



DIAGNOSTIC MEDICAL SONOGRAPHY

Associate in Science Degree

If you are fascinated by the inner workings of the human body, then consider becoming a sonographer. Sonographers play a dynamic role in the treatment and care of patients. When a doctor needs to study any of the soft-tissue organs of a patient - like the liver, gallbladder or kidneys - it is a sonographer who provides the images, using high-frequency sound waves (ultrasound). Besides providing doctors with images of many of the body's internal structures, sonographers also often provide expectant mothers with their first glimpse of an unborn child, a moment most people remember for the rest of their lives. A wide range of career opportunities are available in clinical, commercial and educational settings. Sonographers often perform research or quality assurance testing of new imaging products, supervise a medical department, work in sales and marketing, or develop educational programs.

Note:

The Diagnostic Medical Sonography program is a selective admission, limited enrollment program. Students must be prepared for rigorous coursework, and must meet all prerequisites before continuing in the program.

Potential Careers

- Diagnostic Medical Sonographer

Potential Earnings

\$38,000 - \$42,000 per year

Contacts

Health Sciences Career Program Advisor

West Campus: 407-582-1288

For more information, visit our Website at:
valenciacc.edu/west/health

A.S. to Bachelor's Degree Career Path...

Now the A.S. degree has a career path to continue to a Bachelor's degree. All of Valencia's A.S. degrees will transfer into the new B.A.S. program at UCF's regional campuses, as well as other universities. The B.A.S. degree has seven different tracks you can specialize in - and the cool thing is, the specialization you major in does not have to be in the same area as the A.S. degree.

Check it out at regionalcampuses.ucf.edu/bas

The Internship & Placement Office

is available to assist you in locating an internship or job resources.

Vertrilla Hunt, *East Campus*: 407-582-2726

Carmen Diaz, *West Campus*: 407-582-1034

Matthew Abalos, *Osceola Campus*: 407-582-4196

For more information, visit: valenciacc.edu/ipo

DIAGNOSTIC MEDICAL SONOGRAPHY

Diagnostic Medical Sonography

Associate in Science Degree

Limited Access

This program is designed to prepare the student for employment as a diagnostic medical sonographer. The sonographer should be skilled by academic and clinical training to perform ultrasound examinations under the supervision of a qualified physician.

Diagnostic Medical Sonography is a dynamic new field in the medical arena. It is presently being used to evaluate many soft tissue organs in the body. Some of these organs are the liver, gallbladder, kidneys, and pancreas. One of the most fascinating uses of diagnostic ultrasound is the examination and evaluation of the unborn child. With the most recent technical advances in ultrasound, the sonographer is now able to evaluate flow dynamics of many blood vessels of the fetus, pediatric and adult patient.

Properly trained sonographers are in demand in hospitals, clinics, doctor's offices, marketing, applications, and mobile services.

The program is accredited by the Commission on Accreditation of Allied Health Education Programs. Graduates are eligible to take the national certifying examinations administered by the American Registry of Diagnostic Medical Sonographers.

Diagnostic Medical Sonography is a limited access program. Admission to Valencia does not imply acceptance to the Diagnostic Medical Sonography Program; students must apply and be accepted into the program. General admission procedures for this program are found in the Admissions section of this catalog.

Program expenses are given in the Financial section of this catalog.

Admission requirements for the A.S. Degree in Diagnostic Medical Sonography are:

- Submit a completed Valencia Community College application
- Complete Diagnostic Medical Sonography Program Prerequisites for Admission with a minimum grade of "C"
- Student's official Valencia record must indicate degree-seeking status
- Have a minimum overall college GPA of 2.5 (including transfer work)
- Satisfy the college entry testing requirement and satisfactorily complete all mandatory courses in reading, student success, mathematics, English, and English for Academic Purposes in which you are placed
- Students must successfully complete the designated entrance test requirements for Health Sciences prior to submitting the Sonography application
- Submit a completed Valencia Diagnostic Medical Sonography program application

