Medical Sonography

Fall 2018 Deadline: March 22, 2018

***Admissions Information***

Medical Sonography is a selective enrollment program beginning each fall. Resources such as clinical facilities and faculty, as well as approval standards, limit the number of applicants accepted to the program to 8 students for the fall. The Medical Sonography program does not reserve seats for high school seniors. Medical Sonography is a two-year, associate degree program and all applicants must meet minimum requirements to be considered for admission. Please note, however, that meeting minimum requirements does not guarantee admission.

When applicants have completed all of the minimum requirements, they must meet with an Admissions Counselor for a Medical Sonography Minimum Admissions Requirements (MAR) Review. This must be completed by the deadline date stated above. Qualified applicants will be ranked based on criteria listed in this packet. Applicants not admitted to the program must reapply, complete a new health information session and complete a new MAR Review if they wish to be considered for the following year’s class.

**PHASE I: APPLICATION PROCESS**

The following steps must be completed by March 22, 2018 for the fall 2018 program.

1. Complete the Residency Determination Service (RDS) and a Forsyth Tech application. If currently enrolled in classes at Forsyth Tech, complete the update form in the Admissions Office.

2. Complete the online information session tutorial and return the electronic signature form. This form can be returned to the Admissions Office via email, fax, mail, or hand delivery. If you prefer, you may choose to attend an in-person information session instead of completing the online tutorial.

3. Complete placement testing if required by the Admissions Office.

4. Have an official high school transcript or GED scores mailed to the Admissions Office.

5. Have official transcripts from all colleges or schools attended since high school sent to the Admissions Office. Official transcripts must have the school seal or original signature and be in a sealed unopened envelope or submitted electronically from the school. Electronic transcripts should be sent to Admissions@forsythtech.edu. We strongly recommend that official college transcripts be received and evaluated before a MAR is conducted. Evaluation of transcripts typically takes 5-7 business days to complete once transcripts have been received. Please do NOT bring in transcripts the day you come to complete your MAR review.

6. Submit official copies of any Advanced Placement (AP) scores, if applicable.

**NOTE: The information provided in this packet is subject to change annually.**
PHASE II: MINIMUM ADMISSIONS REQUIREMENTS

1. **Placement Testing:** All applicants must demonstrate English, Reading and Math competencies to be eligible for program consideration. There are 4 different ways that these competencies can be met:

   a. **Multiple Measures- high school GPA:**

      1. If applicant has graduated from a **NC** high school legally authorized to operate in the state **AND**
      2. Has graduated from high school within the past 5 years* **AND**
      3. Has eligible 4th level high school math course** **AND**
      4. Has a 2.6 or higher high school unweighted GPA*** THEN
      5. The placement testing minimum admissions requirement has been met.

      *If applicant is currently enrolled in high school, 1st semester senior grades/GPA must be submitted before the high school GPA can be used to waive placement testing by Multiple Measures. **The list of eligible 4th level math courses is available in the Admissions Office. ***High school transcript must clearly indicate that the GPA is unweighted.

   b. **SAT/ACT scores (valid for five years): Specific scores will waive specific tests**

      For tests taken prior to March 2016:

      SAT Critical Reading- 500+ OR SAT Writing- 500+ or ACT Reading- 22+ OR
      ACT English- 18+ will exempt applicants in Reading Comp. and Sentence Skills.

      SAT Math- 500+ OR ACT Math- 22+ will exempt applicants in Math skills.

      For tests taken in March 2016 or later (note change in SAT scores):

      SAT Evidence Based Reading and Writing- 480+ or ACT Reading- 22+ OR
      ACT English- 18+ will exempt applicants in Reading Comp. and Sentence Skills.
      SAT Math- 530+ OR ACT Math- 22+ will exempt applicants in Math skills.

   c. **Completion of College level English and/or Math**

      A grade of “C” or higher in a college level English composition or math course, that meets program MAR requirements, can waive placement testing once the transcript(s) has been received and reviewed.

   d. **Placement Test Scores (all scores are valid for 5 years):**

      | CPT          | COMPASS     | ASSET        |
      |--------------|-------------|--------------|
      | Sentence Skills | Writing     | Writing Skills | 41 |
      | Reading Comp.  | Reading     | Reading Skills | 41 |
      | Arithmetic    | Pre-Algebra | Numerical Skills | 41 |
      | Algebra       | Algebra     | Elem. Algebra | 41 |
The NC-DAP Math (DMA) and NC-DAP Reading and English (DRE) have replaced the above tests at all NC Community Colleges. The following are the required scores for those taking NC-DAP:

