



SCHOOL OF CARDIAC & VASCULAR ULTRASOUND

Catalog and Handbook

2020 Program Dates:

Vascular: January 6, 2020 – December 18, 2020

Cardiac: July 6, 2020 – June 18, 2021

The Arizona Heart Foundation
School of Cardiac & Vascular Ultrasound
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GENERAL INFORMATION

History and Ownership

The Arizona Heart Foundation was established in 1971 by Edward B. Diethrich, MD, an internationally-renowned cardiovascular surgeon, to develop and support research and education programs.

Dr. Diethrich established the Arizona Heart Foundation School of Cardiac Ultrasound in 1982; it was one of the first programs in the United States dedicated to the development of tomorrow's sonographers. The program has evolved to include the ever-changing field of vascular sonography and is now known as the Arizona Heart Foundation School of Cardiac & Vascular Ultrasound.

Comprehensive 12-month programs in cardiac and vascular ultrasound are offered once a year and include classroom instruction, extensive hands-on scanning experience and clinical rotations. The programs are designed for individuals currently working in the field of ultrasound or who are considering entering the profession. Our faculty's expertise, coupled with small class sizes, not only prepares our students for the national registry exams, but also results in graduates with a discernible difference. More than 500 highly-qualified sonographers have graduated from the program. Our graduates provide quality patient care, possess leadership positions in their profession, and dedicate themselves as life-long learners.

Throughout the past forty-five years the Foundation has prioritized educational programs focusing on heart disease. In addition to the ultrasound programs the Foundation has provided education for cardiovascular nurse specialists, vascular surgeons and cardiologists, fellows, pre-med college students; as well as free programs for the local community.

Mission

The mission of the school is to prepare graduates with a complete educational experience to become a cardiac or vascular professional sonographer. The program provides each student opportunities to learn and develop communication skills, critical thinking and technical skills that adapt to changing technologies in sonography, professional development, and interpersonal skills. The school enhances academic integrity and acceptable professional behavior with skills necessary to perform in the healthcare environment as a Registered Cardiac Sonographer (RCS) or Registered Vascular Sonographer (RVS).

Facilities

Centrally located in Phoenix, Arizona, the Arizona Heart Foundation building consists of over 30,000 sq. ft. and houses the School and its administrative offices, onsite catheterization labs, physician offices, and a large classroom with state-of-the-art audiovisual capabilities. The School maintains a student library and computer lab, dedicated entrance and free parking. A student lounge has a refrigerator, sink and microwave.

Student Services

The School is committed to providing services to students to aid in the development of their academic, personal and professional goals. Students are encouraged to meet with faculty, exchange ideas, and be a part of our advisory boards. Our library is available five days a week and includes books and publications, a place for quiet study time, computers, printer, and internet access. Computer desktops have shortcuts to societies as well as learning and job placement websites. A job posting board is updated regularly.

Students are encouraged to take advantage of open lab times. Hours are posted weekly and students can attend as often as they wish, individually or in study groups.

Assistance with resume preparation and with developing appropriate interview skills are also available.

License

The School is licensed by the State of Arizona State Board for Private Postsecondary Education for Cardiac & Vascular Ultrasound. The mission of the state agency is to “To protect the health, safety and welfare of Arizona citizens by regulating private postsecondary educational institutions and providing services to their students.” (www.azppse.gov).

Accreditation

The programs are not accredited by a nationally-recognized accrediting association.

Registries

All registries are independent agencies and qualifications for taking registry examinations are subject to change. Applicants should research the American Registry of Diagnostic Medical Sonography, (ARDMS.org) and/or Cardiac Credentialing International (CCI.org) for specific qualifications.

Employment

The School does not guarantee job placement to graduates upon program completion or graduation.

Catalog

All statements in this Catalog reflect the approved policies of the School that were in effect at the time of publication. However, the School reserves the right to supplement, change, suspend, or cancel any of the provisions, statements, policies, curricula, procedures, schedules, or fees at any time. The School will publish such changes, suspensions, or cancellations as soon as reasonably practicable.

GOVERNING BODY

Arizona Heart Foundation Board of Trustees

Officers

Donald Reid, MD
Wishaw Hospital, Scotland
Medical Director

Paula Banahan, RN, BSN, CVNS
Arizona Heart Foundation
President and CEO

Joel Rainwater, MD
Comprehensive Interventional Care Centers
Secretary

Sean Kerrigan
Arizona Heart Foundation
Chief Financial Officer

Members

Dawna L. Cato, RN, PhD

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Lynne Jackson

Alex Kienle

Jana Somolova

Adam Turner

Erik Verryden

School of Cardiac & Vascular Ultrasound Advisory Board Directors

Zaki Lababidi, MD
Cardiac Program Medical Director

Dr. Lababidi is an interventional cardiologist and founder of Gilbert Cardiology. He received his MD from Damascus University School of Medicine in 1985 and completed his fellowship at Marshall University. Dr. Lababidi is the medical director of the cardiac ultrasound program and serves on the cardiac advisory board.

Joel Rainwater, MD
Vascular Program Medical Director

Dr. Rainwater is an interventional radiologist and chief medical officer at Comprehensive Interventional Care Centers in multiple cities throughout Arizona. He received his MD from the University of Texas Southwestern and completed his fellowship at MD Anderson and Duke University. Dr. Rainwater is the medical director of the vascular ultrasound program and serves on the vascular advisory board.

School of Cardiac & Vascular Ultrasound Advisory Board Members

Cardiac

Kanaan Abow Alkhier, RPVI, RCS, RVS

Nancy Ashland

Tracy Baginski, RCS

Paula Banahan, RN, BSN, CVNS

Harry Daughenbaugh, RDCS, RVT

Kyle Hajek

Jason Kendrick, BA, RDCS,(AE), RVT

Sean Kerrigan

Gail Size, BS, RPhS, RVS, RVT

Malka Stromer, M.Ed. BSc. RDMS, CRGS

Vascular

Kanaan Abow Alkhier, RPVI, RCS, RVS

Nancy Ashland

Paula Banahan, RN, BSN, CVNS

Kelly Gardner, BS, RDCS (AE, PE), RVT

Sean Kerrigan

Faith Knutson

Jay Shafer, BS, RVT, RVS

Gail Size, BS, RPhS, RVS, RVT

Malka Stromer, M.Ed, BSc., RDMS, CRGS

School of Cardiac & Vascular Ultrasound Officials and Faculty

Paula Banahan, RN, BSN, CVNS

Executive Director

Full-time Employee

Ms. Banahan graduated magna cum laude with a Bachelor of Science Degree from Boston College School of Nursing and earned her Cardiovascular Nurse Specialist Certification from the Arizona Heart Institute. Paula has been in the healthcare industry for over 40 years and has held several nursing leadership and administrative positions. She developed Arizona's first heart and heart-lung transplant program and later became the executive director of the Arizona Heart Institute.

Jason Kendrick, BA, RDCS (AE) RVT
Chair, Cardiac Ultrasound Program and
Development
Full-time Employee

Mr. Kendrick graduated from the University of Oregon and is currently enrolled in Capella University working toward his MBA with an MHA focus. A graduate of Arizona Heart Foundation's School of Cardiac & Vascular Ultrasound, he has been with Banner Hospitals and the Phoenix Indian Medical Center for the past four years. During his time as a high school teacher, Mr. Kendrick designed and implemented a new curriculum for science, health, and PE to be used as an experiential education model.

