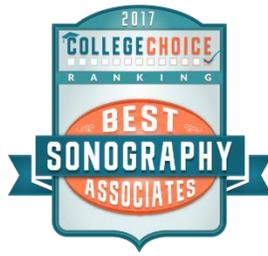


Welcome to the Diagnostic Medical Sonography Program at Montgomery College



Ranked 6th in the country for the Best Associate's in DMS degree for 2017

Diagnostic medical sonography is an exciting imaging modality that is continuously evolving with technological advances. At Montgomery College we strive to provide a comprehensive and thorough education to ready our sonographers of the future for this progressive medical imaging modality. The DMS Program is not a traditional program, it encompasses blended learning, the deliberate connection of educational technology with face-to-face instruction/scanning to enhance and personalize a deep and meaningful curriculum.

Students who plan to major in diagnostic medical sonography will be assigned the temporary major of pre-diagnostic medical sonography, with POS code 530, until they are officially admitted to the diagnostic medical sonography program. Students may take preparatory courses and courses that fulfill General Education requirements during the waiting period. As an alternative to being assigned a temporary major, students waiting for admission to the diagnostic medical sonography program may choose to major in general studies or any other open-admission program. The Admissions and Records Office at Takoma Park/Silver Spring will assign a matriculated code once students are admitted to the diagnostic medical sonography program.

Montgomery College holds institutional accreditation through the Middle States Commission on Higher Education ([MSCHE](#)), and the Diagnostic Medical Sonography Program holds accreditation through the Commission on Accreditation of Allied Health Educational Programs ([CAAHEP](#)).

Diagnostic medical sonography is a multi-specialty profession comprised of abdominal sonography, cardiac sonography, obstetrics/gynecology sonography, vascular sonography, and other specialty concentrations. These diverse areas all use ultrasound as a primary technology in their daily work.

The goal of the DMS Program is to:

- To prepare competent entry-level adult cardiac sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains; and/or
- To prepare competent entry-level general sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains; and/or
- To prepare competent entry-level vascular sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains

The diagnostic medical sonographer is an individual who provides patient care services using ultrasound and related diagnostic procedures. The diagnostic medical sonographer must be educationally prepared and clinically competent as a prerequisite to professional practice. Demonstration and maintain competency through certification by a nationally recognized sonography credentialing organization is the standard of practice in sonography, and maintenance of certification in all areas of practice is endorsed.

The diagnostic medical sonographer functions as a delegated agent of the physician and does not practice independently. Diagnostic medical sonographers are committed to enhanced patient care and continuous quality improvement that increases knowledge and technical competence. Diagnostic medical sonographers

use independent, professional and ethical judgment, and critical thinking to safely perform diagnostic sonographic procedures.

Admission requirements, including specific selection criteria, have been approved by the Montgomery College Board of Trustees; see the Admissions and Registration section of this catalog.

Students need to meet prerequisites for first-semester courses. Each of the diagnostic medical sonography courses builds on materials offered in previous courses. Students in this curriculum are required to achieve a grade of C or better in each sonography course, submit to a criminal background and drug testing and maintain current CPR certification while enrolled in the program.

Upon completion of the sonography curriculum, the graduate will have earned an Associates of Applied Science (AAS) and will be eligible to sit for the national registry exam, administered by the American Registry of Diagnostic Medical Sonographers, in one or more of the following concentrations: abdominal sonography, obstetrics/gynecology sonography, adult echocardiography, or vascular technology.

Dear Prospective DMS Student,

Thank you for your interest in the Diagnostic Medical Sonography (DMS) online/blended program. At Montgomery College we strive to provide a comprehensive and thorough education to ready our sonographers of the future for this progressive medical imaging modality. The DMS Program is not a traditional program, it encompasses blended learning, the deliberate connection of educational technology with face-to-face instruction/scanning to enhance and personalize a deep and meaningful curriculum.

We are happy to assist you in your inquiries into our DMS program. We have enclosed some information that we think will be helpful in answering your questions about this profession and about the application process to our program. I encourage you to review the Admission Process specifically for the Health Science Programs in the College Catalog within the Admissions section and to read over the material enclosed. The Health Science Application also outlines the prerequisites to the program and the steps needed to complete in order to be an eligible candidate.

Once you have had a chance to review the enclosed materials, we would like to meet you at one of our DMS Information Sessions. These information sessions are held once a month on campus. Please see the enclosed schedule for dates and times and how to participate in an online Information Session.

Keep in mind that **March 1st** of each year is the deadline for applying for the DMS Program. The Degree program begins once a year, at the beginning of the Summer Semester.

Remember you may take any of the general education courses required for this program without being accepted into the program. If you need help with planning out our academic courses, please contact Maureen Mirowski, Counselor at 240-567-5810 Maureen.mirowski@montgomerycollege.edu or the counseling department at Montgomery College, at 240-567-1480 or for general information about the Diagnostic Medical Sonography program, contact Sharare Jones at 240-567-5563 (sharare.jones@montgomerycollege.edu)

Please review the enclosed DMS Admissions Information and Health Science Application (<http://cms.montgomerycollege.edu/edu/departments.aspx?id=20563>), and the dates and times for the next available DMS Information Session (<http://cms.montgomerycollege.edu/EDU/Department.aspx?id=5536>). Good Luck in your endeavors, we look forward to meeting you at an upcoming Information Session. For further information on our program please visit our Web Page at <http://cms.montgomerycollege.edu/dms/>.

With Best Regards,

Linda Zanin

Dr. Linda Zanin, RDMS

Coordinator Diagnostic Medical Sonography

DMS Information Sessions

Fall/Spring 2018-2019

Time: 2:00-3:00pm

Location: Health Science Building (HC)

Room 422

Throughout the Spring and Fall semesters, DMS information sessions are held to provide information for those who wish to learn more about the DMS program.

Attending a DMS Information Session is not currently mandatory, however we strongly recommend attending a session to make sure you are on the right track to applying. There is nothing more disappointing than thinking you are ready to apply to the program and then finding out you did not have all the right information you needed to qualify.

At Montgomery College we strive to provide a comprehensive and thorough education to ready our sonographers of the future for this progressive medical imaging modality. The DMS Program is not a traditional program, it encompasses blended learning, the deliberate connection of educational technology with face-to-face instruction/scanning to enhance and personalize a deep and meaningful curriculum. These information sessions provide prospective students with an opportunity to discuss with DMS faculty about academic qualifications for admission, prerequisites for the program, application deadline dates, the DMS curriculum, clinical rotations, details on financial aid, professional careers and more. During these Information Sessions DMS faculty and MC counselors will be present to offer academic advice.

If you would like to speak to a counselor for academic advising please contact the Counseling Department at 240-567-1480, located in the Student Services Building on the Takoma Park/Silver Spring Campus. On Campus DMS Information Sessions are held in the Health Science Center located at 7977 Georgia Avenue, Room 422. ([Directions to the Health Science Center](#)).

See dates and times listed below, no appointment is needed, all are welcome. If you need any questions answered about how to find us, please contact the Administrative Aid at 240-567-5563 and she would be happy to assist you.

FALL/SPRING 2018-2019

On-Campus Information Sessions, **2:00- 3:00 pm**

Health Sciences Building (TP/SS), Room # 422

FALL 2018

Tuesday, September 25, 2018

Tuesday, October 23, 2018

Tuesday, November 27, 2018

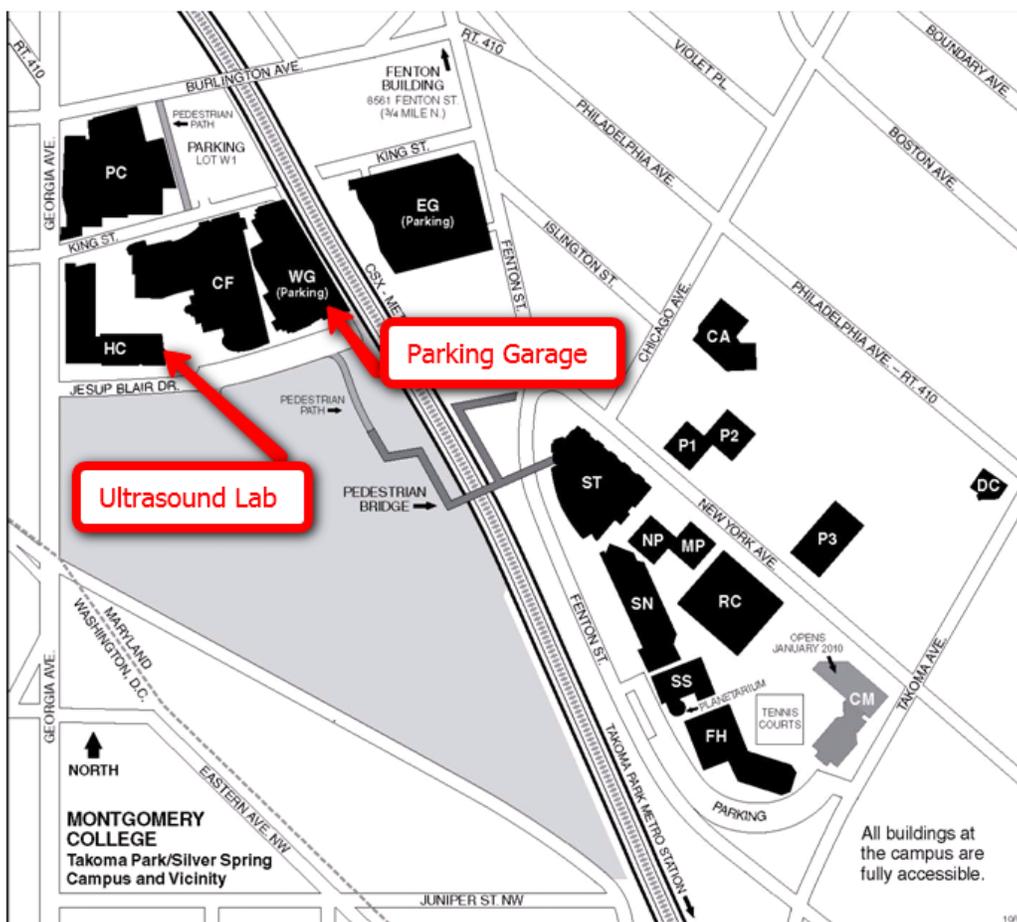
SPRING 2019

Tuesday, January 22, 2019

Tuesday, February 19, 2019

Tuesday, March 26, 2019

**Campus Map - Takoma Park/Silver Spring
Information Sessions is held in room HC 422**



Montgomery College - Health Sciences Building
7977 Georgia Avenue, **Room #422**
Silver Spring, Maryland 20910

Below is the information on how to get to Health Science Building on the TP/SS Campus of Montgomery College.