<table>
<thead>
<tr>
<th>NC-DAP DMA</th>
<th>NC-DAP DRE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DMA-010</td>
<td>7 (or higher)</td>
</tr>
<tr>
<td>DMA-020</td>
<td>7 (or higher)</td>
</tr>
<tr>
<td>DMA-030</td>
<td>7 (or higher)</td>
</tr>
<tr>
<td>DMA-040</td>
<td>7 (or higher)</td>
</tr>
<tr>
<td>DMA-050</td>
<td>7 (or higher)</td>
</tr>
<tr>
<td>DMA-060</td>
<td>7 (or higher)</td>
</tr>
</tbody>
</table>

**Applicants taking the NC-DAP for math** must demonstrate mastery in DMA 010, 020, 030, 040, 050, and 060. Applicants taking the NC-DAP Reading Comprehension and Sentence Skills must demonstrate mastery in DRE 096, 097 and 098.

Applicants not meeting the required mastery or the minimum scores should enroll in the appropriate DRE/DMA course(s). All DRE/DMA courses must be completed by the deadline date. If DRE/DMA or DMS shell courses from other NC community colleges are being used to meet this requirement, submission of the placement test scores will also be required.

**A score of 7 or higher in DMA-60 will exempt students from taking DMA-70 and DMA-80. If the DMA-60 score is below 7, students must also complete the DMA-70 and DMA-80 classes.**

2. **Biology Competency**

Applicants must have completed a high school biology course. If the course was not completed at the high school level, an applicant must complete the course at the college level. There is no age limitation on the high school or college level course.

3. **No “D/F” Policy**

Applicants must earn a grade of “C” or better in all program related courses attempted to be eligible for the program. This policy applies to courses taken at Forsyth Tech as well as equivalent courses completed at outside colleges or universities. **Applicants with a “D” or “F” in a related course (listed on pg. 5) as of the stated deadline will NOT be eligible to complete a MAR review for the Associate Degree Medical Sonography program.** If a grade of “D” or “F” is earned after acceptance to the program, the course must be repeated and a “C” or higher earned before the student will be allowed to enroll in the medical sonography program. Failure to remove a grade of “D” or “F” will result in the loss of admission into the Medical Sonography program.
After completion of Phase I and II, applicants are eligible to meet with an Admissions Counselor to complete the Minimum Admissions Requirements (MAR) Review. Applicants who wish to be considered for the fall 2018 program must complete the MAR Review between the dates of September 5, 2017 and the deadline of March 22, 2018. Applicants for the fall 2018 program will not be considered for admission until this step is completed.

Due to new state regulations regarding residency, applicants are strongly encourage to complete both RDS and the online application prior to coming in to complete the MAR. It may not be possible to complete both steps at the time of MAR. This is of particular note to applicants applying close to the deadline.

When can I complete my MAR Review?

<table>
<thead>
<tr>
<th>Fall 2018 Applicants</th>
</tr>
</thead>
<tbody>
<tr>
<td>If you are applying for fall 2018 and have completed all of your related classes or will be taking classes during the summer semester only, you can complete your MAR:</td>
</tr>
<tr>
<td>September 5 - March 22*</td>
</tr>
</tbody>
</table>

*MAR reviews will not be conducted October 9-13, November 20-24, December 18- January 19, and February 19-22.

The Admissions Office hours for the MAR Review are 8:00 a.m. – 6:00 p.m. Monday through Thursday.

The review is done on a walk-in basis and no appointment is necessary. The Admissions Office is located in the Oak Grove Center, room 2361. Please note that only one counselor is available after 5:00 p.m.

Please do NOT bring in college transcripts the day you come to complete your MAR review as the Admissions Office is not the office responsible for transcript evaluations. Official transcripts should be submitted 5-7 business days prior to coming in to do a MAR review.