The program curriculum includes all courses that are required for the Diagnostic Medical Sonography Associate in Science Degree. A minimum grade of C must be achieved in all courses identified in the program curriculum, including courses required for admission. After being accepted in the Diagnostic Medical Sonography Program, the

courses in the curriculum are progressive in nature, with one course building on the preceding course. Because of this progressive relationship, all courses in a term must be completed with a grade of C or better in order to continue to the next term. If a student achieves less than a C or withdraws, before or after the college deadline, from any course that is required for the Diagnostic Medical Sonography Associate in Science Degree, the student will not be allowed to continue in the program. Several Florida public universities recently have begun to provide opportunities for A.S. degree graduates to pursue a bachelor's degree. Information about such opportunities, including those at the University of Central Florida, is found in the Introduction to this catalog section. Students who want to continue their education should contact their university of choice. Students are strongly encouraged to consult a Health Sciences advisor for assistance in determining the best education plan for their career goals.

Prerequisite:

Course	Title	Credits
+* BSC 2093C	Human Anatomy and Physiology I	4
	Total Credits	4

Year I

FALL TERM

Course	Title	Credits
+* SON 1000C	Introduction to Medical Sonography	3
+ HSC 1230C	Methods of Patient Care	2
+ HSC 1531	Medical Terminology	3
+* BSC 2094C	Human Anatomy and Physiology II	4
	Total Credits	12

SPRING TERM

Course	Title	Credits
+* SON 1001C	Fundamentals of Sonography	4
+* SON 1804	Clinical Sonography I	2
+* MAC 1105	College Algebra	3
+ RTE 2762	Sectional Anatomy	3
	Total Credits	12

SUMMER TERM

Course	Title	Credits
+* SON 1614	Acoustical Physics and Instrumentation I	3
+* SON 1112C	Abdominal Sonography	4
+* SON 1814	Clinical Sonography II	2
+* ENC 1101	Freshman Composition I	3
	Total Credits	12

Year II

FALL TERM

Course	Title	Credits
+* SON 2121	OB/GYN Sonography I	3
+* SON 2824	Clinical Sonography III	3
+* SON 2618	Acoustical Physics and Instrumentation II	3
+* SON 2150	Neurosonology and Superficial Structures	3
	Total Credits	12

SPRING TERM

Course	Title	Credits
+* SON 2122	OB/GYN Sonography II	3
+* SON 2834	Clinical Sonography IV	3
+* SON 2619	Acoustical Physics and Instrumentation III	2
+ PSY 1012	General Psychology	3
+ Humanities	(See A.S. Gen Ed Requirement)	3
	Total Credits	14

Specialized courses may not be offered every session or on every campus.
 + This course must be completed with a grade of C or better.
 * This course has a prerequisite; check description in Valencia catalog.

DIAGNOSTIC MEDICAL SONOGRAPHY

SUMMER TERM A

Course	Title	Credits
+* SON 2061	Seminar in Sonography	4
+* SON 2882	Medical Sonography Clinical Practicum	2
	Total Credits	6
	Total Degree Credits	72

NOTES:

All accepted applicants must be screened by the Florida Department of Law Enforcement for criminal history. Applicants for Valencia Community College Health Science Programs must be free of offenses that would disqualify them from a student clinical experience in a health care setting and must have their civil rights intact. This policy is in response to requirements by clinical agencies and State/Federal regulations.

Specialized program courses are offered on the West Campus.

General Education courses are in bold print in the course listing.

This A.S. degree is transferable to UCF's regional campuses offering the B.A.S. degree. Check with UCF regional offices for their local campus offerings. The degree may also be transferable to B.A.S. programs offered by USF and Daytona State College. Check with USF and Daytona State College for acceptance of this degree.

Students will be required to take 36 credit hours of General Education courses to earn a Bachelor of Applied Science (B.A. S) degree from UCF.

To graduate from UCF's B.A.S. program, students will also have to fulfill the state's foreign language requirement which is as follows: Two years of the same high school foreign language or two semesters of the same college-level foreign language.

Specialized courses may not be offered every session or on every campus.

+ This course must be completed with a grade of C or better.

* This course has a prerequisite; check description in Valencia catalog.