Malka Stromer, M.Ed, BSc., RDMS, CRGS
Clinical Coordinator
Part-time Employee

Ms. Stromer earned her Bachelor of Science Degree and Master's of Education from York University in Toronto, Canada. She has spent the past 13 years of her career as a professor, first at Mohawk College and then at Gateway Community College. She has authored a chapter in a sonography text, won a research award through the SDMS, and most recently earned the John and Suanne Rouche Excellence Award through the League for Innovation in the Community Colleges.

Gail Size, BS, RPhS, RVS, RVT, FSVU
Director of Accreditation and
Program Development
Full-time Employee

Ms. Size earned her Bachelor of Science Degree from St. Mary-of-the-Woods College in 1979 and has over 30 years of technical and managerial experience in both clinical and private vascular laboratories. She is the founder and president of Inside Ultrasound, Inc. Ms. Size has authored numerous publications, including the *Vascular Reference Guide* and *Venous Reference Guide*. She has given multiple presentations nationally and internationally and is on the board of trustees of Cardiovascular Credentialing International.

School of Cardiac & Vascular Ultrasound Management and Administrative Staff

Paula Banahan, RN, BSN, CVNS
Executive Director

Nancy Ashland
Director of Campus Administration

Sean Kerrigan
Chief Financial Officer

Tony Forner
Manager, Support Services

PROGRAMS OFFERED

Cardiac and Vascular Ultrasound

Programs are 50 weeks, include 1,676 clock hours and are offered once a year. All courses are held in person at the School except for clinical externships. Daily attendance is mandatory. Students must participate in all components of the program, including reporting to clinical sites as assigned. The School will inquire about each applicant's previous education and/or experiential learning, and request transcripts from all prior institutions, including military training, traditional college coursework and vocational training. Previous transcripts will be evaluated and credit will be granted if appropriate.

Curriculum

The School follows the National Education Curriculum Common Curricula and its Specialty Curricula for Cardiac and Vascular Technology. The National Education Curriculum for Diagnostic Ultrasound can be found on all societal and the CAAHEP websites.

Admission

The School provides access and equal opportunity to all qualified individuals who apply. Applicants must submit a completed application form, two letters of reference, any transcripts or health care certificates; must be at least 18 years of age and hold at least a high school diploma or GED. It is preferable, but not required, that applicants have an associate's or bachelor's degree or certificate in a patient/health care related field (examples include: EMT, paramedic, surgical technologist). Every application is reviewed on an individual basis.

The School does not accept federal financial aid or participate in the "Ability to Benefit" (ATB) provision in the Higher Education Act (HEA).

Applicants desiring to complete the clinical component of a program out of state must secure their own clinical site.

Applicants must be able to meet the physical demands required of a medical professional which include but are not limited to lifting or turning patients, standing for extended periods of time, overhead stretching, bending, pushing, or pulling as needed.

Tuition and Costs

Tuition	\$28,800	Books/Supplies	Included
Registration Fee	\$ 150	Registration Exam Fee	Included (one time only)

The School offers two (2) options for tuition payments. These options are available to all students:

- (1) Pay in-full, 30 days prior to your program start date and receive \$3,000 off the tuition cost shown above; payments can be made by cash or check, credit card, or a combination of two or more of these options.
- (2) Obtain a student loan prior to your program start date for the above tuition cost and registration fee (if necessary) through the School's tuition financing partner, Meritize. Students will work directly with Meritize and can begin the application process by going to <https://apply.meritize.com>.

Please contact Sean Kerrigan (602-744-3445 or skerrigan@azheartfoundation.org) with any specific questions regarding tuition payments or for more information regarding Meritize.

If you are a veteran, you may also be eligible for assistance from the U.S. Department of Veterans Affairs.

Accepted applicants are notified and receive a packet including an enrollment agreement and information concerning required documentation and immunizations. Accepted applicants are then referred to as "Students".

Veterans Benefits and Transition Act of 2018, Section 3679 of Title 38

Any Student (covered individual) accepted to the program will be permitted to attend or participate in the course of education during the period beginning on the date on which the individual provides to the educational institution a certificate of eligibility for entitlement to educational assistance under chapter 31 or 33 (a “certificate of eligibility” can also include a “Statement of Benefits” obtained from the Department of Veterans Affairs’ (VA) website – eBenefits, or a VAF 28-1905 form for chapter 31 authorization purposes) and ending on the earlier of the following dates:

1. The date on which payment from VA is made to the institution.
2. 90 days after the date the institution certified tuition and fees following the receipt of the certificate of eligibility.

The School will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirement that a covered individual borrow additional funds, on any covered individual because of the individual’s inability to meet his or her financial obligations to the institution due to the delayed disbursement funding from VA under chapter 31 or 33.

Covered individuals must:

1. Submit a certificate of eligibility for entitlement to educational assistance upon acceptance to the program with signed Enrollment Agreement.
2. Advise School of his/her intention to use such entitlement.
3. Provide additional information necessary to the proper certification of enrollment by the School.
4. Should additional payment be required for the amount that is the difference between the amount of the student’s financial obligation and the amount of the VA education benefit disbursement, Student must indicate method of payment on signed Enrollment Agreement.

Fees and Enrollment Documentation

Upon acceptance to a program and no later than two months prior to the program start date, Students must submit the following:

- (3) Registration fee of \$150.00
- (4) Signed Acknowledgement of Receipt of School Catalog and Handbook
- (5) Signed Enrollment Agreement

Additional Expenses

Enrollment is contingent upon the following documents being complete and submitted no later than 1 month prior to the program start date. Any costs are the responsibility of the Student.

- Passport-type photo
- “Clear” or “Negative” grade on the Student’s 12-panel drug screen test
- Fingerprint clearance card
- Valid and current CPR (BLS or ACLS) card
- Clear background check
- Proof of medical insurance
- Any additional testing or documentation that may be required by a clinical site.

Documentation of all current immunizations must be on file by the first day of class.

Failure to timely and satisfactorily meet the above requirements may result in a Student’s enrollment in a program being suspended or cancelled by the School.

Students are responsible for their own housing, food, supplies, transportation, health insurance, and any other living expenses.

Dress Code

Students are required to wear professional attire while on School premises and at clinical sites. The following are considered inappropriate and unacceptable attire: open-toed shoes, tank tops, short shorts, mini-skirts, halter tops, midriff tops, t-shirts, visual display of undergarments, hats, artificial nails, wraps or extenders of any length, and any clothing, piercings or body art that may be offensive. All tattoos must be covered.

CANCELLATION AND REFUNDS

Denial of Admission or Enrollment

An applicant who is denied admission by the School and/or whose enrollment into a program is cancelled by the School due to failure to successfully complete the enrollment process will receive a full refund of all monies paid. The School shall provide the refund no later than thirty (30) days after sending the written notice of denial of admission or cancellation of enrollment.

Three-day Cancellation

A Student who delivers to the School's Program Director written notice of cancellation within three (3) business days of the Enrollment Agreement will receive a full refund of all monies paid. The School shall provide the refund no later than thirty (30) days after receiving the written notice of cancellation.

Withdrawal Before Commencement of Program

A Student who delivers to the School's Program Director a written withdrawal before the start of the program will receive a refund of all monies paid toward tuition; however, the \$150.00 registration fee is then nonrefundable. The School shall provide the refund no later than thirty (30) days after receiving the written notice of withdrawal.

Withdrawal After Commencement of Program

In the case of withdrawal by the Student after commencement of the program in accordance with one of the circumstances described below, the tuition refund amount, if any, will be calculated based on the tuition refund schedule below, and paid within thirty (30) days of the date of withdrawal. The \$150.00 registration fee is then nonrefundable.