Traveling South on Georgia Avenue:

- Turn **left** onto Jessup Blair Drive to enter the West Campus Garage (**WG on Map**). The entrance to the building is at the corner of Georgia Avenue and Jesup Blair Drive (see map above).

Traveling North on Georgia Avenue:

- Turn **right** onto Jessup Blair Drive to enter the West Campus Garage. The Garage says parking for faculty and students only; however visitors are welcome to park on the top level of the garage. The entrance to the building is at the corner of Georgia Avenue and Jesup Blair Drive (see map above).

Public Transportation:

- **Metro Bus:** Route 70, 71 – Georgia Avenue-7th Street. Line (Montgomery College Health Center Building is 3 stops from the Silver Spring Subway station)
- **Subway Station:** Silver Spring

For additional information on how to get to Takoma Park/Silver Spring camps of Montgomery College you can visit us on the web at <http://cms.montgomerycollege.edu/edu/secondary5.aspx?urlid=15>

The Inside Scoop

If you're thinking about a career in ultrasound, the Inside Scoop may be able to help you get a more detailed understanding of what sonography is all about. And hopefully help you decide if this is the right career path for you. At Montgomery College we strive to provide a comprehensive and thorough education to ready our sonographers of the future for this progressive medical imaging modality. The DMS Program is not a traditional program, it encompasses blended learning, the deliberate connection of educational technology with face-to-face instruction/scanning to enhance and personalize a deep and meaningful curriculum.

1. Definition of the Profession

Diagnostic medical sonography is a multi-specialty profession comprised of abdominal sonography, breast sonography, cardiac sonography, obstetrics/gynecology sonography, pediatric sonography, phlebology sonography, vascular technology/sonography, and other emerging clinical areas. These diverse areas all use ultrasound as a primary technology in their daily work.

The diagnostic medical sonographer is an individual who provides patient care services using ultrasound and related diagnostic procedures. The diagnostic medical sonographer must be educationally prepared and clinically competent as a prerequisite to professional practice. Demonstration and maintenance of competency through certification by a nationally recognized sonography credentialing organization is the standard of practice in sonography, and maintenance of certification in all areas of practice is endorsed.

The diagnostic medical sonographer:

- Functions as a delegated agent of the physician; and
- Does not practice independently.

Diagnostic medical sonographers are committed to enhanced patient care and continuous quality improvement that increases knowledge and technical competence. Diagnostic medical sonographers use independent, professional, ethical judgment, and critical thinking to safely perform diagnostic sonographic procedures.

A fundamental approach to the safe use of diagnostic medical ultrasound is to apply elements of the As Low As Reasonably Achievable (“ALARA”) Principle including lowest output power and the shortest scan time consistent with acquiring the required diagnostic information. The diagnostic medical sonographer uses proper patient positioning, tools, devices, equipment adjustment, and ergonomically correct scanning techniques to promote patient comfort and prevent compromised data acquisition or musculoskeletal injury to the diagnostic medical sonographer. (sdms.org)

A diagnostic medical sonographer must be competent in any sonographic procedure they perform. Certification by a sonography credentialing organization that is accredited by National Commission of Certifying Agencies (NCCA) or the American National Standards Institute - International Organization for Standardization (ANSI – ISO) represents “standard of practice” in diagnostic sonography.

Despite the commonality of ultrasound technology across the field of sonography, the bodies of knowledge, technical skills, and competencies of sonographers in different areas of sonography specialization are markedly different. If performing procedures in any of the following primary areas of sonography specialization, a diagnostic medical sonographer must demonstrate competence in the specialty area(s) through appropriate education, training, and certification:

1. Abdominal Sonography
2. Obstetrical/Gynecological Sonography
3. Cardiac Sonography
4. Vascular Technology/Sonography

If the diagnostic medical sonographer specializes or regularly performs procedures in secondary area(s) of specialization (e.g., breast sonography, fetal cardiac sonography, musculoskeletal sonography, pediatric sonography, phlebology sonography, etc.), the diagnostic medical sonographer should demonstrate competence through certification in the area(s) of practice by a nationally recognized sonography credentialing organization. Employers and accrediting organizations should require maintenance of diagnostic medical sonographer certification in all areas of practice.

Ultrasound is a very "hands on" modality. More than other radiology methods, ultrasound images depend on the technique of the person doing the study. Learning proper technique requires many hours spent scanning in class, in open skills enhancement scan lab, and during clinical hours.

2. Earning Potential for Sonographers

Sonographers receive variable rates of compensation depending on geographic area, level of experience, type of employment (per diem, shift differential, full-time part time, or temporary) and type of employer (hospital, specialty clinic, government center, or out-patient center).

The SDMS Salary & Benefits Reports provide in-depth salary and benefits data for the profession including compensation for sonographers by credential, bonuses and salary increases, benefits provided, hours worked per week, and the average number of scans performed in a typical workday. <https://www.sdms.org/resources/salaryreport>

3. Work Environments

Sonography is a dynamic profession that has grown significantly over the past 50 years. With rapidly developing new technologies and increased use of diagnostic ultrasound procedures, growth is projected to continue in the future with employment opportunities for qualified sonographers in both urban and rural areas nationwide. Sonographers and vascular technologists can choose to work in clinics, hospitals, private practice physician offices, public health facilities, laboratories, and other medical settings performing examinations in their areas of specialization. Career advancement opportunities exist in education, administration, research, and in commercial companies as education/application specialists, sales representatives, and technical advisors, etc.

More information about a career in Sonography can be found at Society of Diagnostic Medical Sonography ([SDMS.org](https://www.sdms.org)).

Since most sonographic work is in clinical settings, we thought we would offer some input as to what these environments are like:

Hospitals: In a hospital setting the level of commitment that is expected of hospital workers is quite high. The overall attitude is that patients' needs come first, especially in emergency situations. If a patient comes in to the emergency room at three in the morning needing a sonogram exam, you might very well get a call in the middle of the night.

Even without emergency situations, hospitals have high personnel needs because they are open all the time. Sometimes hospital employees are required to work different days each week, or even different shifts each day. So, why would anybody do it? For one thing, hospital work is a great way to get a really broad base of experience. Also, sonographers may be compensated for being on call, and on days when they're not called in.

Outpatient Clinics and Doctor's Offices: An outpatient clinic operates similar to a doctor's office, except it is larger. Compared to the hospital setting, outpatient clinics or doctor's office have more fixed schedules, usually Monday through Friday. Patients are scheduled to come in during regular daytime hours and, if there is bad weather they can choose to close and direct patients to the hospital. Patients who come to clinics are generally much healthier than hospitalized patients. For one thing, they are able to walk or get around in a wheelchair. In contrast, hospital patients are often very ill and are confined to a hospital bed or stretcher.

So, why would anybody not choose to work in an outpatient clinic? There are several reasons. For one thing, some people might find that a clinic is too quiet or boring compared to a hospital. Another potential problem with clinical settings is that, because of the relatively small personnel groups, individual workers are much more dependent on having good coworker relations.

In general, each work environment offers its own advantages and disadvantages. As student in Diagnostic Medical Sonography Program at Montgomery College, you will experience a variety of work environments as part of your clinical training. By the time you finish, you will know what your individual preferences are.

4. Physical Demands of Sonography

One thing students might not realize about sonography is that it is quite physically demanding. In fact, there are specific physical standards that one must be able to fulfill in order to do the work. For example, vision must be adequate to distinguish fine shades of gray on a computer screen. Sonographers also need to be physically strong in order to help patients move around if they are not fully mobile on their own. Read the Technical Standards of physical fitness published by Montgomery College for more information about physical requirements.

Because of the physically demanding nature of sonography, work-related injuries can be a problem for sonographers. In fact, injuries are the number one reason sonographers eventually retire. Fortunately equipment manufacturers are incorporating ergonomic design into sonographic equipment, and managers are recognizing the need for exercise and relaxation to improve job performance. Take a look at the Society of Diagnostic Medical Sonography web pages on ergonomic issues and exercises at SDMS.org.

5. Legal Aspects of Being a Sonographer

Everyone has heard stories about malpractice lawsuits. Although the incidence of lawsuits brought against sonographers is relatively low compared to physicians, it is a risk that students need to be addressed. A sonographer who makes a mistake can potentially cause serious harm to a patient. Therefore it is important to get good training and document anatomy and pathology with skill. It is also important to keep up to date with changes in technology and maintain their level of training. Malpractice insurance is available for sonographers and is relatively inexpensive. Find out more about liability insurance at the SDMS website. SDMS.org

The good news is that sonographers can reduce the risk of lawsuits by maintaining good standards of practice and keeping up their level of training. The other good news is that malpractice insurance is readily available for sonographers and is relatively inexpensive.

FAQ about DMS Program

Prospective Students

At Montgomery College we strive to provide a comprehensive and thorough education to ready our sonographers of the future for this progressive medical imaging modality. The DMS Program is not a traditional program, it encompasses blended learning, the deliberate connection of educational technology with face-to-face instruction/scanning to enhance and personalize a deep and meaningful curriculum.