DIAGNOSTIC MEDICAL SONOGRAPHY PROGRAM

ASSOCIATE IN SCIENCE DEGREE

ADMISSION PROCESS CHECKLIST

- _____ 1. Students must submit a completed College Application for Admission by the college Application Deadline and must meet the college admission requirements for degree seeking students. College entry level assessments, Computerized Placement Tests (CPT), and all mandatory courses in reading, student success, mathematics, English, and English for Academic Purposes must be completed **prior** to submitting the Program Application. Visit Valencia's Web site at <http://valenciacc.edu/admissions/> for specific information
- _____ 2. View the Sonography program video at: <http://www.valenciacc.edu/west/health/advising/video.cfm>
- _____ 3. Complete the pre-requisite course & other suggested courses for admission prior to the deadline, May 1st.
- _____ 4. Submit a completed application and required documents to the Health Sciences Advising office, West Campus, Building 2 room 208. A \$15 non-refundable Sonography Program fee (check or money order payable to Valencia Community College) must be submitted to the Business Department with each application. **A new application is required if reapplying for admission.**
- _____ 5. Students must complete the designated Health Science Entrance Test requirements prior to submitting the Sonography application. Examination fee is the responsibility of the student. Information regarding entrance test requirements may be viewed at: www.valenciacc.edu/sonography
- _____ 6. Students must review all admission and program requirements on the Valencia Sonography website: www.valenciacc.edu/sonography
- _____ 7. All required documents must be submitted no later than May 1st. (Required documents, i.e., VCC application, program application, 3 references, work experience form, transcripts, and a copy of any certifications.)
 - Students accepted into the program will be notified by mail, 4-6 weeks after the May 1st deadline. Upon acceptance there will be a mandatory orientation and a 16 hour clinical observation. The orientation will notify students of the process required to complete a background check and deadlines for completion. **Failure to meet the deadline will prevent student from starting program classes. Applicants with a positive background check may be denied admission into the program.** Students having concerns regarding their background are encouraged to make contact with the Allied Health Program Advisor well in advance of the deadline date.
 - Applicants for Valencia Community College Health Science Programs must be free of offenses that would disqualify them from a student clinical experience in a health care setting and must have their civil rights intact. This policy is in response to requirements by clinical agencies and State/Federal regulations.
 - Each applicant must be screened by the Florida Department of Law Enforcement for criminal history. Each applicant must have a Social Security Verification, Residency History, Nationwide Sexual Offense Registry Search, Nationwide Healthcare Fraud/Abuse Scan, and a US Patriot Act/OFCA search. A Nationwide Criminal Search is also required if the applicant has worked, resided, or has been a student outside of Florida during the 2 year period prior to the start of any Health Science Program at Valencia.

No student will be admitted into two (2) different Valencia Community College Health Science Programs within an academic year.

**CONTACT: Career Program Advisor,
healthscienceadvising@valenciacc.edu or (407) 582-1288, building 2 room 208**

DIAGNOSTIC MEDICAL SONOGRAPHY GENERAL PROGRAM INFORMATION

The program curriculum includes all courses that are required for the Diagnostic Medical Sonography Associate in Science Degree.

A minimum grade of “C” must be achieved in all courses identified in the program curriculum, including courses required for admission.

There is one prerequisite course: **BSC 2093C Human Anatomy and Physiology I.**

Due to the high number of applicants, the following courses are encouraged to be completed prior to the application deadline of May 1st:

ENC 1101	Freshman Composition I
MAC 1105	College Algebra
PSY 1012	General Psychology
HSC 1531	Medical Terminology
BSC 2094C	Human Anatomy & Physiology II
Elective	Humanities/Fine Arts

After being accepted into the Diagnostic Medical Sonography Program, the courses in the curriculum are progressive in nature with one course building on the preceding course. Because of this progressive relationship, all courses in a session must be successfully completed with a grade of “C” or better in order to continue to the next session. If a student achieves less than a “C” or withdraws before or after the college deadline, from any course that is required for the Diagnostic Medical Sonography Associate in Science Degree, they will not be allowed to continue in the program.

Students who are not allowed to continue in the program may make a petition for readmission to the Health Sciences Petition Committee.