Reminder: MAR reviews will not be conducted on Fridays.
PHASE IV: MAR REVIEW RANKING PROCESS

After completion of Phase I and II, applicants who complete a MAR Review are ranked using a point system. As this is a selective enrollment program, it is in the student’s best interest to achieve as many ranking points as possible. The components of the ranking system include the following items:

1. **Related Courses**

   Points are awarded for specific course grades completed by the deadline. Grade points are valued as follows: A= 4 points, B= 3 points and C= 2 points. These points are then multiplied by the credit hours for each course. For example, English 111 (3 credit hours) with a grade of “B” (3 points) gives a student 9 total points for that course. AP credit is based upon the individual scores as follows: 5=A=4 points, 4=B=3 points and 3=C=2 points. No AP credit is awarded for a score of 2 or lower.

   Related academic courses and approved substitutions are listed below. Only courses completed by the deadline will be used for ranking. Courses **must** be completed with a “C” or higher. **Biology courses over five years old will not be considered for transfer credit or points in the ranking.** Please note: if a course is repeated, the most recent grade earned will be used in the ranking.

   **Related Course Titles – College Level Only**

<table>
<thead>
<tr>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>*BIO 163 or BIO 165 &amp; 166 or BIO 168 &amp; 169</td>
<td>5</td>
</tr>
<tr>
<td>ENG 111</td>
<td>3</td>
</tr>
<tr>
<td>ENG 115 or COM 231</td>
<td>3</td>
</tr>
<tr>
<td>PSY 118 or PSY 150</td>
<td>3</td>
</tr>
<tr>
<td><strong>MAT 171 or higher level math course</strong></td>
<td>4/3</td>
</tr>
<tr>
<td>PHY 110/110A or higher level physics course</td>
<td>4</td>
</tr>
<tr>
<td>Humanities/Fine Arts elective (Hum 115 preferred)</td>
<td>3</td>
</tr>
</tbody>
</table>

   *To qualify for ranking points and transfer credit, courses must satisfy the required semester hours and descriptions. Please note that BIO 165 & 166 must be completed at the same college or university to transfer. Applicants completing BIO 168 & 169 are not restricted to taking both anatomy courses at the same college or university. Since BIO 163 is the preferred curriculum course, students taking the two part sequence (BIO 168/169 or 165/166) should be aware that the two grades are averaged and multiplied by five credit hours to calculate an equivalent BIO point total.

   **A College Algebra course can be used in lieu of MAT 171. Since MAT 171 is a 4 credit course, if a 3 credit College Algebra course is used, the grade will be multiplied by 3 hours. If the College Algebra was 4 credit hours, then the grade will be multiplied by 4 hours. Statistics courses will not count towards ranking points or transfer credit.

2. **Additional Points: Must be submitted at time of MAR Review**

   Points will be awarded for the completion of the following. Please note these are **not** requirements for admission to the program. Appropriate documentation must be submitted for points to be awarded.

   - 5 points  Current CNA I
   - 1 point  Current CNA II
   - *2 points  1 year or more full time experience working in a health field
   - *1 points  480 hours or more part time experience working in a health field

   *Must receive documentation from supervisor on facility letterhead verifying work experience and a copy of the official job description must accompany the letter.

   **Work performed must involve direct patient care as specified in the job description. This includes, but is not limited to occupations such as nursing, CNA, imaging technologists, therapists, patient transporters, orderlies, and other similar positions where patient care is part of the primary job description and purpose. Occupations**
such as medical unit secretary, lab technician, gift shop clerk, cafeteria worker etc. will not be considered since the main function of these jobs is not patient care.

Additional points will be given for the following courses that are not part of the Medical Sonography curriculum’s general education related courses listed on page 5. A final grade of “B” or higher must be verified by an official college/university transcript and submitted by time of the MAR Review to receive points. Additional points will only be awarded for the specific courses identified below (course substitutions are not permitted).

1 point Completion of a medical terminology course (Must be a credit/curriculum course. Non-credit courses will not be considered.)
1 point CIS 110 Introduction to Computers or a higher level computer course.
2 point MAT 151 Statistics I or a higher level statistics course.

3. Total Points for Ranking

Adding together the grade points and related experience points will determine the applicant’s total points for ranking. Students with the highest point total will be accepted. In the event of a tie, the applicant with the higher Related Courses points will be ranked higher. An alternate list will also be developed. Applicants not admitted to the program must reapply, complete a new health information session and complete a new MAR Review if they wish to be considered for the following year’s class.

Accepted student data from the previous 3 years

Please note that the data below is for informational purposes only! Points and criteria vary each year. It is in a student’s best interest to accumulate as many points as possible to be as competitive as possible.