1. A Student choosing to withdraw from the School after the commencement of classes is to provide written notice to the Executive Director of the School. The notice is to indicate the expected last date of attendance and be signed and dated by the Student.
2. For a Student who is on authorized Leave of Absence, the withdrawal date is the date the Student was scheduled to return from the Leave and failed to do so.
3. A Student will be determined to be withdrawn from the institution if the Student has not attended any class for 30 consecutive class days.
4. All refunds will be issued within 30 days of the determination of the withdrawal date.

Tuition Refund Schedule

Clock Hours Attempted	Tuition Refund Amount
10% or less	At least 90%
More than 10% and less than or equal to 20%	At least 80%
More than 20% and less than or equal to 30%	At least 70%
More than 30% and less than or equal to 40%	At least 60%
More than 40% and less than or equal to 50%	At least 50%
More than 50%	Refund will not be issued

Tuition Refund Policy for Students Using Veteran Education Benefits

The Arizona Heart Foundation's School of Cardiac & Vascular Ultrasound Veteran's Tuition Refund Policy complies with CFR 21.4255. In the event the veteran or eligible person fails to enter the course, withdraws, or is dismissed at any time prior to completion, any unused portion of tuition, fees, and other charges is refunded. Any amount more than \$10 of the application/registration fee is subject to proration.

The amount charged will not exceed the exact pro-rata portion of total charges. The length of the completed portion of the program will be prorated over its total length, and the exact proration will be determined by the ratio of the number of days of instruction completed by the Student, to the total number of instructional days in the course. Refunds are made within 40 days of the last date of the Student's attendance.

Equipment, Books and Supplies

Required textbooks are provided by the Program. Any equipment, supplies, additional books, or materials provided by the Program are the sole property of the Program and must be returned upon completion of the Program, withdrawal from the School, expulsion from the School, or as requested by the School's Program Director, unless otherwise stated.

Holder in Due Course Statement

Any holder of this consumer credit contract is subject to all claims and defenses which the debtor could assert against the seller of goods or services obtained pursuant hereto or with the proceeds, hereof Recovery hereunder by the debtor shall not exceed amounts paid by the debtor (FTC Rule effective 5-1476).

IN THE EVENT A SPECIFIC CIRCUMSTANCE IS NOT ADDRESSED ABOVE, THE SCHOOL RESERVES THE RIGHT TO EXERCISE ITS DISCRETION AND DETERMINE WHETHER A REFUND, IN WHOLE OR IN PART, WILL BE PROVIDED TO THE STUDENT AND, IF SO, UNDER WHAT TIMELINE.

ATTENDANCE

The intense curriculum of the Program requires consistent, timely, and complete attendance. Students must attend every day; vacation time will not be allowed. Sick leave is granted to Students as a protection to their health as well as the health of their peers and patients. Sick leave is granted at the rate of one day per month, non-accumulated. More than one sick day in any 30-day period will be made up at the discretion of the Program Director and clinical site preceptor and/or department supervisor based on the clinical rotation and/or academic work missed during the absence.

In the event of any illness or injury that causes a Student to be absent for more than one day, and at the discretion of the Program Director, a physician's release may be required to return to School.

Arriving late to class or clinical site and leaving early from class or clinical site generally will be considered an unexcused absence. If you are going to be absent from class or clinical site, including arriving late or leaving early, it is your responsibility to report any absence to the Program Director or the clinical site preceptor and/or department supervisor, as applicable, before the start of the class/scheduled clinic. If the absence, tardy, or need to leave early is due to an unforeseeable circumstance outside of your control, it is your responsibility to advise the Program Director and clinical site preceptor and/or department supervisor as soon as practicable.

Whether absences are considered EXCUSED is within the sole discretion of the Program Director and clinical site preceptor and/or department supervisor based on the clinical rotation and/or academic work missed during the absence. Absences from unannounced tests and quizzes and any other assignments may be made up at the sole discretion of the instructor.

Failure to comply with the above guidelines will result in an UNEXCUSED absence. The first unexcused absence will be documented in writing. The Student will be counseled, and document will become part of the Student's permanent record. Unless otherwise protected by law, the second unexcused absence will result in a suspension period to be determined by the Program Director, and the third unexcused absence will result in expulsion from the Program. Furthermore, excessive excused absences and/or tardiness also may result in discipline, including suspension or expulsion from the Program, unless otherwise protected by law.

Students who must serve on jury duty or be required to be absent because of a medical emergency or death of an immediate family member must contact the program chair and executive director immediately.

Students who are granted a leave of absence can reapply at no additional cost.

AMERICANS WITH DISABILITIES (ADA) POLICY

The School does not discriminate in admission or access to our Program based on age, race, color, sex, disability, religion, sexual orientation, national origin, or any other category protected by federal or state law. If you would like to request an accommodation, please contact our ADA Compliance Coordinator. The School will work with the applicant or Student to determine whether reasonable accommodations can be effective and/or are available.

Anyone requesting an accommodation, auxiliary aid or service should:

1. Notify the Compliance Coordinator in writing of the type of accommodation needed, date needed, documentation of the nature and extent of the disability, and of the need for the accommodation or auxiliary aid. The request should be made at least four weeks in advance of the date needed.

ADA Compliance Coordinator:

Nancy Ashland

Arizona Heart Foundation

1910 E Thomas Rd, Suite 100, Phoenix, AZ 85016

nashland@azheartfoundation.org, 602-604-5009, Fax: 602-265-8885

2. The Compliance Coordinator will respond within two weeks of receiving the request.
3. If you would like to request reconsideration of the decision regarding your request, please contact the Compliance Coordinator within one week of the date of the response. Please provide a statement of why and how you think the response should be modified.

ADA GRIEVANCE PROCEDURE

Any person who believes she/he has been subjected to discrimination based on disability, or who wishes to appeal an approved accommodation pursuant to this policy, may file a grievance as outlined on Page 14 of this Catalog. The School will not retaliate against anyone who files a grievance in good faith or cooperates in the investigation of a grievance.

NON-DISCRIMINATION AND ANTI-HARRASSMENT POLICY

The School does not discriminate in admission or access to our Program based on age, race, color, sex, disability, religion, sexual orientation, national origin, or any other category protected by federal or state law. Arizona Heart Foundation is committed to maintaining an environment that is free of unlawful harassment and discrimination. In keeping with this commitment, the School will not tolerate any form of unlawful discrimination or harassment by anyone, including any supervisor, co-worker, or non-employee. Harassment consists of unwelcome conduct, whether verbal, physical or visual, that is based on a person's race, color, national origin, religion, age, sex, disability, genetic information, marital status, veteran status, sexual orientation, gender identity or any other characteristic protected by law.

Harassment includes, but is not limited to, derogatory remarks, epithets, offensive jokes, the display or circulation of offensive printed or visual material, or offensive physical actions directed at one of the above categories that unreasonably interferes with a person's working environment or creates an intimidating, offensive, hostile work environment.

Sexually harassing behavior includes, but is not limited to, unwelcome sexual advances, requests for sexual favors, or other physical, verbal or visual conduct of a sexual nature. Such conduct may constitute sexual harassment when: (1) submission to the conduct is made an explicit or implicit term or condition of employment or is used as the basis for employment action affecting such individual; or (2) the conduct has the effect of unreasonably interfering with an individual's work performance or creating an intimidating, hostile or offensive workplace. This type of conduct may include, but is not limited to, sexual propositions, innuendo, suggestive comments, sexually oriented jokes or teasing, or unwelcome physical contact such as patting, pinching, or brushing against another.