Students wishing to satisfy requirements for the Diagnostic Medical Sonography Associate in Science Degree with courses other than those identified, should seek advisement from the Health Sciences Program Advisor.

Admission to the College does not imply acceptance to the Diagnostic Medical Sonography Program, a specific application is required. The Health Science Advising Office provides academic and career counseling and information about specific admission criteria.

The college-wide Health Science Admission Committee uses the following point system to GUIDE them in the selection of qualified students to be admitted to the Sonography Program.

Overall GPA	Points	
2.50 – 2.85	1	
2.86 – 3.00	2	
3.01 – 3.20	3	
3.21 – 3.40	4	
3.41 – 3.50	5	
3.51 – 3.60	6	
3.61 – 3.70	7	
3.71 – 3.80	8	
3.81 – 3.90	9	
3.91 - 4.00	10	

GPA

Valencia GPA	Points	
2.50 – 2.85	1	
2.86 – 3.00	2	
3.01 – 3.20	3	
3.21 – 3.40	4	
3.41 – 3.50	5	
3.51 – 3.60	6	
3.61 – 3.70	7	
3.71 – 3.80	8	
3.81 – 3.90	9	
3.91 - 4.00	10	

Science and General Education Courses

BSC 2093C	*Human Anatomy & Physiology I (pre-requisite course)	A=5 pts, B=4 pts, C=3 pts	
BSC 2094C	Human Anatomy & Physiology II	A=5 pts, B=4 pts, C=3 pts	
MAC 1105	College Algebra	A=5 pts, B=4 pts, C=3 pts	
ENC 1101	Freshman Composition I	Completed - 2 pts, In Progress - 1 pt	
HSC 1531	Medical Terminology	Completed - 2 pts, In Progress - 1 pt	
PSY 1012	General Psychology	Completed - 2 pts, In Progress - 1 pt	
Elective	Any Humanities or Fine Arts	Completed - 2 pts, In Progress - 1 pt	
Bonus	<i>Completion of all Science and General Education courses</i>	8 pts	

Work Experience or Tech Prep - Points may be earned for ONLY ONE of the following areas:

5 pts (Current Certification or Registry)	Radiation Therapy RT (T), Radiologic Tech, RT (R) Nuclear Medical Tech(NMT), Cardiovascular Tech (RCVT)	
5 pts (Current Certification)	Nurse (RN), Medical Lab Tech (MLT), Medical Tech (MT), Respiratory Care Tech (RRT), Basic X-ray (BXMO), or graduate of 600 hours state vocational institution	
3 pts (Program Chair Approval)	Health care experience with direct patient contact	
2 pts (80 documented hours)	Volunteer Health Care experience	
2 pts Tech prep	Tech Prep graduate with documentation on transcript	

Additional Points

HSC 1004	Professions of Caring	3 pts	
Alternate	Previous Year Applicant placed on alternate list	3 pts	

References

References	The names of 3 references are required	
------------	--	--

Total Points: _____
Total Possible Points: 62

DIAGNOSTIC MEDICAL SONOGRAPHY PROGRAM INDIVIDUALS WITH A DISABILITY

For the purpose of the Diagnostic Medical Sonography Program a “Qualified individual with a disability is one who, with or without reasonable accommodation or modification, meets the essential eligibility requirements for participation in the program.”

Diagnostic Medical Sonography is a practice discipline with cognitive, sensory, affective, and psychomotor performance requirements. Based on these requirements a list of “Performance Standards” has been developed. Each standard has an example of an activity or activities which a student will be required to perform while enrolled in the Diagnostic Medical Sonography program. These standards are a part of a Sonographer’s professional role expectation.

These standards should be used to assist students in determining whether accommodations or modifications are necessary to meet performance standards. Students who identify potential difficulties with meeting the performance standards must communicate their concerns to the college counseling/advising staff and program director. The student has the obligation to identify and document the disabling condition and to ask for appropriate adjustments.

The department of Health Related Programs at Valencia Community College makes no preadmission inquiries concerning an applicant’s disabling condition. Information related to an applicant’s disabilities is not a part of the information reviewed by the Admission Committee.