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of qualified applicants</th>
<th>Point range of accepted students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>36</td>
<td>107-111</td>
</tr>
<tr>
<td>2016</td>
<td>35</td>
<td>105-109</td>
</tr>
<tr>
<td>2015</td>
<td>52</td>
<td>102-109</td>
</tr>
</tbody>
</table>

Policy regarding Deferred Action Childhood Arrival (DACA) and Undocumented Students

Current NCCCS policy allows DACA and undocumented applicants to enroll at Forsyth Tech at the out of state tuition cost. However, acceptance to the college does not guarantee acceptance to a specific program.

DACA students are eligible to apply to an Allied Health/Nursing program.

Undocumented students are not eligible for consideration to Allied Health or Nursing programs. According to North Carolina and Federal law, undocumented students are not eligible for North Carolina professional licensure.

This policy is subject to change without notice based upon federal and state regulations.
Medical Training Certification Requirement

It is strongly recommended that you begin working on these certifications prior to acceptance to the Medical Sonography program. Nursing Assistant I and CPR training courses fill up quickly. If you are unable to complete these requirements by the deadline set by the MS department after acceptance, you will lose your seat in the program.

Applicants who are accepted must hold current healthcare provider level cardiopulmonary resuscitation (CPR) certification through the American Heart Association by the first day of class or clinical. CPR certification can be completed through Forsyth Tech’s Economic and Workforce Development-Education Division (336-734-7023).

In addition to the CPR requirement, accepted applicants must complete and pass Nursing Assistant I prior to the first day of Fall 2018 semester. NA I is usually a 6 week course so students must begin the course in time to complete it by the deadline. The NA I must be completed at an accredited program in the state of North Carolina.

Requirements for Admitted Students ONLY

Please note that if you have not completed any of the related courses listed on page 5 at the point of admission to the Medical Sonography program – you must complete those courses by the end of the summer semester to maintain your seat in the program.

Sonography Boot Camp

All applicants who are accepted into the Medical Sonography Program are required to attend a mandatory "Sonography Boot Camp". The “Sonography Boot Camp” is usually held in May during the evening hours. The applicants who are accepted will receive specific dates for the mandatory “Sonography Boot Camp” in their acceptance letters. However, this is a notification that all accepted applicants are expected to attend this event as a condition of final admission. Students who fail to attend the “Sonography Boot Camp” may potentially lose their spot in the program. Accepted applicants who cannot attend during the dates provided in their acceptance letters need to inform program coordinator, John Cassell, as soon as possible to see if other arrangements can be made.

Scanning Labs

Due to the non-ionizing property of ultrasound, we often perform scans on actual volunteers in our labs. When applicable, in order to meet laboratory objectives students will have the option of bringing volunteers of their own or scanning volunteer classmates. There are criteria that must be met before an individual can serve as a scanning lab volunteer. These criteria will be covered in the classroom in detail.

In the event that there are not enough volunteers to meet the scanning lab objectives and requirements, students will have the option of scanning ultrasound phantoms and/or simulators in order to meet these objectives, or make-up labs may be arranged when volunteers are available.
The Associate Degree in Applied Science in Medical Sonography signifies that the graduate is prepared for entry into the practice of sonography. Therefore, the graduate must have both the knowledge and skills to function in a broad variety of situations and to render a wide spectrum of health related services.

Candidates for the degree must have a variety of abilities and skills in the areas of:

A. Observation
B. Communications skills
C. Motor and function
D. Intellectual: Conceptual, Integrative, and Quantitative
E. Behavioral and Social Skills

Technical compensation (i.e. eyeglasses, hearing aides) can be made for some handicaps in certain areas but a candidate must be able to perform in a reasonably independent manner.

A. Observation - abilities required of a candidate include sight sufficient to:
   1. Skillfully use precision instruments such as microscopes, oscilloscopes, gauges, control panels, and other electronic digital equipment.
   2. Observe and evaluate (i.e. patient’s body habitus, transducer selection).
   3. Observe the results of technical factors (i.e. image critique).
   4. Observe the results of certain stimuli (i.e. medication reaction).
   5. Observe changes in equipment operation (i.e. see loss of quality of equipment).
   6. Visually monitor patients and review images in dimmed light.
   7. Visual acuity of 20/60 or better in at least one eye (with or without correction).
   8. Ability to visualize colors and determine colors as displayed on equipment as well as in relation to the patient’s condition.
   9. Ability to adequately differentiate between subtle shades of gray and color.
 10. Hearing within normal limits (aided or unaided).
 11. Ability to assess patient and other situations rapidly, determine course of action, delegate activities to co-workers, and/or respond as appropriate.

