evaluation protocols, technical factors and image quality.

DMSG 410 General Sonography III – Discusses pathology of the major abdominal organs and major abdominal vessels and superficial structures in the adult and pediatric patient. Topics include sonographic appearance, clinical assessment, evaluation protocols, technical factors and image quality.

DMSG 415 General Sonography IV – Discusses the pathology related to the non-gravid female and pediatric pelvis as well as obstetrical exams. Topics include sonographic appearance, clinical assessment, evaluation protocols, technical factors and image quality.

DMSG 420 Clinical Education I – This course will provide basic instruction and scanning experience in sonography in a hospital or other healthcare setting. The student will be able to demonstrate the ability to perform basic sonographic examinations according to the protocols established by the program and healthcare facility utilizing sonographic equipment.

DMSG 425 Clinical Education II – This course will provide basic instruction and scanning experience in sonography in a hospital or other healthcare setting. The student will be able to demonstrate the ability to perform basic sonographic examinations according to the protocols established by the program and healthcare facility utilizing sonographic equipment at the level of an entry-level sonographer.

All students enrolled in Echocardiography will complete the following courses in addition to the DMSA courses listed previously:

DMSE 400 Echocardiography I — This course provides a foundation in the principles of echocardiography and gray scale duplex imaging of arterial and venous sonography. This course involves understanding and recognition of normal cardiovascular anatomy, the electrophysiology of the heart, the conduction system and mechanical events of the cardiac cycle. This course discusses mechanical and electrical events in cardiovascular hemodynamics.

DMSE 405 Echocardiography II – This course provides a foundation in the principles of pre-load and after-load, valvular disease, ischemic cardiac diseases, myocardial diseases as well as endocardial diseases, pulmonic arterial diseases, disease of the aorta and great vessels, and trauma. Each section of diseases will be discussed in detail regarding causes, signs, symptoms, echocardiographic findings, and complications.

DMSE 410 Echocardiography III – This course involves understanding of clinical pharmacology. Pharmacology, indications and contraindications of common drugs used in cardiac patients. Pharmacology of provocative stress agents and their uses/adverse effects will be discussed. This course also discusses potential side effects of cardiac medications on the cardiac function and the related echocardiographic findings.

DMSE 415 Echocardiography IV — This course covers prosthetic valves, cardiac surgeries in adult population, pericardial diseases and cardiac tumors. Each section of diseases will be discussed in detail regarding causes, signs, symptoms, echocardiographic findings, and complications. This course also discusses echocardiographic evaluation of cardiac surgery patients.

DMSE 420 Echocardiography V – This course also involves understanding the indications and utility of advances in echocardiography such as; Stress Echocardiography, Transesophageal Echocardiography, Intraoperative Echocardiography, Contrast Echocardiography, and also 3D Echocardiography and Echo guided procedures.

DMSE 425 Clinical Education I – This course will provide basic instruction and scanning experience in sonography in a hospital or other healthcare setting. The student will be able to demonstrate the ability to perform basic sonographic examinations according to the protocols established by the program and healthcare facility utilizing sonographic equipment.

DMSE 430 Clinical Education II – This course will provide basic instruction and scanning experience in sonography in a hospital or other healthcare setting. The student will be able to demonstrate the ability to perform basic sonographic examinations according to the protocols established by the program and healthcare facility utilizing sonographic equipment at the level of an entry-level sonographer.

Frequently Asked Questions

Do I need prior medical experience to apply to the Sonography Programs?

Prior medical experience via working or volunteering is not required for admission to any of the Sonography Programs. Eight hours of observation (4 Echo/4 General) are required.

Do I need a four-year degree to work as a sonographer?

At this time, a four-year college degree is not mandated, but it is encouraged.

How do I obtain national certification as a diagnostic medical sonographer or echocardiographer?

The first step in the credentialing process is successful completion of the ARDMS Sonography Principle and Instrumentation (SPI) Exam. The SPI Exam can be completed during the program after successful completion of DMSA 415 Physics and Instrumentation.

The second step is successful completion of a specialty exam, which is dependent upon the specific sonography program you chose. Echocardiography students would take the echo exam and general students would take the abdomen/small parts and/or obstetrics/gynecologic. The specialty exams can be completed 60 days prior to graduation; however, credentials are not awarded until all degree requirements are met.

How many students do the Sonography Programs accept?

The number of students accepted into each sonography program will vary depending upon clinical site availability. This number changes from year to year.

What if I was convicted of a crime?

Student background checks are required. A student whose background check is returned with adverse findings is encouraged to submit this information to the American Registry of Diagnostic Medical Sonographers (ARDMS). Using its Compliance Policy, the ARDMS will determine whether the student can sit for the credentialing examinations. This policy applies to all students and is found on the ARDMS website at <https://www.ardms.org/compliance-predetermination-application/>.

As well, at the discretion of the clinical site, students with an adverse background check may not be permitted to begin the clinical component of the program. The Sonography Programs are required to notify a clinical site of a student's adverse background check.

The Sonography Programs reserve the right to refuse admission to any student involved in a criminal matter.

What is the policy regarding drug testing?

A drug screen will be required prior to entering clinical education. If at any time a student is suspected of being under the influence of alcohol or drugs, the student will be required to undergo drug testing. All testing will be at the expense of the student.

Applicants and students should refer to the University of Findlay's Drug and Alcohol Policies.

