Medical Sonography Program

2019 Information PowerPoint
Sonographers are skilled health care professional who uses high frequency sound waves to produce dynamic visual images of organs, tissues, or blood flow inside the body.

Learn more at: abtech.edu/sonography
The most challenging component of the program is developing the skills necessary to manipulate the transducer to obtain optimal, diagnostic images.
Would you like to be a Medical Detective?

• The sonographer controls the camera and is responsible to image each organ in its entirety.
• The sonographer is the doctor’s eyes
• If we fail to see an abnormality, then it is missed!
• Sonographers must understand what normal looks like on ultrasound and the sonographic appearance of hundreds of different pathologies.
• Sonographers must have an in-depth understanding of clinical signs and symptom and lab values that are associated with pathologies.
A successful sonographer must be:

- Extremely Detailed oriented
- Expert Multitasker
- Critical thinker
- Professional
- Patient care oriented
- Able to accept constructive criticism
There are several areas of specialization in the field of sonography. We offer the following:

- Abdomen – evaluation of all the soft tissues, blood vessels and organs of the abdomen.
- Obstetrics/Gynecology – evaluation of the developing fetus and female reproductive system.
- Vascular – evaluation of the blood flow through blood vessels.

We do not offer Echocardiography which is ultrasound of the heart.

This PowerPoint is only a small snapshot of the all the areas we cover within the 2 year program.
Abdominal Sonography

• Evaluates the liver, kidneys, gallbladder, pancreas, spleen and aorta

• Sonography is used to detect pathologies, guide biopsies/procedures and evaluate transplanted organs.
Kidney and liver comparison
Ultrasound Guided Procedures are a large part of field and require exposure to bodily fluids as well as needles and sterile environments such as the operating room, emergency room and procedure rooms.
Superficial Structures

• Evaluation of thyroid, breast and male pelvis
• Sonography is used to detect pathologies, guide biopsies and assist in the operating room.
• Breast sonography is an intimate exam where sonographers evaluate breast pathology
• Male pelvis includes evaluation of the scrotum, testicles and prostate
• Prostate sonography evaluation is done rectally
• The thyroid is a gland in the neck routinely evaluated by ultrasound
Gynecology

• The female pelvis is routinely evaluated by ultrasound
• This intimate exam is performed vaginally
• The sonographer evaluates the uterus and ovaries to detect pathologies, guide biopsies and assist with procedures.
Obstetrics

• Sonography routinely evaluates a fetus from head to toe
• Sonographers must have an comprehensive understanding of a complete human to detect pathologies and assist with procedures.
• There are well over 100 syndromes detected by ultrasound
• Sonography detects life altering pathologies, pathologies that will alter delivery plans, must have a thorough understanding of maternal disease and how it will affect the pregnancy.
Obstetrics

- Ultrasound can detect the fetal heartbeat by the sixth week of pregnancy
- The preferred method for detecting abnormalities during pregnancy, ultrasound does not produce radiation or biological effects
Obstetrics

Sonographers are responsible for imaging small, detailed structures in the baby’s brain, heart, abdomen and skeleton.

- Left Upper Image: Profile of a second trimester baby
- Right Upper Image: Brain anatomy - including the thalamus, ventricles, falx
- Left Lower Image: Abdominal image with stomach, portal vein, aorta and spine
- Right Lower Image - Fetal brain anatomy: Corpus callosum, cerebellum, 4th ventricle, etc.
Vascular

• We image every blood vessel in the body
• A comprehensive understanding of hemodynamics and how all the pathologies affects the blood flow
• Common findings include identifying blood clots or stenosis (narrowing) of a vessel.
Carotid Arteries
Venous Leg

- External iliac vein
- Common femoral vein
- Deep femoral vein
- Superficial femoral vein
- Popliteal vein
- Anterior tibial veins
- Peroneal veins
- Posterior tibial veins

70%-80% of DVTs involve the proximal veins on ultrasound, most commonly the popliteal vein and superficial femoral vein.

20%-30% of DVTs are isolated in veins of the calf: the anterior tibial, peroneal and posterior tibial veins.
Considerations

Successful students in this program:

- Spend on average an extra 8 to 10 hours a week practicing scan skills in the lab. This is in addition to scheduled class/ lab time.
- Study an average of 10-15 hours per week outside of classroom/ clinic time. The lectures in this program present a vast amount of information. (Approximately 70-200 slides per daily lecture.)
- Clinic involves traveling to remote and local hospital, outpatient, and office settings.
Repetitive Stress Injuries are common in the ultrasound field due to the physical nature of the job.

Professionals who enter this field are at risk for neck, shoulder, elbow and wrist injuries.

If you have known injuries or limiting conditions to the neck, shoulder, elbow, wrist and/or hands, this field can exacerbate these injuries.
Work Environments

- Hospitals
- Imaging centers
- Doctors offices
- Maternal fetal medicine offices
- Breast centers
- Outpatient facilities
- Vascular surgeons
- Mobile companies
- Travel ultrasound companies
- Applications and sales with corporate vendors
Salary Expectations

- An entry level registered sonographer can expect to make $23-26 per hour.
- Annual salary in the Asheville, NC area can range from $47,000 to $73,000.
- Smaller hospitals may require taking a **24/7 call rotation** which can be lucrative for the sonographer.
American Registry of Diagnostic Medical Sonography

• The AB-Tech program is accredited through the Commission on Accreditation of Allied Health Education Programs. This accreditation allows our graduates to sit for 4 registry exams during and after successful completion of the program.

• Registry exams include Abdomen, OB/GYN, Vascular, and Physics.
ARDMS pre-application

ARDMS conducts a “pre-application review” for individuals who wish to determine the impact of a previous criminal matter on their eligibility to apply for ARDMS certification. This includes driving while intoxicated.