All employees, staff members, and Students are responsible for helping to enforce this policy against discrimination and harassment. If you believe the actions or words of a supervisor, co-worker, or a nonemployee constitute sexual harassment or other unlawful harassment or discrimination, you have a responsibility to promptly notify the President/CEO.

It is the School's policy to investigate all such complaints thoroughly, promptly, and as impartially as possible. To the fullest extent practicable, the School will maintain the confidentiality of those involved. If an investigation confirms that a violation of this policy has occurred, the School will take corrective action, which may include disciplinary action, up to and including termination. The School also forbids retaliation against anyone for reporting harassment or for cooperating in the investigation of a harassment complaint.

CODE OF CONDUCT

Students are expected to meet the School's standards and expectations for academic and ethical performance and professional behavior when interfacing with the persons in the clinical facility and classroom. If a Student is not meeting the academic and ethical standards or the professional behavior standards of the School, the School will take the corrective or disciplinary action it considers appropriate depending on the totality of the circumstances. The various actions may include verbal warning, written warning, suspension, and/or immediate expulsion. The School reserves the right in each case to take the action it considers appropriate and in the best interests of the School.

Examples of circumstances under which a Student may be subject to discipline, up to and including expulsion, include but are not limited to the following guidelines related to the School's standards and expectations for academic and ethical performance, as well as professional behavior:

1. Academic Dishonesty: Academic dishonesty is any word, action or deed performed alone, or with others for the direct or indirect intention of providing an unfair advantage or benefit to self or other Student(s) including:

- cheating	- misrepresentation
- plagiarism	- giving or receiving illicit aid in class work or other work used as a basis for grading
- unapproved collaboration	- failure to report to Program Director observations of academic dishonesty by others
- alteration of records	
- bribery	
- lying	

2. Outstanding Fees – Failure to timely pay tuition or other fees due to the School.
3. Code of Conduct – Violation of the Code of Conduct.
4. Arriving to class or clinical site impaired by alcohol or with illegal drugs in your system; the manufacture, distribution, dispensation, possession, sale, purchase, transfer or use of illegal drugs at School or the clinical site.
5. Significant Omissions or Errors in Admissions Documentation – Knowingly or in error misrepresent an application is subject to immediate expulsion.
6. Academic Failure – Failing to achieve the required academic standing in the Program.
7. Attendance – Unless otherwise protected by law, failing to achieve the required attendance of the School and the assigned clinical site; persistent tardiness.
8. Harassment or Discrimination – Participating in harassing or discriminatory activities of any Student, staff, clinical staff person, patient, client or visitor to the School or clinical site.
9. Misuse of School Property – Damaging, misusing, stealing or otherwise using without permission the property of the School or assigned clinical site in a way that is prohibited.
10. Endangerment of Staff or Students – Endangering the safety of themselves or others at the School or the assigned clinical site.
11. Disruptive, disorderly, violent or threatening behavior at the School or the assigned clinical site.
12. Defiance of authority of School administrators and instructors, as well as clinical site supervisor, instructors, and staff.
13. The harassment, bullying, demeaning or otherwise oppression of Arizona Heart Foundation School of Cardiac & Vascular Ultrasound, its programs, faculty, staff or other Students.
14. Conduct detrimental to Arizona Heart Foundation School of Cardiac & Vascular Ultrasound, its programs, faculty, staff or other Students.
15. Actions that bring discredit upon Arizona Heart Foundation School of Cardiac & Vascular Ultrasound.

Illegal Drugs and Alcohol

Arizona Heart Foundation School of Cardiac & Vascular Ultrasound has a zero-tolerance policy for illegal substances on campus and at clinical sites. The School prohibits the unlawful use, possession, or distribution of controlled substances and alcohol by Students and employees on the School’s property or as part of School activities. The School reserves the right to require random drug testing.

The School recognizes that alcoholism, drug addiction, and substance abuse may represent illnesses that require professional counseling, treatment, and rehabilitation. The abuse of alcohol or drugs can be hazardous to an individual’s health and safety, as well as an impediment to academic and personal success. Because the health and safety of Students and employees are paramount to the School, those who are affected by alcohol and/or substance abuse are encouraged to utilize referrals provided by the School.

In addition to the above, in the case where the Student has committed a crime or violation of the law, the School will notify law enforcement.

The School reserves the right to suspend or cancel the Student's enrollment in the Program at any time if, in the School's sole judgment, the Student fails to comply with attendance requirements, academic standards, financial requirements, the School's Code of Conduct, zero tolerance policy for illegal substances, or otherwise disrupts the normal activities of the School. If a Student is expelled for any reason, there will be no reimbursement of tuition.

Return of Property

A Student who is expelled is responsible for the return of any School property in his/her own possession within 10 days and will be held financially responsible for any property not returned in good condition.

Notification of Expulsion

Students who are subject to expulsion for any reason will be notified in writing, either hand delivered or by registered mail with return receipt. The School is not responsible for non-delivery by registered mail if the Student has not provided a valid home address where the Student currently resides.

The notification will contain a general description of the basis for expulsion and the effective date. Expelled Students who dispute the facts of the expulsion must appeal the decision within three business days of the date of the notification. The appeal may be filed as outlined in the School's Grievance Procedure.

The amount of tuition reimbursement granted to an expelled Student will be up to the sole discretion of the School.

Students who have been expelled may apply for a future program.

GRIEVANCE PROCEDURE

The School is committed to ensuring that Students with grievances relating to the School and/or Program, the administration, and/or other personnel use a process that may resolve their concerns as promptly, confidentially, and as fairly as practicable under the circumstances.

If you have a grievance, you first should discuss it informally with the individual directly involved in the matter. If you are not comfortable doing so, or the matter is not resolved through this initial step, you should submit your written grievance within three (3) business days of the event at issue or initial discussion, to:

Paula Banahan, Executive Director
Arizona Heart Foundation School of Cardiac & Vascular Ultrasound
1910 E. Thomas Rd, Ste. 100
Phoenix, AZ 85016

The executive director will respond in writing within 10 business days.

If the Student complaint cannot be resolved after exhausting the School's Grievance Procedure, the Student may file a complaint with the Arizona State Board for Private Post-Secondary Education. You must contact the State Board for further details. The State Board address is 1740 W. Adams Street, #3008, Phoenix, AZ, 85007, 602-542-5709, or www.azppse.gov.

Arbitration of a student grievance is required. Arbitration will take place at a location reasonably convenient for both parties giving due consideration to the student's ability to travel and other pertinent circumstances. Both parties will attempt to have proceedings take place within a reasonable time and without undue delay. The arbitration proceedings will follow the spirit if not the letter of the consumer due process protocol of the American Arbitration Association. The protocol includes but is not limited to a

fundamentally fair process; an independent and impartial, competent, and qualified arbitrator; independent administration of the arbitration; reasonable cost; right to representation; and possibility of mediation. Arbitration does not preclude other avenues of recourse, including but not limited to possible relief in small claims courts, unless and until the arbitration result is made binding. Arbitration of a student grievance does not preclude the student from seeking a remedy from the Arizona Board of Private Postsecondary Education.

STANDARDS OF ACADEMIC PERFORMANCE

The School's academic performance and attendance policies are applied equally to all students.

Academic Progress Records

Class sizes are kept small to allow for constant feedback between instructor and Student. Therefore, we seek to constantly keep Students updated on their progress in class, whether positive or in need of improvement. All grades given to Students for work completed are kept by the School and are available upon reasonable request by the Student. Requests for transcripts should be directed to Nancy Ashland, nashland@azheartfoundation.org.

The program maintains progress reports of student academic and clinical education on an ongoing basis with daily, weekly, monthly, and end-of-term progress via verbal and written quizzes and exams.