1. What is an Associates of Applied Science in Diagnostic Medical Sonography?

An Associate of Applied Science (A.A.S) is an undergraduate academic college degree awarded by an education institution upon completion of a course of study lasting two years of technical training for the degree. That means you'll be taking your subject interest classes and upon successfully completing the requirements will be able to work toward being fully trained in your field at the end of your two-year program. That means, upon successful completion of the two-year DMS program, a student will earn an Associates of Applied Science (A.A.S.) and will be eligible to take board exams offered through the American Registry of Diagnostic Medical Sonographers (ARDMS). Additionally, if the DMS graduate should decide to pursue higher education, Montgomery College has obtained many Guaranteed Admission Agreements with four-year universities so that an DMS graduate can transfer into Bachelor of Science Degree programs. Click on these links to find out more about the [MC-GW transfer opportunity http://smhs.gwu.edu/academics/health-sciences-programs/guaranteed-admission-agreements](http://smhs.gwu.edu/academics/health-sciences-programs/guaranteed-admission-agreements) or [other college transfer opportunities http://cms.montgomerycollege.edu/EDU/Plain.aspx?id=49246](http://cms.montgomerycollege.edu/EDU/Plain.aspx?id=49246) for MCDMS graduates.

2. What is the application process for the DMS program?

Students interested in applying for the DMS program must submit the following information to the Admissions Office/Takoma Park Campus **PRIOR to March 1st**.

3. Are there prerequisite courses for the DMS program?

Yes, in order to be considered for admission, there are prerequisites in English, Math, Biology, Anatomy & Physiology, and Physics that must be successfully completed prior to applying to the program. For specifics on the admission process and pre-reqs, see the DMS application on the Health Sciences Admissions page: <https://www.montgomerycollege.edu/admissions-registration/health-sciences/index.html> and DMS Admission FAQ's about Admissions to the program.

4. What coursework will I have to take to fulfill the General Education Course Requirements for DMS Degree? Can I take these courses prior to admission into the DMS program?

Students in the Montgomery College DMS program must complete 33 credit hours of general education and other required coursework. Some of these courses (e.g. BIOL 212) have prerequisites that must be completed prior to taking them. Students are expected to complete these courses in addition to the credit hours required of the DMS curriculum.

Though students are not required to have completed all the general education courses and other required coursework prior to applying to the DMS program, it is highly recommended that students successfully complete as many of these courses before starting the program.

For a suggested course sequence for the DMS program, click on the DMS Admissions tab on the left hand tool bar and scroll down to the bottom of the page.

5. Does admission take place once or twice a year for the DMS program? How many students are accepted into the program each year?

Admission to the Diagnostic Medical Sonography program takes place only once a year. All admission applications, transcripts, and placement tests must be submitted BEFORE MARCH 1st for admission into the following summer semester.

The DMS Program admits General Sonography, Echocardiography, and Vascular students once a year. Students will be required to choose their specialty concentration before beginning the program. The capacity of Montgomery College for new DMS students is 30 seats per academic year (18 General, 6 Echo, 6 Vascular).

6. What are clinical rotations? Are they required for the DMS program?

Clinical rotation prepares students for the challenging responsibilities of the profession and provide opportunity to acquire a working knowledge of the field, provide a clinical educational experience that enables students to be capable of performing routine sonographic procedures and related functions specific to sonography, provide an education experience that promotes effective communication skills, critical thinking abilities and professionalism, and promote the development of core values and ethical standards necessary for the delivery of quality patient-centered care.

Clinical rotations are formal arrangements that provide DMS students with hands-on experience at an ultrasound facility.

Learning to produce quality ultrasound images takes a lot of practice. The only way to learn is by scanning. Skills Enhancement Lab time provides students with the opportunity to get additional hands-on scanning in lab on-campus. Attendance at Skills Enhancement Lab is optional supervised scanning time -- all students are encouraged to take advantage of the extra one-on-one help with scanning.

7. Will I be able to choose my clinical sites?

Students do not choose clinical sites for their clinical work. One of the most important reasons is that students have to be assigned in clinical sites that have trained, qualified, and registered sonographers in the specialty concentration the student is enrolled in. Each clinical site is under contract with Montgomery College to ensure appropriate clinical policies and procedures are adhered to. No two clinical experiences are the same, however by the end of the program students will have to had unique clinical experiences necessary for them to be eligible to work in a clinical setting as entry level sonographers. For these and other reasons necessary to maintain the high standard of ultrasound education in the DMS program, Clinical Concentration Coordinators assign clinical rotation assignments. In addition, not every clinical site offers opportunities to gain experience in each specialty concentration. Students are assigned to clinical sites based on criteria including but not limited to:

- * Student expression of desired concentration of study (General, Echocardiography & Vascular);
- * Diagnostic lab availability (General, Echocardiography & Vascular);
- * Complements the student's individuality (i.e. technical skill level, interpersonal skills)
- * Exposure of student to a variety of clinical settings, i.e. in-patient and out-patient experiences;
- * Variety in clinical instructorship and case volume handled by the site;
- * Student exposure to a variety of ultrasound equipment

8. Can I continue to work at my job while enrolled in the DMS program? How much time does this program take?

There are no policies prohibiting students from working while attending the DMS program. However, due to the challenging curriculum and the demands of the clinical course hours requirement, many students have found working while in the program to be extremely difficult. Nonetheless, some students have successfully completed the program while working part-time.

Students in this program are expected to comply with the requirements of the program set by the Standards and Guidelines of the Accrediting organization. If a student has a lot of commitments outside of school, the student will need to balance his/her priorities to be able to successfully complete the program requirements.

The program will require the student to complete all the program requirements in order to earn an AAS degree in Diagnostic Medical Sonography. As such, by graduation, all general education courses as well as SONO courses must have been successfully completed.

Time Requirements – Outside of DMS face to face class/lab time:

1. If you have any of the general education course requirements to complete, then these additional requirements will increase your total in-class. Sonography students suggest that the more general education courses you can finish before you start the program the more time you can commit to your sonography courses.
2. Also, most classes involve a lot of reading/homework and group project work. Sonography students suggest you plan on at least a few hours at school one additional day a week for getting together with classmates to study, work on group projects and for optional scanning during Skills Enhancement scan labs.
3. Learning to produce diagnostic ultrasound images takes a lot of practice. The only way to learn is by scanning.

9. Will I be a registered sonographer upon graduation?

During the 2nd summer session of the program, students will sit for the Sonography Principles and Instrumentation (SPI Board Exam) administered by the American Registry of Diagnostic Medical Sonographers (ARDMS) . The successful passing of the SPI Board Exam is a pre-requisite to the 2nd Fall Semester in the DMS Program.

During the final semester in the DMS Program students will sit for Specialty National Board Exam(s) offered through the American Registry of Diagnostic Medical Sonographers (ARDMS). Depending on which specialty concentration you complete (i.e. general, vascular, or echocardiography), ARDMS offers the following certifications:

- * **RDMS - Registered Diagnostic Medical Sonographer**
- * **RDCS - Registered Diagnostic Cardiac Sonographer**
- * **RVT - Registered Vascular Technologist**

For more information on certification, click here: <http://www.ardms.org>

10. When do I qualify to sit for my registry exams?

Students will sit for their national board exam before they complete the DMS program. The National Board Exam is provided by the American Registry for Diagnostic Medical Sonographers (ARDMS) and students must qualify with the ARDMS to sit for their national board exam. During the 2nd summer in the DMS Program students are required to sit for and pass their SPI Board Exam. Successful passing of the SPI Board Exam is a pre-requisite to continue to the 2nd Fall Semester in the DMS Program. During the Final Spring Semester in the DMS Program, students are required to sit for their Specialty Board Exams before graduation.

When planning your examination schedule, you should keep in mind that you are required to take both a physics board exam (SPI) and the corresponding specialty area exam(s) within a 1 year span. For a list of additional considerations and ARDMS requirements for registry applicants, click here ARDMS [Overview of Applicant Process](#).

11. Can I take the Board exams more than once if I do not pass?

Yes, according to the American Registry of Diagnostic Medical Sonographers (ARDMS) candidates who are unsuccessful in passing an examination and wish to reexamine can reapply. However, there is a mandatory 90-day waiting period after the date of the previous examination before a new examination-eligibility period can be scheduled. Students should be aware that individual employers may have their own policies governing Board exam failure.

12. What percentage of students successfully complete the DMS program at MC?

The percentage of students who start and complete the DMS program in two years is published on the DMS Program Outcomes on this website. Note: Financial and family obligations are the most common reasons students do not successfully complete the DMS program.

13. What percentage of students eventually pass their board exams?

DMS students have a high pass rate on their board exams. The board exam pass rate varies from year to year, however the DMS board exam pass rates have been consistently higher than that of the national average. Please refer to the DMS Program Outcomes on this website for graduate board pass rates.

14. Will the college help students find jobs after graduation?

The college does not have a job placement service for DMS students. However, the DMS program does help with resume building, Registry Review courses for board exams, and job posting from employers. There is a nationwide need for qualified sonographers. Please refer to the DMS Program Outcomes link on this website for job placement rates.

15. Are there any health related side effects for sonographers or students?

Widespread clinical use of diagnostic ultrasound for many years has not revealed harmful effects with prudent use of ultrasound. Studies in humans have revealed no direct link between the correct use of diagnostic ultrasound and any adverse outcome. Although the possibility exists that biological effects may be identified in the future, current information indicates that the benefits to patients far outweigh the risks.

Visit <http://www.aium.org/patient/pamphlets/safety.asp> for more information.

16. After I complete the program, can I return and learn another concentration?

Sonographers who are currently registered in one specialty concentration may return to the DMS Program at Montgomery College to earn an additional specialty concentration. For more information on the DMS specialty concentrations offered at Montgomery College, visit the DMS Specialty Concentration link.

17. I took my anatomy, physiology, physics, and biology 5 years ago. Does Montgomery College accept my old credits?

Anatomy and Physiology credits cannot be older than 5 years. All other college credits do not have an expiration date. To determine which college credits will transfer to Montgomery College, you must send official transcripts to the Admission and Records Office for review once you have become a Montgomery College student. To become a MC student you can fill out the MC Online Application.

18. I am a parent with kids. Can I determine my start and end time at my clinical site?

It depends on the clinical site, some clinical sites start a little later, and some start a little earlier. Students are required to set their clinical time with the clinical site. Students are treated like employee's when it comes to clinical time, they must report on time according to their published clinical schedule when they check-in and check-out of clinicals.

19. If I encounter an emergency in my personal life, can I postpone my exam(s) or retake my course(s)?

In this situation, students need to address their individual case with the Course Instructor. Any work missed must be made up. The Course Instructor is guided by the college policy on course attendance and course withdrawal. Students who qualify for Disability Support Services(DSS) can complete a intake form with the Disability Support Services Office and speak directly with a DSS counselor.