The senses of vision, smell and hearing are necessary for a candidate to effectively function in the Sonography Curriculum.

B. Communication Skills - required by candidate include: the ability to speak, hear, and observe patients in order to:
   1. Elicit information and cooperation (i.e. questioning of patient, giving breathing instructions).
   2. Describe changes in mood, activity, and posture.
   3. Perceive nonverbal communication (i.e. pain, lack of understanding).
   4. Communicate in a clear and concise manner to people in various departments in both written and spoken English.
   5. Understand spoken and written English in the clinical and classroom settings.
   7. Read and apply appropriate instructions in treatment charts, notes, and records.
   8. Ability to work in a noisy environment with many interruptions.
   9. Ability to accurately read and transcribe moderately illegible handwriting.
 10. Ability to hear, understand, and respond appropriately to comments, questions, and instructions given in person, over the phone, and in writing/print.

A candidate must be able to communicate effectively and sensitively with patients, including not only speech and hearing, but reading, writing, and electronic forms. A candidate must be able to communicate effectively and efficiently in oral and written form with members of the health care team.
C. **Motor and Function** - Abilities required of a candidate include gross and fine muscular movements, equilibrium, strength, and functional use of the senses of touch and vision for the handling of patient, self, and equipment in order to:

1. Elicit information from patients by palpation, auscultation, percussion, testing muscle strength and function, penetration of the skin, and other diagnostic maneuvers.
2. Safely perform procedures.
3. Provide other patient services and patient associated services.
4. Safely lift, manipulate, and use equipment correctly.
5. Lift fifty (50) pounds of weight up and over head level.
6. Reach up to six (6) feet off the floor, and ability to reach frequently.
7. Transfer immobile patients from stretcher to sonography table with assistance.
8. Transfer patients from wheelchair to stretcher or examination beds and back.
9. Push a standard wheelchair from a waiting area or patient’s room to the ultrasound department.
10. Use a keyboard, mouse and/or trackball for inputting clinical data into consoles, computers, and electronic charts.
11. Sitting less than 2 hours a day.
12. Standing up to 80% of an 8-hour day.
13. Walking 4-6 hours a day.
15. Grasping/Gripping for constantly extended periods. (for an hour or more)
16. Pushing and pulling for extended periods.
17. Moderate amounts of stooping.
18. Moderate amounts of crouching.
20. Ability to work long and/or irregular hours.
21. Ability to move a maximum of a 290-pound patient in a 2-person or a 3-person transfer.
22. Reach forward up to 18 inches while holding an object weighing 15 pounds.
23. Push ultrasound equipment on wheels weighing up to 300 pounds of more.

A candidate must have these abilities to provide safe care for patients in various states of mobility and awareness.

D. **Intellectual: Conceptual, Integrated and Quantitative** – Abilities required of a candidate include measurement, calculation, reasoning, analysis, and synthesis to:

1. Solve problems (i.e. mathematical computation).
2. Comprehend three dimensional relationships (i.e. anatomical relations).
3. Understand the spatial relationship of structures.
4. Comprehend and apply clinical instructions given from department personnel.
5. Ability to remember and recall a large amount of information.
6. Ability to apply critical thinking skills in regard to obtaining adequate clinical history from the patient and correcting that information with exam findings.

A candidate must have these abilities to accurately perform sonographic technique to produce quality sonograms.
E. **Behavioral and Social Skills** – required of candidate:

1. Allow mature, sensitive and effective relationships with patients, clients, and fellow workers (interpersonal skills).
2. Tolerate physically taxing workloads.
3. Function effectively under stress.
4. Adapt to changing environments (i.e. flexible schedules).
5. Display flexibility and ability to function during uncertainty inherent in health care (i.e. emergency conditions).
6. Display:
   a. Compassion
   b. Empathy
   c. Integrity
   d. Concern for others
   e. Interest and motivation
7. Ability to calmly and politely cope in stressful situations, in emergency patient situations, or situations with other staff members.

A candidate must have these abilities to provide empathetic support to patients where quality care is dependent on a team approach.

All of the previously listed abilities, skills, and knowledge in a candidate will be continually tested and evaluated during the educational process of this curriculum.