Tutoring services are recommended to the students throughout the program and provided at no additional cost.

The School's grading system is based on the following standard:

90% - 100% = A	80% - 89% = B	70% - 79% = C	60% - 69% = D	Below 60% = F
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The minimum satisfactory grade level required to graduate the Program is a "C" or higher. A grade level of "D" or lower is unsatisfactory and will require immediate counseling. Failure to improve the grade level to a "C" or higher within the next 30 days will result in the beginning of a 30-day probation period. Failure to improve the grade level to a "C" or higher at the end of the designated 30-day probation period (60 days from the initial counseling) will result in expulsion from the program.

Completion of Program

Students must participate in all components of the program.

- Attendance: Students must sign in each day of class and lab. While at clinical sites the students will sign into Trajecsys and each clinical preceptor will verify attendance.
- Classroom didactic instruction, including assignments, quizzes, exams, presentations, and research.
- Scanning lab instruction including assignments and proficiencies exams.
- Open scanning lab.
- Clinical site rotation and instruction.
- Instructor and facilities surveys.

If a Student believes there is a discrepancy in the progress of his/her grades, progress, or clinical site travel, the Student is to contact the executive director immediately. The executive director will meet with the student and instructor to review the grievance in order to come to a mutual understanding and decision. The School is committed to ensuring that students with grievances relating to their grades, progress, or clinical site may resolve their concerns as promptly, confidentially, and as practicable under the circumstances.

Upon successful completion of the program Students are awarded clock hours and a certificate of completion. It should not be assumed that any programs described in the Catalog could be transferred to another institution. The School does not guarantee the transferability of credits to a college, university or institution. Any decision on the comparability, appropriateness and applicability of credits and whether they should be accepted is the decision of the receiving institution.

Requirements for Graduation

To graduate with a certificate of completion from the Program, Students are required to successfully complete all didactic and clinical education courses as well as hours and clinical caseloads. A minimum of a "C" passing grade is required.

All Students are required to successfully pass either the Registered Cardiac Sonography (RCS) exam or the Registered Vascular Sonography (RVS) exam conducted by Cardiovascular Credentialing International (CCI).

Additionally, all financial obligations to the program must be fulfilled.

CARDIAC PROGRAM

Credentialing

The cardiac program is designed to meet and exceed the minimum clinical clock hour requirements as recommended by Cardiovascular Credentialing International (CCI). Students are prepared to successfully pass the Registered Cardiac Sonography (RCS) exam conducted by CCI.

Description

The program offers in-depth education that will enable Students to produce accurate, high-quality echocardiographic images needed for entry-level employment. Residential classroom, clinical hands-on experience and professional development will provide the opportunity to learn pathologic knowledge related to sonography, demonstrate scanning techniques and protocols in the skills lab and clinical settings, and integrate lectures with clinical education. The cardiac sonographer performs procedures in private physician offices, clinics, hospitals, and acute or long-term care facilities.

Goals and Objectives

Upon completion of the Program Students will demonstrate:

- Entry level scanning skills of the anatomy and surrounding structures.
- Entry level knowledge of cardiac protocols for the national registry exam.
- Effective communication.
- Basic patient care.
- Knowledge and understanding of human gross anatomy and sectional anatomy as it relates to diagnostic cardiac ultrasound.
- Knowledge and understanding of physiology, pathology, and pathophysiology as it relates to cardiac ultrasound.
- Knowledge and understanding of acoustic physics, Doppler ultrasound principles, and ultrasound instrumentation.
- Knowledge and understanding of the interaction between ultrasound and tissue and the probability of biological effect in clinical examinations.
- Professional judgment and discretion.
- Interpersonal relationships including moral and ethical responsibilities for effective communication and empathy with the patient.
- Ergonomically correct scanning techniques.
- Ability to utilize learned skills in a variety of medical facilities.
- Ability to meet the needs of the communities we serve, including graduates, employers, physicians, and the general public.
- Successfully pass the RCS exam.

Outcomes

Upon completion of the Program Students will:

- Integrate knowledge and patient data in order to obtain optimum diagnostic results.
- Demonstrate effective interpersonal skills with patients and members of the health care team.
- Provide care and empathy to promote patient physical and psychological well being.
- Function within recognized ethical and legal standards of the profession and employer.
- Perform appropriate cardiac diagnostic procedures with accuracy.
- Maintain optimal functioning of equipment.
- Document complete and accurate results of diagnostic data to facilitate physician's interpretation.
- Demonstrate knowledge of quality assurance, management techniques, and IAC echocardiography accreditation needs as a professional sonographer.

- Follow the approved ASE Standards (www.asecho.org) and the Scope of Practice for the Ultrasound Professional (www.sdms.org).
- Use ergonomically correct scanning techniques to prevent musculoskeletal injury.

Clock Hours (50 weeks)

Patient Care	41
Physics	88
Introduction to Echocardiography	165
Advanced Echocardiography	158
Imaging Lab	384
Clinical Rotation	840
Total	1676

Daily Schedule

Classroom sessions and clinical rotations average 35 hours per week. Some weekend and/or evening hours may be required. Cardiac Students are required to participate in TOPS (Team of Physicians for Students) and Bates Foundation screenings as scheduled.

7:00-10:00	Ultrasound Skills Lab			
10:00-10:30	Lunch			
10:30-2:00	Academic Classes			
First Term: July 6-October 30, 2020		Academic	Lab	Clinical
17 Weeks / 85 Days (84 Class/0 Clinical/1 Holiday)		3.5 hrs	3.0 hrs	8.0 hrs
	Introduction to Ultrasound/Physics	88		
	Patient Care	41		
	Introduction to Echocardiography	165		
	Ultrasound Skills Lab		252	
	Clinical Site			0
	First Term Total	294	252	0
Second Term: November 2, 2020-February 26, 2021				
17 Weeks / 85 Days (32 Class/41 Clinical/12 Holiday)				
	Advanced Echocardiography	112		
	Ultrasound Skills Lab		96	
	Clinical Site			328
	Second Term Total	112	96	328
Third Term: March 1-June 18, 2021				
16 Weeks / 80 Days (13 Class/64 Clinical/3 Holiday)				
	Review	46		
	Ultrasound Skills Lab		36	
	Clinical Site			512
	Third Term Total	42	42	288
	TOTAL	452	384	840
	Academic Classes			452
	Ultrasound Skills Lab			384
	Clinical			840
	TOTAL HOURS			1676

CARDIAC COURSE DESCRIPTIONS

Patient Care

This course includes an overview of cardiac anatomy, physiology, medical terminology, pharmacology, basic diagnostic procedures, blood-borne pathogens, pathophysiology and infectious diseases. It also includes how to interact with patients in a clinical setting as well as the topic of professionalism, characteristics of a healthcare professional, patient communication and critical thinking, legal and ethical issues, HIPPA, OSHA, and malpractice.

Physics

This course includes ultrasound instrumentation properties of sound waves, propagation and interaction of ultrasound in tissue, static, and real-time ultrasound imaging principles and artifact, and instrumentation of real-time ultrasound imaging. Laws of conservation, properties of matter, properties of sound and light, current, Ohm's Law, frequency, physical principles, hemodynamics, Doppler physics, color imaging and artifacts, digital signal and image processing and bio effects.

