

Vascular Technology A.A.S.

Program Description

This Associate in Applied Science degree will prepare graduates to take and pass the national registry examination in vascular sonography. Students who complete this degree will be prepared to enter the workforce as vascular technologists. Sonography or ultrasonography is the use of sound waves to generate an image for the assessment and diagnosis of various medical conditions. Trained sonographers operate equipment that collects reflected echoes for interpretation and diagnosis by a physician. The application and selection process for admission to the vascular technology program occurs alternate summers. Application deadline is June 15.

Employment Information

According to the U.S. Department of Labor, Bureau of Labor Statistics, the employment "of diagnostic medical sonographers is expected to grow faster than the average of all occupations through 2016 as the population grows and ages..." The optimistic outlook for diagnostic medical sonographers is also based on the need to replace existing sonographers and because many patients are seeking safer diagnostic methods such as sonography, due to improvements in technology and increasing demands on the health care system related to changes in population demographics.

Degree Awarded

Associate in Applied Science

For More Information

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Technical Occupational Specialty

				41 Credit Hours	Date	Institution
<input type="checkbox"/>	SON	1113	Ultrasound Physics and Instrumentation	3		
<input type="checkbox"/>	SON	1143	Vascular Concepts I	3		
<input type="checkbox"/>	SON	1213	Physics and Instrumentation II	3		
<input type="checkbox"/>	SON	1233	Vascular Technology & Scanning Techniques I	3		
<input type="checkbox"/>	SON	1253	Clinical Experience I	3		
<input type="checkbox"/>	SON	2113	Vascular Concepts II	3		
<input type="checkbox"/>	SON	2213	Vascular Concepts III	3		
<input type="checkbox"/>	SON	2214	Vascular Technology & Scanning Techniques II	4		
<input type="checkbox"/>	SON	2223	Vascular Technology & Scanning Techniques III	3		
<input type="checkbox"/>	SON	2234	Vascular Technology & Scanning Techniques IV	4		
<input type="checkbox"/>	SON	2253	Clinical Experience II	3		
<input type="checkbox"/>	SON	2353	Clinical Experience III	3		
<input type="checkbox"/>	SON	2453	Clinical Experience IV	3		

Support and Related Courses

				10 Credit Hours	Date	Institution
<input type="checkbox"/>	BIOL	1012	Biological and Medical Terminology	2		
<input type="checkbox"/>	BIOL	1214	Human Anatomy	4		
<input type="checkbox"/>	PSIO	2314	Human Physiology	4		

General Education Requirements

				19 Credit Hours	Date	Institution
<input type="checkbox"/>	BIOL	1303	Principles of Biology	3		
<input type="checkbox"/>	ENGL	1113	English Composition I	3		
<input type="checkbox"/>	ENGL	1213	English Composition II	3		
or						
<input type="checkbox"/>	ENGL	2333	Technical Report Writing	3		
<input type="checkbox"/>	HIST	1483	U.S. History to 1865	3		
or						
<input type="checkbox"/>	HIST	1493	U.S. History Since 1865	3		
<input type="checkbox"/>	PHYS	1114	General Physics I	4		
<input type="checkbox"/>	POLS	1113	American Government	3		

Total to Graduate

70 Credit Hours

Student Name:	_____
CWID:	_____
Counselor:	_____
Catalog 2009-2010	

SON 1113 ULTRASOUND PHYSICS AND INSTRUMENTATION I

A course in the physics and instrumentation of ultrasound which will cover ultrasonic wave generation and propagation, interaction of sound and matter, transducer and instrumentation designs, ultrasound scanning modes, image artifacts and quality, Doppler effect and Doppler instrumentation components.

SON 1143 VASCULAR CONCEPTS I

A study of the vascular systems hemodynamics which will include: arterial, venous, extracranial, intracranial and abdominal. Students will learn to evaluate pulse volume recordings, plethysmography, segmental pressures and other techniques used in noninvasive testing.