Student-to-Student FAQ

1. Is it possible to work and be successful in this program?

Unfortunately, there is no straight yes or no answer to this question. The fact is that the DMS program does require a significant time commitment that is often equal to more than the average full time job. Deciding to work during the program is a personal decision that should be made after careful consideration and evaluation of the schedule and required commitments of the program.

2. On average how much time do you spend studying each week?

The average study time for any course per credit hour is 2-3 hours per credit hour. The Diagnostic Medical Sonography program is intensive and encompasses a large amount of information. As the program progresses the required study time increases in preparation for completion of the required board examinations.

While required study time will vary from student to student it is not something that can be over looked in this program. To be successful in Diagnostic Medical Sonography you have to be able to utilize the information learned for critical thinking and problem solving. Simply memorizing facts is not enough, you need to spend as much time as you need to fully understand all of the information that is presented during the program.

3. What is an important skill that you feel is required to be successful in this program?

Time management is an important skill to have and be able to utilize during the Diagnostic Medical Sonography program. Aside from the required clinical hours and required instructional lab days there are weekly assignments, discussion boards, class projects, skills enhancement labs, quizzes, and more to complete throughout the semester. Finding adequate time to complete all of the requirements and additional time to study takes careful planning and dedication. Many students find that utilizing a daily planner is extremely helpful and a key aspect to their success throughout the program.

4. Are there any recommended study methods I should use while in the program?

There are a number of different study methods students utilize throughout the program. Some of these include: outlines, flash cards, online quizzes, study groups, audio notes, and board exam review material.

There is no one study method that works for every student. Take the time to try out different techniques to find what works best for you.

5. I noticed there are a number of required and recommended textbooks listed for each course. Are these materials really necessary?

Yes, the required textbooks are imperative for successful completion of each course and many students recommend having the suggested study material as well. Reviewing the same information in multiple formats is a great way to learn and since each resource presents the same information in a different format you are encouraged to really think about the information and not just memorize it.

6. Since this is a blended online program is it really necessary to make connections with my classmates?

Yes, making connections with your fellow sonography students is very important. During required instructional lab days you will depend on your peers to complete scan assignments and other required course work. Your peers are also a great learning resource and support system. Take the time to make connections and support each other throughout the program.

7. Aside from the required clinical experience how will I obtain hands on ultrasound experience?

During the required lab time you will learn to perform ultrasound examinations by using the lab ultrasound machines. You will perform ultrasounds on technical models, anatomically correct body structure models, classmates, and volunteers. It is during these labs that you will experience a large portion of your hands on training, especially in the first year of the program.

8. During the required instructional labs are we provided with models to scan?

The Diagnostic Medical Sonography lab has a number of anatomically correct and technical models for students to practice scanning on. Often times the majority of volunteer models are fellow classmates and outside models are not provided during required instructional labs with the exception of volunteer obstetrical models during the second year of the general ultrasound program.

9. I am uncomfortable with being a model for my classmates. Is modeling for my peers a requirement of the program?

No, being a model for your classmates is not a requirement for the program. Choosing to model for your classmates is a personal choice and at no time should you feel like you have to do anything you are uncomfortable with. Students are NOT required to be scanned.

10. When at my clinical site, what will be expected of me?

While at your clinical site you will be observing, assisting, and participating in ultrasound examinations. In addition you may be asked to help with routine tasks such as stocking exam rooms, refilling gel bottles, cleaning examination rooms and ultrasound machines, and more. It is important to realize that the sonographers (clinical instructors) at the clinical site are not reimbursed for their contribution to your education. Clinical Instructors first responsibility is to their patients. Students are a guest in the clinical site and must abide by their policies and procedures.

11. Will I be left alone with patients at my clinical site?

Students are supervised at all times at the clinical site. Students will be supervised under direct and indirect supervision by the clinical instructor(s). Many students comment on how different sites allow for different levels of participation with patients during an examination.

12. Will I be exposed to other ultrasound specialty concentrations other than the one I am enrolled during my clinical rotations?

It is possible that during your clinical rotations you will observe examinations performed by sonographers with specialty certifications other than the concentration you are currently enrolled in. This happens because many sonographers hold multiple certifications allowing them to perform multiple types of sonographic examinations.

13. Will I be introduced to multiple imaging modalities during my clinical rotations?

Prior to performing an ultrasound examination it may be necessary or required to look at the patient's medical history. A patient may have had other diagnostic studies performed. There is an expectation that you will be able to review the results of prior studies/labs/reports. While this is not direct exposure to other imaging modalities it is important to look for prior studies/labs/reports results and be able to understand how they may impact the ultrasound examination.

14. I understand that clinical experience is important for my education but will my performance at my clinical sites actually impact my future job outlook?

It is important to view your clinical rotations as an extended job interview.

15. Are there benefits to pursuing multiple certifications once I complete my initial ultrasound education?

There are always benefits to continuing education especially in diagnostic medical sonography. Pursuing multiple specialty certifications increases your marketability as a sonographer and affords you more opportunities to work in a multitude of clinical settings.

16. What words of wisdom do you have for incoming students?

The Diagnostic Medical Sonography program is intensive but if you are organized and dedicated it is possible to be successful. Always ask for as much clarification as you need and always take advantage of every opportunity to learn and better your sonographic skills. This program provides you with the tools needed to be successful but it is up to you to utilize those tools to become a diagnostic medical sonographer.

DMS Technical Standards

The Technical Standards for Diagnostic Medical Sonography have been established by the Society of Diagnostic Medical Sonography. The practice of Diagnostic Medical Sonography requires the following functional abilities with or without reasonable accommodations.

- **VISUAL ACUITY:** Sufficient to assess and evaluate images distinguishing among black/white/multiple shades of grey tones; distinguish multiple color variations in hues, tone or brightness;
- **HEARING:** Hear audible cues and warnings on imaging equipment and life support devices; distinguish slight audible Doppler signal variations
- **OLFACTORY:** Sufficient to assess patients and to implement the care plans that are developed from such assessments
- **TACTILE:** Utilize the sense of touch in order to provide patient care and to position patients for optimum sonographic procedures
- **STRENGTH AND MOTOR SKILLS:** Coordinate movements of equipment, such as portable machines, portable breathing apparatus, and/or other accessories
- **FINE MOTOR SKILLS:** Manipulate efficiently the movement of a transducer, including an endocavity probe, using one hand while simultaneously keying information with the other hand
- **PHYSICAL ENDURANCE:** Transport efficiently in and out of the ultrasound exam room any non-ambulatory patients who may arrive in wheelchairs or on stretchers; lift, move and transport patients and/or any accessories needed to complete the task
- **ABILITY TO COMMUNICATE:** Give clear and understandable oral instructions, respond to patients' inquiry, and/or report to healthcare personnel involved in the completion of the study
- **EMOTIONAL STABILITY:** Utilize interpersonal skills to handle patients with physical, mental or emotional challenges
- **COGNITIVE ABILITY:** Utilize critical thinking skills to act and decide appropriately in matters of emergent needs; utilize the skills needed on when and how to perform procedures with "universal precautions".

At Montgomery College we strive to provide a comprehensive and thorough education to ready our sonographers of the future for this progressive medical imaging modality. The DMS Program is not a traditional program, it encompasses blended learning, the deliberate connection of educational technology with face-to-face instruction/scanning to enhance and personalize a deep and meaningful curriculum.

Online Hybrid Learning/Face to Face Scanning Labs & Off Campus Clinical Training

At Montgomery College we strive to provide a comprehensive and thorough education to ready our sonographers of the future for this progressive medical imaging modality. The DMS Program is not a traditional program, it encompasses blended learning, the deliberate connection of educational technology with face-to-face instruction/scanning to enhance and personalize a deep and meaningful curriculum. The DMS program is offered in a blended format with face-to-face hands-on teaching & scanning training with hybrid online learning through [Blackboard Learn](#). Students receive face to face hands on learning as well as the convenience of having the freedom to learn at their own pace in the comfort of their own home via Blackboard. This allows students to have access to lectures, quizzes, projects, assignments, and more any time, day or night, from anywhere they have internet access. Many students appreciate the convenience of not having to commute, having access to all their learning materials in one place, the user friendly online platform, and the freedom of independent learning. Therefore, if a student is eager to learn, has great time organization and time management skills, and are motivated to be a health professional in the exciting field of diagnostic medical sonography; then please check out the Montgomery College Diagnostic Medical Sonography Program. All three sonography concentrations: Vascular, Echo, and General Abdomen and OB/GYN offer hybrid online courses. However, please remember, on campus face-to-face attendance is required for didactic courses. The instructors conduct face-to-face course lab scanning demonstrations and practice, hands on scanning one-on-one guidance and didactic course content review. Hybrid online lecture content is offered through Blackboard, Montgomery Colleges Learning Management System (LMS). Optional Skills Enhancement Scanning labs are offered 5 days a week.

To find out more about online learning, please visit Montgomery College's [Office of Distance Learning](#) where you can find a step by step online [orientation](#) and [tutorial](#) to acquaint yourself with the online education format at Montgomery College.

If the Sonography program is offered hybrid, would I ever have to come to school?

Yes, you do come to school. Every other week you will come to school one to two days a week for scheduled face-to-face labs or for optional Skills Enhancement labs. Every semester, you can access the syllabus and course schedule for each course you are enrolled in. Also, it is good to mark your calendar ahead with course face to face meeting dates and the [college academic calendar](#) to make sure you know when all your due dates are and when face to face labs are being held on campus. During your face to face lab sessions you meet with your classmates and professor. This is a chance for asking questions, participate in group activities, participate in hands-on scanning, learn from scanning skill demonstrations, and have plenty of time to practice scanning. Montgomery College has a state of the art scanning lab with ultrasound machines, computers, phantoms and learning resources. In addition, you can sign up for Skills Enhancement Scan lab when you want to additional scanning time to work on perfecting your scanning skills. During these optional Skills Enhancement Scan labs you will have additional time to practice your scanning skills; which can help to reinforce what is learned during face to face course scan labs and what is learned at clinical sites during your rotations. It is during these additional Skills Enhancement Scan labs that you can spend as much time as you need for practicing and learning. They allow you to work and feel more comfortable using ultrasound equipment, scanning procedures and protocols and ultrasound scanning skills.