Determination is made on a individual basis as to whether or not any accommodations or modifications can be reasonably made.

VALENCIA

SONOGRAPHY PROGRAM APPLICATION FOR ADMISSION

Date of application: _____

Name (Last) _____ (First) _____ (Middle) _____

(Maiden) _____ VCC ID# (required) _____

Home Address _____ Apt # _____

City, State, Zip, County _____

Telephone Number (Home/Day time) _____

Atlas Email: _____

Male _____ Female _____ Race _____ Birth Date _____

Are you a U.S. citizen? Yes No

Are you a Florida resident? Yes No

Have you been accepted to Valencia Community College? Yes No

Have you taken any courses at another college or university regardless of the grades earned or their applicability toward this program requirements? Yes No

Name of College or University: _____

Are your official college and high school transcripts on file in the Valencia Community College registrar office? Yes No

Excluding this application, how many times have you applied for admission to this program? _____

Finance Office Use

A \$15 non-refundable application fee to the program (check or money order payable to Valencia Community College) must be submitted to the Business Office with **each** application.

By mail: Please mail application and check together to the address listed below.

Do not send separately.

Valencia Community College
Business Office, SSB 101
1800 S. Kirkman Road
Orlando, FL 32811

In person: Please make payment to the Business Office **before** turning in your application to the Health Science Advising Office on the West Campus, building 2, room 208.

Have you completed the following?

Health care work experience documentation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Currently enrolled in a course not at VCC	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Review of advisement information	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Professional license, certification, or registration documentation	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Health Sciences Entrance exam (copy of results)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Name and telephone numbers of references	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Reviewed Sonography Program video	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Paid the \$15 application fee for the Sonography Program	<input type="checkbox"/> Yes	<input type="checkbox"/> No

SONOGRAPHY APPLICATION AND DOCUMENTATION MUST BE SUBMITTED BY MAY 1ST TO BE CONSIDERED FOR ADMISSION TO THE FALL TERM.

I HAVE REVIEWED ALL ADMISSION REQUIREMENTS AND EXPECTATIONS ON THE VALENCIA SONOGRAPHY WEBSITE. I AFFIRM THAT ALL INFORMATION ON THIS APPLICATION IS TRUE. I ALSO UNDERSTAND THAT IT IS FRAUDULENT TO MISREPRESENT ANY INFORMATION ON THIS FORM. I HAVE READ AND UNDERSTAND THE PERFORMANCE STANDARDS NECESSARY TO BE A COMPETENT SONOGRAPHER.

Signature

Date

REFERENCES

Name of Applicant: _____ VCC ID#: _____

Please list the name, address, position and telephone number of three people you authorize us to contact for references. Include people who can evaluate you in regard to your work performance, relationships with other people, emotional maturity, and commitment to goal accomplishment.

Reference #1

Name: _____

Position: _____

Telephone #: _____

Address: _____

Reference #2

Name: _____

Position: _____

Telephone #: _____

Address: _____

Reference #3

Name: _____

Position: _____

Telephone #: _____

Address: _____

Waiver of rights to reference information:

I waive all my rights to the information submitted by the person serving as my reference, and I understand no one will have access to this information other than members of the Admission Committee.

Signature of Applicant

Date

HEALTH CARE WORK EXPERIENCE AND PROFESSIONAL CERTIFICATES

Applicant's health care related work experience as well as health related professional license, registration and certification will be taken into consideration in the selection process. Please provide the following information (use additional pages if needed).

1. List all health care experience with direct patient contact and include the following:
 - A. Positions held

 - B. Paid or volunteer

 - C. Length of time in position

 - D. List of responsibilities

 - E. What did you gain from this experience that will assist you in reaching your personal and professional goals?

2. List and enclose copies of health related professional license, registration, or certification certificates that you currently hold.