Introduction to Echocardiography

This comprehensive course will provide an overview of the basic principles of adult echocardiography, including the technique of performing cardiac ultrasound examinations. The standard measurements for each echocardiography discipline will be presented; normal anatomy as well as cardiac pathology will be emphasized. Each component of the cardiovascular principles examination outline will be presented. Major topics include anatomy and physiology, technique, Doppler, valvular heart disease, ischemic heart disease, diseases of the aorta, congenital heart disease, pericardial disease, hypertension, cardiomyopathies, and cardiac tumors. Instruction will be comprised of lecture, ultrasound lab, and independent assignments.

Advanced Echocardiography

Students will have an in-depth understanding of the cardiac cycle, cardiac anatomy and physiology, standard 2-D views, M-mode and real-time measurements, Doppler calculations, pathology and stress echocardiography, echo standards, advanced methods, 3-D, 4-D, tissue Doppler, cardiac resynchronization and new technologies. This comprehensive advanced course will be the final preparation for the registry exam.

Imaging Skills Lab

This course ensures the development of the Student's scanning skills as well as the appropriate use of protocol. Students begin training in the School's imaging lab during the first week of the program. Patient models are used exclusively to help Students identify a variety of anatomies and indications. Students will be fully prepared to enter vascular clinical rotations and perform studies independently. During this time interrelationships with patients and staff, communication, cleanliness, initiative, efficiency, confidence, judgement, constructive criticism, learning from mistakes, professional growth, HIPAA compliance, patient mindfulness, and personal responsibility are practiced.

Clinical Rotation

Students continue to practice tasks after competency testing to ensure the refinement of their professional skills and gain independence and confidence. Students will be supervised and instructed in the clinical setting by the affiliate preceptors and sonographers. Through individualized instruction and evaluation, the student's clinical progress and competency will be measured by the school's clinical coordinator and the affiliate preceptors and sonographers.

CARDIAC 2020-2021 CALENDAR

First Day of Program		July 6, 2020
Holidays	Labor Day	September 7
	Thanksgiving	November 26-27
	Winter Break	December 21, 2019-January 1, 2021
	Spring Holidays	March 15 and April 5
	Memorial Day	May 31
Last Day of Program		June 18, 2021
Graduation		Date to be determined

The schedule may be amended or suspended, at any time, at the School's sole discretion, with or without notice.

CARDIAC CLINICAL SITE OVERVIEW

Clinical rotation hours are included in the Program. Students will not be assigned to a clinical site until it has been determined by the School that this privilege has been earned as evidenced by the Student's academic and ethical performance, adherence to the School's Code of Conduct, scanning proficiency, professional behavior, attendance, promptness and compliance with any financial agreement with the School. Students are required to report to all clinical sites as assigned.

The goal of the clinical rotation in the current curriculum is to prepare the Student to perform step-by-step limited, and later complete, cardiac sonography exams under direct supervision. The Student will practice exercising independent judgment relative to the entirety of the sonography test performed.

All practical training will be monitored and under direct supervision of the school. The planned program of activities will be controlled by the School and not by officials at the clinical site.

Student Responsibilities

Under the direct supervision of the clinical site preceptor/staff designee, the sonography Student will be responsible for the following duties:

1. Patient interviews relevant to the cardiovascular indications
2. Instruction and patient preparation for the exam
3. Quality control testing for the ultrasound machine/transducers
4. Execution of patient imaging procedures including:
 - Routine and complex echocardiograms
 - Treadmill and pharmacological stress echocardiograms
 - Transesophageal echocardiogram (TEE)
 - Computer image acquisition and image enhancement
 - Patient preparation for various procedures
 - Preparation of the preliminary report
5. Demonstrate knowledge and understanding of cardiac pathology, pathophysiology, and hemodynamics in different disease states.
6. Demonstrate an understanding of ultrasound physics and instrumentation .
7. Exhibit professionalism in the performance of these duties, demonstrate an empathetic and instructional approach to patient care, and maintain confidentiality of information as required.
8. Achieve professional growth and development through participation in medical and technical education and research to enhance the quality of patient care.
9. Take care of the patient while in the department and may be required to assist with patient issues such as vomiting, bleeding, CPR, and/or ACLS procedures.

General

The sonography Student on clinical rotation must:

- Possess these intellectual skills: comprehension, measurement, mathematical calculation, problem solving, reasoning, integration, analysis, comparison, self-expression and criticism.
- Be able to exercise appropriate judgment to recognize and correct performance deviations.
- Be prepared to recognize any condition, whether observed in the ultrasound exam or inpatient behavior, which may pose immediate threat to health or life and react appropriately.
- Attend class a minimum of one day a week in order to maintain interaction with instructors in order to continue learning and prepare for the national registry exam.

Behavioral and Social

The sonography Student on clinical rotation must:

- Be able to manage time to complete didactic and clinical tasks within reasonable time constraints.
- Possess emotional health necessary to effectively employ intellect and exercise appropriate judgment.
- Be able to provide professional and technical services in spite of the stress of heavy workloads.
- Be flexible, creative and adaptable to clinical and didactic changes.
- Recognize potentially hazardous materials, equipment and situations and be able to proceed safely to reduce risk of injury to patient or self.
- Support and promote the activities of fellow students and health care professionals.
- Be honest, compassionate, ethical and responsible.
- Always safeguard and preserve the confidentiality of patient information in accordance with office policy.

Technical

The sonography Student on clinical rotation must assist the clinical site preceptor/staff designee to perform echocardiographic procedures by demonstrating appropriate competency in the following:

- Obtain appropriate clinical history in order to adapt the imaging techniques accordingly.
- Patient education
- Patient care and management
- Record complete physiologic ultrasound exam consisting of 2D, M-mode, pulsed (PW) and continuous wave (CW) Doppler and color flow imaging, making appropriate quantitative calculations from the data recorded.
- Perform exercise echocardiography and pharmacological stress testing
- Assist in the performance of transesophageal (TEE) echocardiograms
- Assist in the Bubble/Saline study
- Determine if contrast injection is indicated and act accordingly
- Record complete physiologic examination and ultrasound exam consisting of 2D, pulsed (PW) Doppler and color flow imaging, and make appropriate quantitative calculations from the data recorded.
- Equipment configuration and operation
- Positioning skills
- Ultrasound safety

In addition to the above, other duties as indicated by clinical instructor or program/school policies.

Clinical Site Preceptor

Per guidelines from the Accrediting Bureau of Health Education Schools (ABHES), Commission on Accreditation of Allied Health Education Programs (“CAAHEP”) and Joint Review Committee-Cardiovascular Technology (“JRC CVT”) the following apply in connection with the clinical site preceptor:

- Responsibilities

Although Students will work with many sonographers in the clinical setting, a clinical site preceptor/instructor shall be designated as the primary contact for the Student and the Program Director. The clinical site preceptor/staff designee must be available to Students whenever he or she is assigned to a clinical site, provide appropriate clinical supervision, and be responsible for Student clinical evaluation.

- Qualifications

The designated clinical instructor must hold the RDCS (through the ARDMS) credential or the RCS (through CCI) credential and have appropriate education and experience to fulfill the minimal qualification requirements.

Cardiac Sonography Student - Master List of Competencies

Below is a list of competencies that the sonography Student must successfully complete in order to demonstrate acquired skills in the performance and evaluation of the adult cardiac studies. The competencies consist of communication, didactic learning, scan lab skills, and clinical rotations. The competencies are evaluated using the associated clinical evaluation form each term or sooner if appropriate.