What does a hybrid classroom look like?

If you have never taken an online course, Montgomery Colleges [Office of Distance Learning](#) has an [orientation](#) and [tutorial](#) that walks you through a "typical" online classroom. In an online classroom, there are places to view assignments, assessments, classroom discussions, course schedule, grade book which concentrations progress in the course, web links, and course e-mail. There are assignments, discussions, video's to view and quizzes to complete. Getting used to online learning can be challenging at first but it will become much more

easy once you have spent time learning in this environment. There is a weekly discussion board that presents students questions and asks them to discuss and describe a topic related to what is being learned that week with their classmates. The web links provide useful websites that can be used to enhance the course material. With the built in calendar tool you can become very organized because you have a list of everything that is due for the month and you also can personalize the calendar with whatever you have on your own agenda. At the end of each week you can view your grades on the grade book link and know exactly how you are progressing in your courses. At anytime you can communicate via Blackboard email, request online office hours, communicate with classmates and faculty via online tools and of course face to face on campus. There are many different ways to communicate and work with your classmates and instructors. The link is: <http://cms.montgomerycollege.edu/edu/department2.aspx?id=4963> to listen to the tutorial.

What is a discussion board?

An online discussion board is a way to discuss a topic, ask for help or simply communicate and engage with your classmates and instructors about the material being covered, experiences you are having off campus at clinicals or just a way to get clarification on a question you have. A question or explanation of some sort will be posted on Sunday by your instructor and you will have to post a response to the instructors question by the following Wednesday. Along with your response you will ask a question for your fellow classmates to discuss. This is how the communication between students gets started. Following your response, you have to reply to two of your classmates questions by the following Saturday. This is graded and is an important part of the online classroom. The instructor for the course will also reply to some of the questions and this helps make a good discussion and provide clarification for questions that go unanswered by your classmates.

How am I tested, are the exams online?

Quizzes, midterm and final exams completed on-campus in the Medical Learning Center.

How will we know the material for each week if we don't have a specific lecture for that week?

Learning in an hybrid-online program will require you to be a self directed learner. You must be organized and self-motivated to read all the required reading and course content, complete course work and online assessments and assignments in a timely manner. Letting online course work "pile up" for a week can be disastrous, you need to be self disciplined to keep reading and working every week in order to keep up with the work. You will be provided course material you need for each week, including, weekly Learning outcomes and assessments.

If you have questions how do you get them answered?

If you have questions about the online course content, required readings assignments and/or quizzes you can email, call or meet face to face with your instructor. You can also participate in study groups with your classmates as well as ask your assigned clinical faculty and clinical instructors for clarifications while at clinical about procedures and scanning protocols. If you have question while reading course material or during clinical internship, your instructors, classmates and the internet are great resources to reach out to. Internet resources often are wonderful resources for the most up to date information. Also, you will form a tight bond with your classmates because you will work with each other for two years. Faculty are always available and respond back to student questions within 48 hours. If you are experiencing technical difficulties with online learning you can call/email the Montgomery College Help Desk, they are open 24/7. There is never a need to wait for face to face labs to ask your questions, there are many resources available to you.

What is the online atmosphere like in Blackboard?

When you are online you can access everything you need for your courses. You must be very organized and remember to mark your calendars with due dates and deadlines. When you are logged-in to your course and online, there is a feature that allows you to see who is online studying at the same time as you. You can send them live messages and ask them to chat and study with you. The online courses in the Diagnostic Medical Sonography Program are organized and become easy to navigate. When you come to class you need to be organized with the questions you would like the instructor to review with you and your classmates. Time is spent at the beginning of each face to face lab session reviewing over course material and answering questions. If you can keep organized and manage your time then you will get the best that the online classes have to offer such as being able to make your own personal study schedule that works best for you and your daily life. Don't put things off to the last minute because a lot of the work you do needs to be researched and it takes time to learn. The best advice you can follow, is to have a schedule that you can follow each week. Maybe, complete your discussion topics one day, assignments another day, while reading your chapters and lecture outlines every other day. This will ensure that by the end of the week you are prepared to complete the required course work and move on to the next week's material. Being organized is the most important aspect of an online program.

Advantages/Disadvantages of Learning Online – Make a Decision if Online Learning is for You

Other than saving the planet, what are the advantages of an online course?

Φ- 1. Online courses are convenient.

The biggest advantage of an online course is that your classroom and instructor (theoretically) are available 24 hours a day, seven days a week. Your only excuse for missing class is not getting online! Otherwise, everything is available to you. You can get announcements, access notes, review assignments, take practice quizzes, discuss questions, chat with fellow students and study any time you want. Other than certain due dates, you make your own schedule for completing the requirements of the course.

Φ- 2. Online courses offer flexibility.

You can study any time you want. You can study with whomever you want. You can study wearing anything you want (or nothing if you prefer!) Online courses give you the flexibility to spend time with work, family, friends, significant others or any other activity you like. You still have to complete the work (and this flexibility can be your downfall; see disadvantages) but for many people, with continually changing work schedules or people who make frequent business trips, parents with small children, students caring for others or whose health prevents them from making it to campus on a regular basis, students whose friends or boyfriend/girlfriend drop in unexpectedly, or for those days when the surf and/or snow is wicked, this method of course delivery can't be beat.

Φ- 3. Online courses bring education right to your home.

Online students often find that their family, friends and/or boy-girl-friends get involved in the course. Oftentimes, a student will study with that special someone present. Children may take an interest in the online environment. Parents may look over the shoulder of an online student while they are surfing across the web. In

short, everyone in the household gets involved in learning. Having the support of your family and friends makes you more likely to succeed.

Φ- 4. Online courses offer more individual attention.

Because you have a direct pipeline to the instructor via e-mail, you can get your questions answered directly. Many students aren't comfortable asking questions in class for fear of feeling stupid. The Internet (hopefully) eliminates that fear (as long as you feel comfortable with the instructor). Many times you think of a question after class or while you are studying. Rather than trying to remember to ask it or forgetting it, you can send an e-mail to the instructor. Your opportunity to learn is enhanced.

Φ- 5. Online courses help you meet interesting people.

Many of us don't really take the time to get to know our fellow students, especially in large classes. We might be too busy or we're just plain shy. An online course provides an opportunity to get to know other students via bulletin boards, chat rooms and mailing lists. I've had students form study groups online, meeting at a local library or coffee shop. Even if you just converse online, it gives you a type of interaction with other students and other people that just isn't practical in the time-limited on-campus classroom.

Φ- 6. Online courses give you real world skills.

When you complete this course, you will be able to include e-mail and web browsing as technical skills on your resume. That gives you a definite advantage over someone who doesn't have these skills. Learning how to get information via the Internet opens up a world of possibilities for your personal and professional life. You can find jobs online, get college applications online, make travel plans online, get dealer costs for cars online, comparison shop online, access great works of art and literature online, meet people from around the world online, follow sports and movies online, and so on. The possibilities are practically endless.

Φ- 7. Online courses promote life-long learning.

Most of the time, most of what we learn in a course is forgotten within a week or two of the end of classes. Having that spark of interest and knowing how to find information online insures that what your learning is always available to you. If you become interested in a certain topic, perhaps because of something you see, read or hear about, or perhaps because one of your children or friends has a question, you can get online and look it up. You will have developed the skills to find information, digest it, synthesize it and formulate an answer to any question that comes your way.

Φ- 8. Online courses have financial benefits.

Although you may think that buying a computer and paying for Internet access is pretty expensive, consider what it would cost you in gas and parking each month if you were driving to campus. Consider the costs of eating out versus eating at home. Consider the costs for child-care, pet care or any other kind of care that you need to provide while you are away from home. Consider the costs of missing work to make classes or not being eligible for a promotion because you can't attend classes to advance your educational level. These are very tangible benefits of having access to education at home.

Φ- 9. Online courses teach you to be self-disciplined.

Perhaps the greatest foe of online courses is procrastination. Most of us, instructors included, put off the things we need to do until the very last moment. When it comes to education, the last moment is the worst possible moment to learn. Sometimes that lesson is learned the hard way in the form of poor performance on an exam or assignment. But ultimately, you succeed because you realize the importance of doing things on time or even ahead of time. That self-realization propels your success in an online course. No one is there looking over your shoulder to tell you to go online and study. No one is there to make you ask questions or post responses. The motivation to study in an online course comes from you. It's something we call student-centered or active learning. The online student takes responsibility for their course of studies and matures into an individual for whom learning and accomplishment are highly valued. In short, your success depends on you!

Φ- 10. Online courses connect you to the global village.

No technological invention in the history of man has connected the people of the world like the Internet. While there is still a huge disparity between those who have access to the Internet and those who don't, the mere fact that any of us can communicate across the globe speaks to the importance of this medium. Many times the web sites you visit in a course will be based in another country. What better place to find out about the works of Michelangelo than to go to Italy (virtually, of course)? What better way to learn about the Amazon rain forest or the history of China or the customs of islanders in the South Pacific than to visit those places online? And if you participate in global learning days or other online events, you may even meet and make friends with someone in another country. It is a small world, after all.

There are probably many more advantages to Internet-based courses, but I think you get the idea. The point is that we live in an diverse-changing world that is ripe with new possibility. The ability to learn new information or a new skill whenever you want and wherever you want offers far greater opportunities for education than ever before. The scope and reach of education broadens to far greater horizons that perhaps ever imagined.

How could there possibly be any disadvantages of online courses? Read on.

Φ- 1. Online courses require more time than on-campus classes.

Believe it or not, you will spend more time studying and completing assignments in the online environment than you will in an on-campus course. How can that be? The online environment is text-based. To communicate with your instructor and other students, you must type messages, post responses and otherwise communicate using your fingers (i.e. through typing). As you can probably guess, typing is slower than speaking. (Try reading each word as you type it and compare the difference if you had spoken the same thing.) In the same sense, reading your lecture materials can take more time than listening to an instructor deliver them, although spoken lectures have a distinct disadvantage. If you are sitting in a classroom, it's likely that you'll miss a good percentage of what the instructor says, no matter how focused you are. It's human nature to zone out for brief periods of time. When you are reading, you will have a tendency to go back over the notes if you miss something and that takes more time. The point is that you will likely learn more in an online environment, but you will have to make a greater effort to accomplish that learning.