PERFORMANCE STANDARDS FOR ADMISSION AND PROGRESSION

ISSUE	STANDARD	EXAMPLES OF REQUIRED ACTIVITIES (NOT ALL INCLUSIVE)
Critical Thinking	Critical Thinking ability sufficient for safe clinical judgement.	<ul style="list-style-type: none"> * Identify cause-effect relationships in clinical situations. * Evaluate sonographs to ascertain that they contain proper identification and are of diagnostic value. * Select exposure factors and accessory devices for all sonographic procedures with consideration of patient size, age, and extent of disease. * Assess patient's condition and needs from a distance of at least 20 feet. * Initiate proper emergency care protocols, including CPR, based on assessment data.
Interpersonal	Interpersonal abilities sufficient to interact with individuals, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds.	<ul style="list-style-type: none"> * Establish rapport with patients, families, and colleagues. * Display compassion, empathy and concern for others * Demonstrate a high degree of patience. * Work with other healthcare providers in stressful situations
Communication	Communication abilities sufficient for interaction with others in verbal and written form.	<ul style="list-style-type: none"> * Communicate in English to the patient in order to: converse, instruct the patient, relieve anxiety, gain their cooperation during procedures, understand the patient when communicating symptoms of a medical emergency. * Read the patient's medical chart and/or physician's orders. * Legibly write patient history. * Documents own actions and patient responses as indicated.
Mobility	Physical abilities sufficient to move from room to room and maneuver in small spaces.	<ul style="list-style-type: none"> * Assist all patients, according to individual needs and abilities, in moving, turning, transferring from transportation devices to the scanning table. * Be able to push, pull, and lift 40 pounds. * Push a stretcher, wheelchair or other transportation device without injury to self, patient, or others. * Push an ultrasound machine (approximately 500 lbs.) from one location to another, including turning corners, getting on and off of an elevator, and manipulating it in a patient's room.
Motor Skills	Gross and fine motor abilities sufficient to provide safe and effective care.	<ul style="list-style-type: none"> * Ability to maintain prolonged arm positions necessary for scanning. * Accurately draw up sterile contrast media and other solutions without contaminating the syringe and/or needle, etc. * Physically be able to administer emergency care including performing CPR. * Be able to stand for periods as long as 2 hours and to walk a distance of 2 miles during a normal work day. * Ability to seize, grasp, grip, hold, turn, or otherwise work with Hands. * Work fingers to manipulate switches, dials, and other equipment controls * Input data into computer
Hearing	Auditory abilities sufficient to monitor and assess patient needs, and to provide a safe environment.	<ul style="list-style-type: none"> * Hear a patient talk in a normal tone from a distance of 20 feet. * Hear monitor alarm, emergency signals, and cries for help.
Visual	Visual ability sufficient for observation and assessment necessary in the operation of equipment and care of patients.	<ul style="list-style-type: none"> * Observe the patient in order to assess the patient's condition and/or needs from a distance of, at least, 20 feet. * Can see numbers, letters, calibrations, etc. of varying sizes located on equipment utilized by a sonographer.
Tactile	Tactile ability sufficient for patient assessment and operation of equipment.	<ul style="list-style-type: none"> * Perform palpation, tactile assessment, and manipulation of body parts to insure proper body placement and alignment. * Manipulate dials, buttons, and switches.

Cost of Diagnostic Medical Sonography Program 2009/2010

Approximate costs for instate students in the Sonography program during the two years curriculum include:

*Tuition fees (\$77.83 cr. hr. x 72)	\$5,603.76
Liability insurance	34.00
Lab fees	200.00
Physical Exam	150.00
Hepatitis immunization	150.00
PPD, MMR, Tetanus and Varicella Immunizations	165.00
CPR Certification	40.00
Flash Drive	15.00
Books and syllabi (approximate)	1,100.00
Uniforms, lab coat, shoes	250.00
Background Check	49.00
Health Science Entrance Test	40.00
Graduation Pin (estimate)	40.00
Student Professional Dues	72.00
Approximate Total for Two Years	\$7,908.76

****Current fees subject to change***

(To view current tuition fees, please visit, <http://www.valenciacc.edu/finanserv/fees.cfm>)

Sonography students will be responsible for furnishing transportation to the community and/or hospital facilities used by the college for clinical practice.

To be certified, the graduate must successfully complete the following:

American Registry of Diagnostic Medical Sonography	<u>\$600.00</u>
	\$8,508.76