For more information go to www.ardms.org and type pre-application in the search box
Mandatory Requirements

1. **Information session** - the online option requires students to contact program faculty in order for their name to be submitted to apply.
2. **Summer Lab Practicum** for the accepted students and top alternates.
3. **Program Orientation** for the accepted students
   Details about the lab practicum and orientation will be provided in acceptance letters!
Medical Sonography Information session is Mandatory to apply! This is the Online option

It is mandatory for you to contact program faculty in order to apply. You can reach program faculty at 828-398-4740 or 828-398-7381. Only the names of potential students that contact sonography faculty will be submitted to Admissions with permission to apply.
Mandatory attendance is required for Summer Lab Practicum:

The top ten conditional applicants and six alternates are required to attend an on-campus lab practicum in general, vascular, and obstetrical concentrations. This entails 15 hours of hands-on learning in the sonography lab.

Learn more at: abtech.edu/sonography
Mandatory attendance is required to the Program Orientation for the accepted applicants
Attendance is mandatory to the summer lab practicum, and program orientation. These requirements will not be available by phone, Skype or any other means of communications. The time and location will be provided once accepted into the program.
Preapplication requirement: students applying to the Medical Sonography program must have successfully completed: BIO 163 (or BIO 168 and BIO 169) ENG 111, and MAT 152 with a “C” or better prior to applying to the program.

Preadmission requirement: PHY 125 (only PHY 125 will be accepted) with a “C” or better prior to the first day of the sonography program.
Clinical Rotations

- Clinical rotations are typically 15-24 hours per week in area hospitals, clinics and physician offices. It is important for you to realize that driving is involved, which could be extensive and varies depending on where you live.
Clinical Rotations

- Have multiple back up childcare plans, as you can only miss 10% of contact hours in a course.
- The majority of program contact hours are spent in the clinical setting. Students are required to follow the policies set by each clinical site. These policies include, but are not limited to: orientation, background checks, drug screens, professional appearance, etc.
- Students are conditionally accepted into the program. If a clinical site denies placement for any reason, the student cannot continue in the program.
Criminal Background Check and Drug Screen

These are completed through Castlebranch.

You may be subject to random, screens and checks throughout the program.

More information will be provided at orientation for the accepted students.
American Heart Association BLS Provider Training will be provided in SON 110 Introduction to Sonography, the cost will be $55
Vaccinations

Gather documentation NOW!

- Tdap (Diptheria-Tetanus-Pertussis) in last ten years
- MMR (or titer)
- Varicella (or titer)
- PPD
- Hepatitis B series (or titer)
- Flu vaccine
All of your courses have an online component

You **MUST** have internet access and a computer
# APPROXIMATE STUDENT EXPENSES

<table>
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<tr>
<th>Per Semester</th>
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<tbody>
<tr>
<td>In-state Tuition (16 or more credit hours)</td>
<td>$1,216.00</td>
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<tr>
<td>In-state Tuition (per credit hour per semester – Fall and Spring)</td>
<td>$76.00</td>
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<tr>
<td>Student Fees (including accident insurance)</td>
<td>$34.00</td>
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<tr>
<td>Summer Semester Tuition/Fees</td>
<td>$76.00 per credit hr</td>
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<tr>
<td>Technology Fee</td>
<td>$48.00</td>
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<tr>
<td>CAPS fee (campus, access, parking and security)</td>
<td>$10.00</td>
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### APPROXIMATE STUDENT EXPENSES

<table>
<thead>
<tr>
<th>Other Expenses</th>
<th>Description</th>
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<tbody>
<tr>
<td>Textbooks (books may be purchased on-line)</td>
<td>Approximately $780</td>
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<tr>
<td>Course Fee</td>
<td>$68 fee for all 14 SON courses</td>
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<tr>
<td>Physical Exam (after acceptance)</td>
<td>$125.00</td>
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<tr>
<td>CPR Course – A-B Tech</td>
<td>$55.00</td>
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<tr>
<td>Immunizations (as needed – must include current influenza vaccinations)</td>
<td>Health Department Buncombe County</td>
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<tr>
<td></td>
<td>MMR x 2 ($89.00 per shot)</td>
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<tr>
<td></td>
<td>Varicella x 2 ($137.00 per shot)</td>
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<td></td>
<td>Hepatitis B x 3 ($56.00 per shot)</td>
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<tr>
<td></td>
<td>PPD ($28.00)</td>
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<td>Influenza combo ($40.00)</td>
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<td></td>
<td>Tdap ($56.00)</td>
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<td>Other Expenses</td>
<td>Background Check/Drug Screening (after acceptance)</td>
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<td>Uniform Shoes</td>
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<td>Uniforms (for three sets)</td>
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<td>Tablet</td>
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<tr>
<td>Trajecsys</td>
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<tr>
<td>Student Picture ID</td>
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<tr>
<td>Holder for Student Picture ID</td>
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## APPROXIMATE STUDENT EXPENSES

<table>
<thead>
<tr>
<th>Graduation Expenses</th>
<th>ARDMS Exams</th>
<th>$950</th>
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<tbody>
<tr>
<td>Graduation Fees</td>
<td></td>
<td>Approx. $50.00</td>
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Please note the costs listed are simply a program summary *ESTIMATE*. It is provided to inform interested individuals of potential education costs.
Additional program information

information packet available at the Admissions office
You are expected to use your AB-Tech email as that is the way I will communicate with you!

AB Tech Community College
Reminder!!!

You are completing the online version of the information session and it is mandatory that you contact program faculty in order to apply. You can reach us at 828-398-4740 or 828-398-7381