1. Demonstrate and practice intra and interdepartmental skills
2. Demonstrate and practice effective communication (verbal, non-verbal, written)
3. Utilize professional conduct and demonstrate professional judgment
4. Demonstrate initiative and display positive attitude
5. Provide effective and safe patient care
6. Demonstrate critical thinking skills
7. Utilize correct scanning techniques
8. Recognize and identify cardiac anatomic structures
9. Utilize scanning skills to perform PW, CW, color Doppler imaging studies

Patient Care Duties Not to be Provided by Students

The sonography Student must not perform the following clinical care duties independently:

1. Discuss the echocardiography findings/diagnosis/prognosis/treatment plans or surgical advice to the patients and their relatives
2. Administration of IV/IM/Intra-cardiac drugs
3. If the patient refuses examination by a sonography Student the Student must stop, leave the room, fulfill the patient’s wishes for privacy, and report this to the supervisor
4. While examining all populations of patients for cardiac ultrasound procedures, appropriate caution must be exercised per guidelines from the hospital
5. Patient information, including personal or medical records and cardiac sonographic scans, are not to be removed from the premises, nor copied in any format, without express written request from the Program Director of the School and hospital administration. In such case, all patient identification and medical record numbers must be deleted.
6. Medical equipment, devices, and supplies are not to be removed from the premises by the Student.

VASCULAR PROGRAM

Credentialing

The vascular program is designed to meet and exceed the minimum clock hour requirements as recommended by Cardiovascular Credentialing International (CCI). Students are prepared to successfully pass the Registered Vascular Specialist (RVS) exam conducted by CCI.

Description

The program offers in-depth education that will enable Students to produce accurate, high-quality vascular images needed for entry-level employment. Residential classroom, clinical hands-on experience and professional development will provide the opportunity to learn pathologic knowledge related to sonography, demonstrate scanning techniques and protocols in the skills lab and clinical settings, and integrate lectures with clinical education. The vascular sonographer performs procedures in private physician offices, clinics, hospitals, and acute or long-term care facilities.

Goals and Objectives

Upon completion of the Program Students will demonstrate:

- Entry level scanning skills of the anatomy and surrounding structures
- Entry level knowledge of vascular protocols for the national registry exam
- Effective communication, professional judgment, and discretion
- Basic patient care
- Knowledge and understanding of human gross anatomy and sectional anatomy as it relates to vascular ultrasound.
- Knowledge and understanding of physiology, pathology, and pathophysiology as it relates to vascular ultrasound.
- Knowledge and understanding of acoustic physics, Doppler ultrasound principles, and ultrasound instrumentation.
- Knowledge and understanding of the interaction between ultrasound and tissue and the probability of biological effect in clinical examinations.
- Interpersonal relationships including moral and ethical responsibilities for effective communication and empathy with the patient.
- Ergonomically correct scanning techniques
- Ability to utilize learned skills in a variety of medical facilities
- Ability to meet the needs of the communities we serve, including graduates, employers, physicians, and the general public
- Successfully pass the RVS exam

Outcomes

Students will:

- Integrate knowledge and patient data in order to obtain optimum diagnostic results
- Demonstrate effective interpersonal skills with patients and members of the health care team
- Provide care and empathy to promote patient physical and psychological well being
- Function within recognized ethical and legal standards of the profession and employer
- Perform appropriate vascular diagnostic procedures with accuracy
- Maintain optimal functioning of equipment
- Document complete and accurate results of diagnostic data to facilitate physician's interpretation
- Demonstrate knowledge of quality assurance, management techniques, and IAC vascular accreditation needs as a professional sonographer
- Follow the approved SVU Standards (www.svunet.org) and the Scope of Practice for the Ultrasound Professional (www.sdms.org)
- Use ergonomically correct scanning techniques to prevent musculoskeletal injury

Clock Hours (50 weeks)

Patient Care	25
Introduction to Ultrasound/Physics	77
Introduction to Vascular	78
Advanced Vascular	141
Ultrasound Skills Lab	366
Clinical Rotation	944
Total	1676

Daily Schedule

Classroom sessions and clinical rotations average 35 hours per week. Some weekend and/or evening hours may be required.

7:00-10:00	Academic Classes			
10:00-10:30	Lunch			
10:30-1:30	Ultrasound Skills Lab			
First Term: January 6-May 1 17 Weeks / 85 Days (79 Class/1 Clinical/5 Holiday)		Academic 3 hrs	Lab 3 hrs	Clinical 8 hrs
	Introduction to Ultrasound/Physics	77		
	Patient Care	25		
	Introduction to Vascular Ultrasound	78		
	Advanced Vascular Ultrasound	57		
	Ultrasound Skills Lab		237	
	Clinical Site			8
	First Term Total	237	237	8
Second Term: May 4-August 28 17 Weeks / 85 Days (28 Class/55 Clinical/2 Holiday)				
	Advanced Vascular Ultrasound	84		
	Ultrasound Skills Lab		84	
	Clinical Site			440
	Second Term Total	84	84	440
Third Term: August 31-December 18 16 Weeks / 80 Days (15 Class/62 Clinical/3 Holiday)				
	Review	45		
	Ultrasound Skills Lab		45	
	Clinical Site			496
	Third Term Total	45	45	496
	Academic Classes			366
	Ultrasound Skills Lab			366
	Clinical			944
	TOTAL HOURS			1676

VASCULAR COURSE DESCRIPTIONS

Patient Care

This course includes an overview of anatomy, physiology, medical terminology, pharmacology, basic diagnostic procedures, blood-borne pathogens, pathophysiology and infectious diseases. It also includes how to interact with patients in a clinical setting as well as the topic of professionalism, characteristics of a healthcare professional, patient communication and critical thinking, legal and ethical issues, HIPPA, OSHA, and malpractice.

Physics

This course includes ultrasound instrumentation properties of sound waves, propagation and interaction of ultrasound in tissue, static, and real-time ultrasound imaging principles and artifact, and instrumentation of real-time ultrasound imaging. Laws of conservation, properties of matter, properties of sound and light, current, Ohm's Law, frequency, physical principles, hemodynamics, Doppler physics, color imaging and artifacts, digital signal and image processing and bio effects.

Introduction to Vascular Ultrasound

This basic comprehensive course will provide an overview of ultrasound and sound in general. It will explain ultrasound as in imaging technology using high-frequency waves to characterize tissue. It will cover how it is a useful and flexible modality in medical imaging, and often provides an additional or unique characterization of tissues compared to other modalities. This course will also introduce vascular ultrasound including an introduction of the arterial and venous system of the human body, and introduction to scanning the following vascular studies: carotid duplex, extremity arterial, extremity venous, abdominal aortic duplex, aortoiliac duplex, renal artery duplex and ABI (ankle brachial index).

Advanced Vascular Ultrasound

This all-encompassing course will provide an in-depth overview of vascular anatomy of the human body; including cerebrovascular, intracranial, extremity arterial mapping, extremity venous mapping and reflux and abdominal vasculature in relationship to the abdominal aorta, mesenteric and renal arteries/veins. This course will also be the final preparation for the registry exam.

Imaging Skills Lab

This course ensures the development of the Student's scanning skills as well as the appropriate use of protocol. Students begin training in the School's imaging lab during the first week of the program. Patient models are used exclusively to help Students identify a variety of anatomies and indications. Students will be fully prepared to enter vascular clinical rotations and perform studies independently. During this time interrelationships with patients and staff, communication, cleanliness, initiative, efficiency, confidence, judgement, constructive criticism, learning from mistakes, professional growth, HIPAA compliance, patient mindfulness, and personal responsibility are practiced.

Clinical Rotation

Students are required to report to all clinical sites as assigned. Students continue to practice tasks after competency testing to assure the refinement of his/her professional skills and gain independence and confidence. Students will be supervised and instructed in the clinical setting by the affiliate preceptors and sonographers. Through individualized instruction and evaluation, the student's clinical progress and competency will be measured by the school's clinical coordinator and the affiliate preceptors and sonographers.