Φ- 2. Online courses make it easier to procrastinate.

Just as there is a dark side to that controversial property known as the Force, there is a dark side to Internet-based courses. The dark side starts with procrastination. Procrastination is to a student what Darth Maul is to Qui Gon. Procrastination will chop you to bits in an online course. There is no one to tell you to get to class on time. There is no one reminding you that assignments are due or that exams are coming. There is no one to preach to you, beg with you, plead with you to stay on top of your coursework. (Sounds pretty good, huh?) It's easy to put off reading and assignments in the online environment. Before you know it, weeks have gone by, you haven't done any homework and it's exam time. Scary bad. Creepy anxious. Too real.

Φ- 3. Online courses require good time-management skills.

An Internet-based course demands that you develop personal time-management skills. As with most things, if you don't manage your time properly, you will find yourself buried beneath a seeming insurmountable mountain of coursework. Online courses require the self-discipline to set aside chunks of time to complete your studies. It means you have to make online studying a priority and not let other activities interfere. Sometimes, it means making difficult choices.

Φ- 4. Online courses may create a sense of isolation.

In an online course, no one can hear you scream. And that causes discomfort for some online students. Studying alone with only the computer as your companion can be terrifying. There's no whispering in the back of the room, no wise remarks from the peanut gallery, no commanding presence at the front of the classroom pleading for everyone to listen. The online environment is a much different atmosphere that takes some getting

used to. Hopefully, your online instructor is sensitive to this problem and can help you overcome those feelings. In any case, you should be aware of them and seek help if they start to impede your studies. A quick e-mail to a classmate, your instructor or a counselor can help you feel better connected if the sense of community you seek is missing.

Φ- 5. Online courses allow you to be more independent.

In my opinion, it's a much better situation for the student. By the time a student enters a community college, they want to be independent. They don't want someone telling them what to do all the time. They want is their freedom. (At least, that's how I was when I went to college.)

Φ- 6. Online courses require you to be an active learner.

It's a sink or swim proposition and you can't have it both ways. If you desire to become a responsible, self-sufficient, independently minded citizen of this planet, then now's the time to start. Life is not a dress rehearsal. Get busy with it.

Φ- 7. Online courses don't have an instructor hounding you to stay on task.

I also think it's an advantage for the instructor. I don't have to become the all-powerful Oz and threaten you with dire consequences if you don't do your work. I don't have to control you, manipulate you, scold you, act like a parent or babysitter to you. I can treat you like an adult with the respect that you deserve.

Φ- 8. Online courses give you more freedom, perhaps, more than you can handle!

This freedom can be dangerous if you don't learn how to handle it.

Φ- 9. Online courses require that you find your own path to learning.

Personally, I think it is far better to let students find their own way. Instructors can be beacons, lighthouses of knowledge, so to speak, but we can't steer the ship. Hopefully, everyone makes it safely to harbor. Occasionally, someone shipwrecks. But in all cases, everyone learns, and I think that is important.

Φ- 10. Online courses require you to be responsible for your own learning.

Only you are responsible for your learning. I can't force it on you. I can't make you study. I can share a little knowledge and experience, show you a few tools and hope you get it. The spark and desire to pursue your dreams must be yours.

So, in a philosophical sort of way, the real disadvantage to an Internet-based course is that you might not own up to it. You might not take responsibility for your studies and your goals. You might get way behind and never catch up.

DMS Admissions

At Montgomery College we strive to provide a comprehensive and thorough education to ready our sonographers of the future for this progressive medical imaging modality. The DMS Program is not a traditional program, it encompasses blended learning, the deliberate connection of educational technology with face-to-face instruction/scanning to enhance and personalize a deep and meaningful curriculum.

How do I apply to the Montgomery College Diagnostic Medical Sonography Program?

If you are not already a Montgomery College student, you will first need to apply to Montgomery College. Everyone is welcome to attend Montgomery College, as it has an open admission policy. You can fill out and submit the [Montgomery College Application online](#) OR if you stop by any Montgomery College campus Admissions and Records Office they can provide you with a paper copy to fill out and turn in right away. Along with the Montgomery College Application, you will need to pay a one-time \$25.00 application fee.

Once you have received notification of your acceptance as a Montgomery College student, or if you are already a Montgomery College student, you can fill out the [Health Science Application](#) located under Health Sciences Admissions Information. The Health Science application must be printed, filled out and returned to the College. To become an eligible candidate for the DMS program you should review the Prerequisite courses required to apply listed on the [Health Science Application](#). Please note that there are [Minimum](#) eligibility requirements required to apply. In addition to the minimum eligibility requirements there is also a [Priority](#) course requirement that can be completed. Applicants who have completed both the minimum and priority requirements will be given first consideration over those students who have only completed the minimum eligibility requirements. You will need to print this application out and mail it into the address given on the application, OR you can pick up a Health Science Application at the Takoma Park/Silver Spring campus and submit it to the Admissions and Records Office.

Go to: [Instructions for using online Application Form](#) and [Application form](#) You will need the free [Adobe Reader](#) to use the form. Otherwise call the DMS Office for paper copies of the instructions and Application Form. Also complete the [Applicant Checklist](#). TEAS testing is required. Go to [TEAS INFORMATION](#). Here is a [TEAS sample](#). Here is the link: <http://cms.montgomerycollege.edu/edu/departments2.aspx?id=20563>.

While not required, it is HIGHLY RECOMMENDED that all potential DMS applicants attend a DMS Information Session.

Transcripts from other countries must be evaluated by an approved evaluation institution. Contact the Admissions Office for the information packet: 240-567-1501.

Must meet minimum grade point average of 2.5 out of 4.0 scale for consideration.

The admissions GPA calculation will be based on grades earned in the semesters in which your most recent 24 college level credits were attempted. If an applicant has attempted fewer than 24 college level credits secondary school records will be included in this calculation. Official transcripts are required in all cases. Courses taken in the fall semester will NOT be counted toward eligibility for the following spring admission and courses taken in the summer will NOT be counted toward eligibility for the following fall admission.

Completion of all program admission requirements does not guarantee placement into the program. Attach official copies of transcripts from all other colleges you have attended to the Health Science Program Application whether or not you have previously submitted transcripts to the College.

Is there anything else I need to submit along with my Health Science Application?

Along with the Health Science Application you will need to turn in transcripts from any prior college education you have received. Admissions will be able to tell you what past courses will transfer towards prerequisites and required courses in the program, and what classes you still may need to complete prior to applying.

When is the deadline to apply to the Diagnostic Medical Sonography Program?

The deadline to submit your Health Science Application to the Admissions and Records Office is **March 1st**. Once accepted into the Diagnostic Medical Sonography program, courses will begin during the first summer session following admission, which is usually after the Memorial Day Holiday Weekend.

Are there any specific prerequisites that need to be completed prior to applying to the Diagnostic Medical Sonography Program?

Prerequisite courses are subject to change from year to year, but they can be found within the Health Science Application, so if you do not apply this year, make sure to check back to see if there have been any changes to the prerequisites.

There are two prerequisite courses, however, that will not change, and those are basic physics and biology. If you become a sonography student, you will quickly see why it is so crucial to have a background in these areas of study. Effective sonography counts on the sonographer's extensive knowledge of the body's anatomical structures in combination with the manipulation of the ultrasound machine's controls based on an understanding of the physics of sound.

You will also have an advantage in the program, if you are familiar with anatomy at the start of the program, and so it is beneficial to have also completed BIOL 212 and BIOL 213 or an equivalent of anatomy and physiology within the past 5 years of applying. The Montgomery College physics course PHYS 010 or any basic college physics class will qualify as your physics prerequisite requirement. With these two main subjects, biology and physics, along with the English and math requirements listed on the application, you are eligible for admission into the Diagnostic Medical Sonography program.

What is the deadline for courses to be completed in order for them to be considered for admission?

All prerequisite courses must be completed by the semester before the March 1st deadline. If you are applying to the Sonography program for the March 1st deadline, all your prerequisite courses must be completed by the prior fall semester.

How can I be a competitive applicant to the Diagnostic Medical Sonography program?

The minimum GPA required to be considered for admission into any of the Health Science programs is 2.5. Since the Diagnostic Medical Sonography program is a competitive program to get into, a GPA of 3.0 or higher is a better goal to strive for if you are still completing prerequisite courses. There is also a Priority course you can complete prior to applying, which will make you more competitive as an applicant. The priority admission course can be found on the Health Science Application. By completing the priority course before you apply, will increase your chances of being accepted as well as lighten your course load if accepted.

How many students are accepted into the program each year?

Thirty (30) students are accepted into the Diagnostic Medical Sonography program each year. As you fill out your application, you will see that you are asked to indicate your "preferred ultrasound concentration specialty" by selecting one of three boxes on the application. "Specialty" refers to the three different concentrations the

program offers. You may be interested in the general concentration if you have a preference for abdominal, obstetrics, and gynecological. If your primary interest is the heart, you should consider echocardiography which includes the study of the adult heart. The third concentration is for those students who have an interest in the vascular system.

Make sure you have a good idea of which of the three specialty concentrations you have in interest in applying for. There are only a certain number of seats available in the program for each of the specialty concentrations. Please use this website and the additional links on this website to research sonography specialty concentration you would like to study so that you can make an informed decision. Make sure to rank your 1st, 2nd and 3rd specialty concentration preference on the application.

Can I study more than one ultrasound specialty during my two years in the program?

You are unable to study more than one specialty concentration at a time. After completing your degree in your selected specialty concentration, you can always return to Montgomery College Diagnostic Medical Sonography program to complete an additional specialty concentration.

Will I be able to sit for the National Board Examinations after completing the Diagnostic Medical Sonography Program at Montgomery College?