Alcohol:

<http://catalog.findlay.edu/current/Undergraduate-Catalog/Copy-of-University-Policies/Alcohol-Policy-for-Students-and-Student-Organizations>

Drug Policy:

<http://catalog.findlay.edu/en/current/Graduate-Catalog/University-Policies/Drugs>

What happens if I don't meet the application deadline for the class that I want to attend?

Applications received after the January 1st deadline will be reviewed at the discretion of the Admissions Committee and will only be considered if time and space permit.

Do I need to have all of the prerequisite courses completed prior to applying to the program?

No. Students may *apply* but may not *begin* any sonography program without successful completion of all listed program prerequisite courses with a "C" or better. Students are also highly encouraged to complete all other degree requirements prior to starting any sonography program. Students who opt to complete all degree requirements prior to entering the sonography program of their choice will be able to immediately seek employment upon program completion.

If I apply and all my documentation is received and course work is completed by the deadlines, will I automatically be accepted into the program?

No. Acceptance is competitive and based on several determining factors, as previously outlined.

What happens if the semester at the college that I am attending does not end until after the documentation submission date, so I do not have a transcript showing course grades?

An official, current transcript is needed to verify all course completion and final grades. If any of these current courses is a program prerequisite, your application file will be incomplete.

I received a "D" in one of the prerequisite courses. Can I still attend the program?

No. All program prerequisite courses must have a "C" or higher grade. Any prerequisite course with a "C-" or below must be repeated to meet the academic admission requirements of the program. Even if the low grade is accepted by the college/university that you are attending, it does not meet the Program requirements and therefore will need to be repeated prior to entering any Sonography Program.

I received a letter stating admission into one of the Sonography Programs was denied. Why?

Based on the documentation in your file, the Admissions Committee determined that you did not meet the criteria for admission into the program. You would then be required to notify the program office if you desire to be considered for a future sonography program. If the program office does not receive this information from the student, the student's file may be automatically closed. Once a student's file is closed, to be reconsidered for admission the student would be required to submit a new application and pay the posted application fee.

Will I need a physical exam?

Yes, programmatic accreditation requires documentation that a student enrolled in a Sonography Program be free from communicable diseases and can physically and mentally handle the requirements of the program. In addition, each clinical site may require specific medical test results and exams be completed before the start of clinical education. Accepted students will receive a list of the specific medical requirements and deadlines. The cost of all medical tests is the responsibility of the student.

When do classes start in the Sonography Programs?

The Echocardiography and General Sonography programs begin in May.

What are the class times?

Sonography classes are held between the hours of 8:00 a.m. to 12:00 Noon and 1:00 p.m. to 5:00 p.m. Monday through Friday. Class times may vary, and students will receive a specific course schedule with as much advance notice as possible.

When does clinical education begin?

Your clinical education will begin immediately following the academic session. Clinical education lasts for 35 weeks. You are committed to a 40-hour week for each of the 35 weeks for a total of 1400 clinical hours.

Where can I attend clinical education?

Clinical education must be completed in an approved clinical site.

Do I have to pay for my transportation to clinical education?

It is your responsibility to provide and pay for all expenses related to travel to and from the clinical site.

Is housing available during the didactic component of the program?

Yes, the University of Findlay offers on-campus housing for the semesters that you are enrolled in the Sonography Programs; this is available on a first come, first-served basis. Houses are non-coed, will be rented only to Diagnostic Services students, and are located nearby so students can easily walk to class.

Is housing available during the clinical education component of the program?

Housing during the clinical education component is your responsibility. If your clinical site is in reasonable proximity to Findlay, you may be permitted to stay in the Diagnostic Services housing, **based on availability and a case-by-case basis.**

Can I interview for clinical placement at a clinical site where I interviewed previously and was denied acceptance during a previous academic year?

No, students are not permitted to re-interview at a clinical site where they were previously denied placement.

How many students can a clinical site take?

The number of students completing clinical education at each site is set by the programmatic accreditation agency (JRCEDMS) and the Sonography Programs must adhere to its decision. Some of the facilities that the Sonography Programs use may also be affiliated with other sonography programs and therefore may not routinely be available for clinical education. Typically, each clinical site accepts one student.

What is the dress code for clinical education?

Students are required to wear scrubs for clinical education. A detailed list of appropriate and acceptable clinical attire is provided to the students by the Sonography Program Office. The Clinical Dress Code Policy is in the Clinical Student Handbook and is covered during clinical orientation.

Can I work while I am enrolled in the program?

Any outside employment must not interfere with scheduled class times or clinical education hours. The Sonography Programs strongly recommend that no outside employment be attempted during the program. Class time or clinical education hours will not be adjusted to meet employer needs.

Can I maintain my status as an athlete while enrolled in one of the sonography programs?

It is possible to maintain athletic status during the academic semester of the program, yet it would be difficult to manage an athletic schedule during the clinical component. The schedule during the academic semester and time requirements of clinic cannot be changed to accommodate practice and game times.

Is financial aid available?

Information and applications concerning financial assistance may be obtained by contacting the Financial Aid Office at the University of Findlay.

Students at UF need to be aware that any institutional merit scholarship, need-based scholarship, or grant **will not be awarded for any part of the professional program year.**

Questions regarding Financial Aid forms should be directed to the Financial Aid Office at the University (419-434-4791).

I have additional questions about the Sonography Programs. Who do I contact?

You can call the Sonography Program Office at (419) 434-4708 or email us at dms@findlay.edu.

While every effort is made to ensure the accuracy of the information contained herein, the University of Findlay and the Sonography Programs reserve the right to make changes at any time without prior notice.