VASCULAR 2019 CALENDAR

First Day of Program		January 6, 2020
Holidays	Spring Break	March 9-13
	Memorial Day	May 25
	Independence Day	July 3
	Labor Day	September 7
	Thanksgiving	November 26-27
Last Day of Program		December 18
Graduation		Date to be determined

The schedule may be amended or suspended, at any time, at the School's sole discretion, with or without notice.

VASCULAR CLINICAL SITE OVERVIEW

Clinical rotation hours are included in the Program. A Student will not be assigned to a clinical site until it has been determined by the School that this privilege has been earned as evidenced by the Student's academic and ethical performance, adherence to the School's Code of Conduct, scanning proficiency, professional behavior, attendance, promptness and compliance with any Tuition Agreement with the School. Students are required to report to all clinical sites as assigned.

The goal of the clinical rotation in the current curriculum is to prepare the sonography Student to perform step-by-step limited, and later complete, vascular sonography exams under direct supervision. The Student will practice exercising independent judgment relative to the entirety of the sonography test performed.

All practical training will be monitored and under direct supervision of the School. The planned program of activities will be controlled by the School and not by officials at the clinical site.

Student Responsibilities

Under the direct supervision of the clinical site preceptor/staff designee, the sonography Student will be responsible for the following duties:

1. Patient interviews relevant to the indications for the exam ordered.
2. Instruction and patient preparation for the exam.
3. Quality control testing for the ultrasound machine/transducers.
4. Execution of patient imaging procedures including:
 - Routine and complex vascular studies
 - Computer image acquisition and image enhancement
 - Patient preparation for various procedures
 - All required worksheets completed
5. Demonstrate knowledge and understanding of vascular pathology, pathophysiology, and hemodynamics in abnormal disease states.
6. Have an understanding of ultrasound physics and instrumentation.
7. Exhibit professionalism in the performance of these duties, demonstrate an empathetic and instructional approach to patient care, and maintain confidentiality of information as required.
8. Achieve professional growth and development through participation in medical and technical education and research to enhance the quality of patient care.
9. Take care of the patient while in the department and may be required to assist with patient issues such as vomiting, bleeding, CPR, and/or ACLS procedures.

General

The sonography Student on clinical rotation must:

- Possess these intellectual skills: comprehension, measurement, mathematical calculation, problem solving, reasoning, integration, analysis, comparison, self-expression and criticism.
- Be able to exercise sufficient judgment to recognize and correct performance deviations.
- Be prepared to recognize any condition, whether observed in the ultrasound exam or in-patient behavior, which may pose immediate threat to health or life and react appropriately.
- Attend scheduled class a minimum of one day a week in order to maintain interaction with instructors to continue learning and prepare for the national registry exam.

Behavioral and Social

The sonography Student on clinical rotation must:

- Be able to manage time to complete didactic and clinical tasks within reasonable time constraints.
- Possess emotional health necessary to effectively employ intellect and exercise appropriate judgment.
- Be able to provide professional and technical services in spite of the stress of heavy workloads.
- Be flexible, creative and adaptable to clinical and didactic changes.
- Recognize potentially hazardous materials, equipment and situations and be able to proceed safely to reduce risk of injury to patient or self.
- Support and promote the activities of fellow Students and healthcare professionals.
- Be honest, compassionate, ethical and responsible.
- Always safeguard and preserve the confidentiality of patient information in accordance with office policy.

Technical

The sonography Student on clinical rotation must assist the clinical site preceptor/staff designee to perform vascular procedures by demonstrating appropriate competency in the following:

- Obtain appropriate clinical history in order to adapt the imaging techniques accordingly.
- Patient education.
- Patient care and management.
- Record complete physiologic ultrasound exam consisting of 2D, pulsed (PW) Doppler and color flow imaging, making appropriate quantitative calculations from the data recorded.
- Equipment configuration and operation.
- Positioning skills.
- Ultrasound safety.

In addition to the above, other duties as indicated by clinical instructor or program/school policies.

Clinical Site Preceptor

Per guidelines from the Accrediting Bureau of Health Education Schools (ABHES), Commission on Accreditation of Allied Health Education Programs (“CAAHEP”) and Joint Review Committee-Cardiovascular Technology (“JRC CVT”) the following apply in connection with the clinical site preceptor:

▪ Responsibilities

Although Students will work with many sonographers in the clinical setting, a clinical site preceptor/instructor shall be designated as the primary contact for the Student and the program director. The clinical site preceptor/staff designee must be available to Students whenever he or she is assigned to a clinical site, provide appropriate clinical supervision, and be responsible for Student clinical evaluation.

▪ Qualifications

The designated clinical instructor must hold the RVT (through the ARDMS) credential or the RVS (through CCI) credential and have appropriate education and experience to fulfill the minimal qualification requirements.

Vascular Sonography Student - Master List of Competencies

Below is a list of competencies that the Student must successfully complete in order to demonstrate acquired skills in the performance and evaluation of adult vascular studies. The competencies consist of communication, didactic learning, scan lab skills, and clinical rotations. The competencies are evaluated using the associated clinical evaluation form each term or sooner if appropriate.

1. Demonstrate and practice intra and interdepartmental skills.
2. Demonstrate and practice effective communication (verbal, nonverbal, written).
3. Utilize professional conduct and demonstrate professional judgment.
4. Demonstrate initiative and display positive attitude.
5. Provide effective and safe patient care.
6. Demonstrate critical thinking skills.
7. Utilize correct scanning technique and follow testing protocols.
8. Recognize and identify vascular anatomic structures; recognize and identify vascular pathology and associated findings.
9. Utilize scanning skills to perform B-mode, PW Doppler, color Doppler, and power Doppler (titles may differ per manufacturer) imaging during vascular studies.

Patient Care Duties Not to be Provided by Students

The Student sonographer must not perform the following clinical care duties independently:

1. Discuss the vascular ultrasound findings/diagnosis/prognosis/treatment plans or surgical advice to the patients and their relatives.
2. Administration of IV/IM/Intra-cardiac drugs.
3. If the patient refuses examination by a Student sonographer the Student must stop, leave the room, fulfill the patient's wishes for privacy, and report this to the supervisor.
4. While examining all populations of patients for vascular ultrasound procedures appropriate caution must be exercised per guidelines from the hospital.
5. Patient information, including personal or medical records and vascular sonographic scans, are not to be removed from the premises, nor copied in any format, without express written request from the Program Director of the School and hospital administration. In such case, all patient identification and medical record numbers must be deleted.
6. Medical equipment, devices, and supplies are not to be removed from the premises by the Student.



ACKNOWLEDGMENT OF RECEIPT OF CATALOG AND HANDBOOK

By signing below, I certify and acknowledge the following:

1. I have received and read a copy of the Arizona Heart Foundation School of Cardiac & Vascular Ultrasound Catalog and Handbook.
2. I agree to abide by the policies set forth in the Catalog and Handbook, including the Code of Conduct.
3. I understand that the provisions, statements, policies, curricula, procedures, schedules, and fees described in this Catalog and Handbook are subject to change, suspension, cancellation or may be varied by the School at any time. I also understand that any information contained herein may be waived, modified, suspended, altered or eliminated, at the sole discretion of the School, depending on the circumstances of a given situation.
4. I accept responsibility for keeping informed relative to any changes to this Catalog and Handbook.

Student's *printed* name

Student's *signature*

Date Acknowledged

NOTE: This page must be signed, dated, and returned to the School with a signed Enrollment Agreement.