The Diagnostic Medical Sonography Program at Montgomery College is accredited by the Commission on Accreditation of Allied Health Education Programs (CAAHEP). With the successful completion of a degree in this program, you will be eligible to sit for your national board examinations. The Diagnostic Medical Sonography program strives to meet and exceed nationally expected educational standards.

1. Courses are taught by experienced and credentialed faculty who are available to advise and assist in your learning.
2. The Diagnostic Medical Sonography Lab is located on the Takoma Park/Silver Spring campus of Montgomery College and is equipped with state of the art equipment for students to learn how to scan on.
3. The on-campus scan lab is an ergonomically designed ultrasound scan lab which simulates a clinical environment, making the time spent practicing on campus as real as possible.

Other than prerequisite courses that I need to complete to become an eligible candidate, are there any other requirements I will need in order to begin the program?

When you have been accepted into the program, you will need to begin to fulfill additional requirements in order to begin your clinical work within the program. These requirements include:

1. Completing an annual criminal background check
2. Completing annual drug testing
3. Obtaining CPR certification: American Heart Association CPR certification is required for any individual who works in a health care setting. Montgomery College offers courses CPR on campus throughout the year making it easy to become certified.

Note: CPR certification may not be completed online.

4. Annual physical examination with updated vaccinations. It's also important to be up to date on all your immunizations and to make sure you're healthy and able to perform the DMS technical standards requirements.

How can I find out more about the Diagnostic Medical Sonography program?

If you have more questions about the program before applying or about the application process, there are a few ways you can get more information. Use this website to navigate through other sections where you can get answers to your questions or watch video clips on the different topics. You can also get in touch with the program by sending an e-mail via the **Contact Us link**, or talk with a faculty member during an Information Session on the Takoma Park Campus. You can even call or stop by and set up an appointment to meet with a counselor in the Student Services Building on Campus (240-567-1480) or speak to a representative in the Diagnostic Medical Sonography Program (240-567-5563).

General Scope and Structure of the new ATI Test of Essential Academic Skills (TEAS), Version 6

*****All Health Science students - regardless of which Health Science program they are applying for - MUST select "TEAS for Nursing" when registering to take the TEAS.*****

The ATI TEAS is a timed computer-based multiple-choice assessment used by the Health Sciences Institute and Center at Montgomery College to evaluate the academic preparedness of entry-level health sciences students in:

- Reading Comprehension
- **Math**
- Science
- **English and Language Usage**



Montgomery College administers the ATI TEAS. The ATI TEAS consists of four content areas that have corresponding sub-content areas.

*There are a total of 170 multiple-choice questions. Test-takers are allotted 209 minutes (approximately 3 hours and 29 minutes) to complete the exam.

Reading	Math*
53 questions; 64 minutes	36 questions; 54 minutes
<ul style="list-style-type: none"> • Key ideas and details • Craft and structure • Integration of knowledge and ideas 	<ul style="list-style-type: none"> • Number and algebra • Measurement and data <p><i>*Please be advised that a calculator is embedded in the Math Section. However, students should not rely on the calculator, as they risk running out of time.</i></p>
Science	English and Language Usage
53 questions; 63 minutes	28 questions; 28 minutes
<ul style="list-style-type: none"> • Human anatomy and physiology • Life and physical sciences • Scientific reasoning 	<ul style="list-style-type: none"> • Conventions of standard English • Knowledge of language • Vocabulary acquisition

DMS Degree Requirements General Concentration

Diagnostic Medical Sonography A.A.S. (TP/SS): 530

Total Credits: 70

<u>GENERAL EDUCATION: FOUNDATION COURSES</u>	Course	Hours
English Foundation (EN 102/ENGL 102 or EN 109/ENGL 103)		3
Math Foundation (MA 110,115(A), 117(A), 130, 150, 165, 170, or 181)		3 or 4
<u>GENERAL EDUCATION: DISTRIBUTION COURSES</u>	Course	Hours
Arts or Humanities Distribution (ARTD or HUMD)	SP 108/COMM 108	3
Behavioral & Social Sciences Distribution (BSSD) †	PY 102/PSYC 102	3
Natural Sciences Distribution with Lab (NSLD)	BI 107/BIOL 150	4
General Education Elective (GEEL)	BI 204/BIOL 212	4
PROGRAM REQUIREMENTS	Course	Hours
(if needed for EN 102/ENGL 102 or EN 103/ENGL 103)	EN 101/ENGL 101†	(3)
(Requirement for admission into the DMS program, PHYS 010 or higher is a prerequisite for MS 102/SONO 105)	PH 010/PHYS 010	(2)
	BI 205/BIOL 213	4
	HI 125/HINM 115	2
	HI 126/HINM 116	2
DIAGNOSTIC MEDICAL SONOGRAPHY PROGRAM COURSES	HI 135/HINM 120	3
(TP/SS ONLY)	MS 101/SONO 101	3
	MS 102/SONO 105	2
	MS 201/SONO 204	3
	MS 202/SONO 205	2
	MS 224/SONO 224	1
	MS 225/SONO 279/SONO 261	1
	MS 220/SONO 275/SONO 262	1
	MS 221/SONO 277/SONO 263	2
	MS 222/SONO 278/SONO 264	4
	MS 226/SONO 276/SONO 265	1
	MS 223/SONO 280/SONO 266	4
GENERAL SONOGRAPHY CONCENTRATION (13 CREDIT HOURS)	MS 112/SONO 112	3
	MS 113/SONO 123	3
	MS 210/SONO 210	1
	MS 212/SONO 232	3
	MS 213/SONO 243	3

DMS Degree Requirements Vascular Concentration

Diagnostic Medical Sonography A.A.S. (TP/SS): 530

Total Credits: 63

<u>GENERAL EDUCATION: FOUNDATION COURSES</u>	Course	Hours
English Foundation (EN 102/ENGL 102 or EN 109/ENGL 103)		3
Math Foundation (MATH 110,115(A), 117(A), 130, 150, 165, 170, or 181)		3 or 4
<u>GENERAL EDUCATION: DISTRIBUTION COURSES</u>	Course	Hours
Arts or Humanities Distribution (ARTD or HUMD)	SP 108/COMM 108	3
Behavioral & Social Sciences Distribution (BSSD) †	PY 102/PSYC 102	3
Natural Sciences Distribution with Lab (NSLD)	BI 107/BIOL 150	4
General Education Elective (GEEL)	BI 204/BIOL 212	4
PROGRAM REQUIREMENTS	Course	Hours
(if needed for EN 102/ENGL 102 or EN 103/ENGL 103)	EN 101/ENGL 101†	(3)
(Requirement for admission into the DMS program, PHYS 010 or higher is a prerequisite for MS 102/SONO 105)	PH 010/PHYS 010	(2)
	BI 205/BIOL 213	
	HI 125/HINM 115	2
	HI 126/HINM 116	2
DIAGNOSTIC MEDICAL SONOGRAPHY PROGRAM COURSES	HI 135/HINM 120	3
(TP/SS ONLY)	MS 101/SONO 101	3
	MS 102/SONO 105	2
	MS 201/SONO 204	3
	MS 202/SONO 205	2
	MS 224/SONO 224	1
	MS 225/SONO 279/SONO 261	1
	MS 220/SONO 275/SONO 262	1
	MS 221/SONO 277/SONO 263	2
	MS 222/SONO 278/SONO 264	4
	MS 226/SONO 276/SONO 265	1
	MS 223/SONO 280/SONO 266	4
VASCULAR CONCENTRATION (6 CREDIT HOURS)	MS 216/SONO 246	3
	MS 219/SONO 256	3

DMS Degree Requirements Echocardiography Concentration

Diagnostic Medical Sonography A.A.S. (TP/SS): 530

**Echo Track
Total Credits: 66**

<u>GENERAL EDUCATION: FOUNDATION COURSES</u>	Course	Hours
English Foundation (EN 102/ENGL 102 or EN 109/ENGL 103)		3
Math Foundation (MATH 110,115(A), 117(A), 130, 150, 165, 170, or 181)		3 or 4
<u>GENERAL EDUCATION: DISTRIBUTION COURSES</u>	Course	Hours
Arts or Humanities Distribution (ARTD or HUMD)	SP 108/COMM 108	3
Behavioral & Social Sciences Distribution (BSSD) †	PY 102/PSYC 102	3
Natural Sciences Distribution with Lab (NSLD)	BI 107/BIOL 150	4
General Education Elective (GEEL)	BI 204/BIOL 212	4
PROGRAM REQUIREMENTS	Course	Hours
(if needed for EN 102/ENGL 102 or EN 103/ENGL 103)	EN 101/ENGL 101†	(3)
(Requirement for admission into the DMS program, PHYS 010 or higher is a prerequisite for MS 102/SONO 105)	PH 010/PHYS 010	(2)
	BI 205/BIOL 213	
	HI 125/HINM 115	2
	HI 126/HINM 116	2
DIAGNOSTIC MEDICAL SONOGRAPHY PROGRAM COURSES		
(TP/SS ONLY)	HI 135/HINM 120	3
	MS 101/SONO 101	3
	MS 102/SONO 105	2
	MS 201/SONO 204	3
	MS 202/SONO 205	2
	MS 224/SONO 224	1
	MS 225/SONO 279/SONO 261	1
	MS 220/SONO 275/SONO 262	1
	MS 221/SONO 277/SONO 263	2
	MS 222/SONO 278/SONO 264	4
	MS 226/SONO 276/SONO 265	1
	MS 223/SONO 280/SONO 266	4
ECHOCARDIOGRAPHY CONCENTRATION (9 CREDIT HOURS)		
	MS 211/SONO 229	3
	MS 215/SONO 245	3
	MS 218/SONO 248	3

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General Education Course & Credit Requirements: All Programs

	AA	AAT	AS	AAS	AFA
Foundation Courses	2 courses 6 credits	2 courses 6 credits	2 courses 6 credits	2 courses 6 credits	2 courses 6 credits
Institutional Requirement Courses	2 courses 6 credits	2 courses 6 credits	N/A	N/A	N/A
Distribution Area Courses	6 courses 19-21 credits	6 courses 19-21 credits	6 courses 19-21 credits	3 courses 10 credits	5 courses 15 credits
General Education Elective	N/A	N/A	1 course 3 credits	1-2 courses 4-6 credits	N/A
TOTAL Courses & Credits	10 courses 31-33 credits	10 courses 31-33 credits	9 courses 28-30 credits	6-7 courses 20-22 credits	7 courses 21 credits

English Foundation – 3 credits. Choose one course from: **ENGL 102 Critical Reading, Writing, Research** or ENGL 103 Critical Reading, Writing and Research in the Workplace. *All students must complete ENGL101/101A as a College prerequisite for ENGL102 or 103 unless eligible for placement into ENGL 102 or 103 through transfer credit, AP scores, or SAT/ACT scores, or Accuplacer scores and College English dept. permission.*

Mathematics Foundation – 3 - 4 credits. Choose one according to major(s) desired: **MATH 117 Statistics, MATH 120 Survey of College Mathematics, MATH130† Math for Education, MATH 150 Applied Calculus, MATH 165 Precalculus, MATH 170 Calculus for Life Sciences I, MATH 181 Calculus I.**

†MATH 130, Math for Education, is required for the Associate of Arts in Teaching. Many transfer institutions will not accept MATH 130 as a general education math course if an AAT is not completed.