SON 1213 PHYSICS & INSTRUMENTATION II

Continuation of son 1113 physics & instrumentation i. A course in the physics and instrumentation of ultrasound which will cover ultrasonic wave generation and propagation, interaction of sound and matter, transducer and instrumentation designs, ultrasound scanning modes, image artifacts and quality, doppler effect and doppler instrumentation components. Prerequisites: Son 1113

SON 1233 VASCULAR TECHNOLOGY & SCANNING TECHNIQUES I

Students will review basic gross anatomy and cross sectional anatomy of the lower extremity peripheral arterial, venous, extracranial, intracranial and deep abdominal avascular systems. Emphasis will be placed on the normal exam. Students will begin to familiarize themselves with the basic knobology of direct and indirect vascular testing and standard protocols.

SON 1253 CLINICAL EXPERIENCE I

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and some hands-on practice in a patient care setting under direct supervision of registered sonographers

SON 2113 VASCULAR CONCEPTS II

A continuation from SON 1143. A study of the vascular systems hemodynamics which will include: arterial, venous, extracranial, intracranial and abdominal. Students will learn to evaluate pulse volume recordings, plethysmography, segmental pressures and other techniques used in noninvasive testing. Prerequisite: SON 1143.

SON 2213 VASCULAR CONCEPTS III

A continuation from SON 2113 Vascular Concepts II. A study of the vascular systems hemodynamics which will include: arterial, venous, extracranial, intracranial and abdominal. Students will learn to evaluate pulse volume recordings, plethysmography, segmental pressures and other techniques used in noninvasive testing. Prerequisite: SON 2113.

SON 2214 VASCULAR TECHNOLOGY & SCANNING TECHNIQUES II

Students will review the previous semester's concepts, and add the abnormal upper arterial and venous systems anatomy. Basic common disease concepts and clinical assessment will continue. Ultrasound criteria and protocols for normal and common abnormal studies will be gone over and practiced in the laboratory setting. Prerequisite: SON 1233.

SON 2223 VASCULAR TECHNOLOGY & SCANNING TECHNIQUES III

Students will build on previous semesters, adding more advanced and uncommon pathology of the vascular patient. We will work on perfecting history taking, patient assessment, critical thinking and analyzing data. Advanced direct and indirect vascular procedures will be covered and analyzed. Prerequisite: SON 2214.

SON 2234 VASCULAR TECHNOLOGY & SCANNING TECHNIQUES IV

Students will develop and systematic approach to problem solving using critical thinking, and increase independent judgment to aid the provider in the evaluation of the peripheral vascular patient with vascular disease. A complete review in the laboratory setting of vascular anatomy, physiology, assessment, history taking and analyzing data for the preparation of the preliminary report. Prerequisite: SON 2223.

SON 2253 CLINICAL EXPERIENCE II

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and hands-on practice in a patient care setting under direct supervision of registered sonographers. Prerequisite: SON 1253.

SON 2353 CLINICAL EXPERIENCE III

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and some hands-on practice in a patient care setting under direct supervision of registered sonographers. Prerequisite: SON 2253.

SON 2453 CLINICAL EXPERIENCE IV

Clinical rotation in various clinical settings (hospital and/or clinic) for observation and some hands-on practice in a patient care setting under direct supervision of registered sonographers. Prerequisite: SON 2353.

BIOL 1012 BIOLOGICAL AND MEDICAL TERMINOLOGY

Introduction to the use of Latin and Greek common roots, stems and combining forms in structuring biological and medical terminology. Prerequisites: [R] [Sci] MATH 0104

BIOL 1214 HUMAN ANATOMY

Morphology of the human body and its systems. Laboratory includes dissection and study of the human cadaver. Prerequisite: [R] [SCI] Math 0104

PSIO 2314 HUMAN PHYSIOLOGY

Structure and function of the systems of the human body. Lab: three hours per week. Pre-requisite: CHEM 1214 or CHEM 1314.