General Education Institutional Requirements [GEIR's] Associate of Arts (AA) degree programs require two courses/ 6 credits of General Education Institutional Requirements [GEIR]. Each AA degree may specify which courses are appropriate for the GEIR; some degrees may require a specific course – for example, the Business AA requires a COMM as one GEIR. Choose courses from COMM, HLTH, or ARTD/HUMD. Students may not select two COMM, two HLTH, or two ARTD/HUMD courses to meet their General Education Institutional Requirements. Check the Online Catalog to find your MC A.A. degree plan.

- One COMM course from the General Education List [COMM 108 or COMM 112]
- One HLTH course from the Gen. Ed. List [HLTH 105, 121, 125, 131, 150, 160, *170, *200, 212, *215, 225]
- One ARTD (Arts) or HUMD (Humanities) course from the General Education List – page 2-3.

General Education Electives (GEEL) – 3 credits (AS programs)/ 4-6 credits (AAS programs). All AS and AAS programs include an open elective option designated as GEEL. Any General Education course not used for a different requirement will fulfill this requirement. Students should check their degree programs for any specific requirements for GEEL course selection; students should seek guidance from counselors about how individual courses may transfer before selecting courses for this requirement.

- Students who intend to transfer should select General Education courses carefully. Courses in ***bold/italics*** are recommended for anyone undecided about a transfer destination if it is out-of-state or a private school. See the **MC Transfer Page** www.montgomerycollege.edu/transfer
- * Students must pick one course on the DISTRIBUTIONS PAGE with an Asterisk to fulfill the Global/Cultural Perspectives Requirement.

Arts Distribution (ARTD)/(GEIR)

ARTT 100 Intro to Drawing
 ARTT 102 Design Studio: 2-D
 ARTT 112 Digital Photography/Fine Arts I
 ARTT116/GDES 116 Digital Tools/Visual Arts
 *ARTT 120 Ceramics I
 ARTT 123 Crafts
 ***ARTT 127 Art Appreciation**
 ARTT 152 Photographic Expression I
 ***ARTT 200, 201 Art History I, II**
 *ARTT 225 World Woodcut Traditions

*ARTT 270 Survey of African Art
 *ARTT 272 Survey of Asian Art
 *DANC 100 Intro to Dance
 ENGL 235 Film & Literature
 ENGL 264 Intro Creative Writing Fiction
 ENGL 272 Intro Creative Writing Poetry
 FILM 110 Intro to Film
 GDES 121 Fdmtls/Graphic Design I

GDES 134 Illustration I
 *ISTD 173 Integrated Arts
MUSC 110 Listening to Music
 * **MUSC 117 World Music**
MUSC 131 American Popular Music
 MUSC 184 Intro to Music Theory
 PHOT 161/161L Intro Digital Photography
 ***THET 100 Intro to the Theatre**
 THET 110 Fundamentals of Acting
 TVRA 134 Media Appreciation

Humanities Distribution (HUMD)/(GEIR)

*ARAB 101,102 Elem. Arabic I, II
 *ASLP 100 American Sign Language I
 *ASLP 110 ASL II
 *CHIN 101,102,201,202 Elem./Inter. Chinese I,II
COMM 108 Intro to Human Communication
 COMM 112 Business & Professional Comm.
 *ENGL 122 Intro to World Mythology
ENGL 190 Intro to Literature
 ***ENGL 201, 202 Intro/World Literature I, II**
 *ENGL 205 Asian Literature
 *ENGL 208 Women in Literature
 ***ENGL 211,212 American Literature I, II**
 ENGL 213,214 British Literature I, II
 *ENGL 220 The American Novel
 *ENGL226,227 African American Literature I, II
 *ENGL 230 Intro to Modern Drama
 *ENGL 231 Intro to Modern Poetry
 *ENGL 233 The Short Story
 *FREN 101,102,201,202 Elem./Interm. French I, II
 *FREN 207,208 Rdgs in French Literature I, II
 *GERM 101,102, Elem German I, II

* GHUM 101 Intro to Global Humanities
 * HIND 101, 102 Elementary Hindi I, II
 * HIST 112 Women in World History
 * HIST 114 The World in the 20th Century
 * **HIST 116, 117 World History I, II**
 HIST 146 History of the Ancient World
HIST 147, 148 History of Europe I, II
HIST200, 201 History of the United States I, II
 HIST 205 Tech. & Culture/Western World
 * HIST 211 History of Latinos in the U.S.
 * HIST 228 Women in the Western World
 * HIST 235, 236 History of African Americans I, II
 * HIST 240 Civil Rights in America
 * HIST 245 Latin American History
 * HIST 247 East Asian Civilization
 * HIST 250 Modern Asia
 * HIST 252 US & 20th Cent. World Affairs
 HIST 262 Hist. of England I
 *HIST 263 Hist of England II
 * HIST 265, 266 African History I, II
 * ITAL 101, 102 Elementary Italian I,

* KORA 101, 102 Elementary Korean I, II
 * LATN 101, 102 Elementary Latin I, II
 * LING 200 Intro to Linguistics
PHIL 101 Intro to Philosophy
 PHIL 140 Intro to the Study of Ethics
 * PHIL 143 Intro to the Study of Religion
 PHIL 190 Elem. Logic & Semantics
 PHIL 201 Morality & Contemp. Law
 PHIL 205 Philosophy in Literature
 * PHIL 212, 218 Women in Philosophy I, II
 * PORT 101,102 Elem. Portuguese I, II
 * RUSS 101,102, Elem./Inter. Russian I, II
 * SPAN 101,102,201,202 Elem/Inter. Spanish I, II
 * SPAN 103 Intensive Element. Spanish
 * SPAN 106 Spanish/Heritage Speakers
 * SPAN 203 Intensive Interm. Spanish
 * SPAN 215 Adv. Span Convers& Comp
 * SPAN 216 Adv. Readings in Latin Amer. Lit.
 * WMST 101 Intro to Women's Studies

Behavioral & Social Sciences Distribution (BSSD) If 2 are required, they must be from 2 different disciplines

***ANTH 201 Intro to Sociocultural Anthropology**
ANTH 240 Intro to Archaeology
 *ANTH 256 World Cultures
 *CCJS 110 Administration of Justice
 * ECON 105 Basic Economics
ECON 201 Prin. of Economics - Macro
ECON 202 Prin. of Economics II – Micro
GEOG 101 Intro to Geography
 GEOG 105 Cultural Geography
 GEOG 113 Economic Geography

*GEOG 130 Global Geography
 *GNDS 101 Intro to Gender Studies
 HLTH 131 Drugs&Lfstl. Wellness (GEIR)
 HLTH 160 Sci. & Theory of Health (GEIR)
 *HLTH 170 Introduction to Aging (GEIR)
 HLTH 212 Ctrl. Stress & Tension (GEIR)
 HLTH 225 Intro. Hlth Behaviors (GEIR)
POLI 101 American Government
 ***POLI 105 Intro to Political Science**
 *POLI 203 International Relations
 *POLI 206 Political Ideologies
 *POLI 211 Comp. Politics & Gov'ts
 *POLI 256 Politics of the Third World

PSYC 102 General Psychology
 * **SOCY 100 Intro to Sociology**
 * SOCY 105 Social Problems & Issues
 * SOCY 208 Sociology of Gender
 * SOCY 240 Sociology of Age & Aging
 * SOCY 243 The Sociology of Sport

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Natural Sciences Distribution with Lab (NSLD) For AA, AAT, AS, AAS degrees, one must be a lab:

AOSC 105 Meteorology: Intro to Weather
 ASTR 101 Intro to Astronomy
BIOL 101 General Biology
BIOL 105 Environmental Biology & BIOL 106 Lab
 BIOL 130 The Human Body & BIOL 131 Lab
BIOL 150 Principles of Biology I for Science Majors
 BIOL 212, 213 Human Anatomy & Physiology I, II

CHEM 109 Chemistry & Society & CHEM 109L
CHEM 131 Principles of Chemistry I
CHEM 132 Principles of Chemistry II
 CHEM 150 Essentials of Organic & Biochemistry
 GEOG 124 Physical Geography & GEOG124L
GEOL 101 Physical Geology
 GEOL 102 Historical Geology
 LNTP 100 Intro. to Plant Sciences

PHYS 110 Sound & Lights in the Arts
PHYS 203, 204 General Physics I, II
 PHYS 262 General Physics II: Electricity
 PHYS 263 Gen. Physics III: Waves
PSCI 101, 102 Physical Science I, II

Natural Sciences Distribution without Lab (NSND): 2ND course may be a Non-Lab from below, or choose two Labs above

*ANTH215 Human Evolution & Archaeology
 AOSC 100 Weather & Climate
BIOL 105 Environmental Biology
 BIOL 111 Nat. Science of Chesapeake Bay

BIOL 130 The Human Body
CHEM 109 Chemistry & Society
 ENES 100 Intro/Engineering Design

NUTR 101 Intro to Nutrition
PHYS 105 Conceptual Physics
 PHYS 161 Gen. Physics I: Mechanics

Update: 7/26/18