



Program Planning Guide

Medical Sonography Associate in Applied Science Degree (A45440)

Program Length: 5 Semesters

Program Sites: Lee Main Campus seated only

The Medical Sonography program teaches students how to use high-frequency sound waves (ultrasound) to create images of the inside of the body. Medical sonographers use this technology to help doctors see organs, tissues, and blood flow so they can diagnose and monitor medical conditions. Students in the program learn about anatomy, how the body's systems work together, and how to capture clear, accurate images. Coursework covers topics such as physics, abdominal and vascular imaging, and obstetric/gynecologic sonography. Students also gain hands-on experience operating ultrasound equipment, understanding normal and abnormal findings, tracking fetal growth, and providing professional, compassionate care to patients.

Graduates are eligible to take examinations in ultrasound physics and instrumentation, as well as specialty examinations administered by the American Registry for Diagnostic Medical Sonography (ARDMS), and find employment in clinics, physicians' offices, mobile services, hospitals, and educational institutions.

Limited Enrollment Application Overview:

The Medical Sonography (MS) program is a limited-enrollment program, which means that there are a limited number of seats in this program each year. Students must meet all requirements listed below to enter the MS program. While they are completing these requirements, pre-MS Students will be enrolled in the **Pre-Sonography program (A55280MS)**. Acceptance will be reviewed from November 1 to May 15, and students will be notified of acceptance through email by May 15 each year.

MS Admission Requirements:

- ☐ Complete 25/26 credit hours of Pre-MS general education courses (see page 2).
- ☐ Complete BIO 163 with a B or better.
- ☐ Complete all other general education courses with a C or better.
- ☐ Have a minimum 2.5 GPA based on 25/26 credit hours of MS general education courses.
- ☐ Attend two mandatory, in-person program orientations before beginning the program. The dates will be provided in the admission acceptance letter.

Provisional Acceptance:

Provisional acceptance is not offered for the medical sonography program due to the wait list of accepted students.



Pre-MS General Education Requirements & Suggested Course Schedule:

Course Schedule		Class	Lab	Clinical	Credits	Notes:
1st Semester (fall)						
ACA 122	Transfer & Career Success	0	2	0	1	Seated or Online
ENG 111	Writing & Inquiry	3	0	0	3	Seated or Online
PHY 110	Conceptual Physics	3	0	0	3	Seated or Online
PHY 110A	Conceptual Physics Lab	0	2	0	1	Seated or Online
PSY/SOC	PSY 150 or SOC 210	3	0	0	3	Seated or Online
	Total Semester Hours	9	4	0	11	
2nd Semester (spring)						
BIO 163	Basic Anatomy & Physiology	4	2	0	5	Seated
Elective	Communications Elective	3	0	0	3	Seated or Online
Elective	Mathematics Elective	2/3	2	0	3/4	Seated or Online
PHI 240	Introduction to Ethics	3	0	0	3	Seated or Online
	Total Semester Hours	12/13	4	0	14/15	

Communication Elective Options: Pick one: ENG 112, ENG 114, **COM 110***, COM 120, COM 231

Mathematics Elective Options: Pick one: MAT 143, MAT 152, MAT 171. Students can also take PHY 151 and MAT 171 in place of PHY 110/11A and MAT 143 or in place of PHY 110/11A and MAT 152

Approved Biology Substitutions: Can substitute BIO 165/166 or BIO 168/169 for BIO 163

***Recommended for MS students**



Upon acceptance into the Medical Sonography program, students will take the following courses:

Course Schedule		Class	Lab	Clinical	Credits	Notes:
1st Semester (fall)						
SON 110	Introduction to Sonography	1	3	3	3	Seated
SON 111	Sonogram Physics	3	3	0	4	Seated
SON 130	Abdominal Sonography I	2	3	0	3	Seated
	Total Semester Hours	6	9	3	10	
2nd Semester (spring)						
SON 120	SON Clinical Education I	0	0	15	5	In-person clinical rotation
SON 131	Abdominal Sonography II	1	3	0	2	Seated
SON 140	Gynecologic Sonography	2	0	0	2	Seated
SON 241	Obstetrical Sonography I	2	0	0	2	Seated
	Total Semester Hours	5	3	15	11	
3rd Semester (summer)						
SON 121	SON Clinical Education II	0	0	15	5	In-person clinical rotation
	Total Semester Hours	0	0	15	5	
4th Semester (fall)						
SON 220	SON Clinical Education III	0	0	24	8	In-person clinical rotation
SON 242	Obstetrical Sonography II	2	0	0	2	Seated
SON 250	Vascular Sonography	1	3	0	2	Seated
	Total Semester Hours	3	3	24	12	

5th Semester (spring)						
SON 221	SON Clinical Education IV	0	0	24	8	In-person clinical rotation
SON 225	Case Studies	0	3	0	1	Seated
SON 289	Sonographic Topics	2	0	0	2	Seated
	Total Semester Hours	2	3	24	11	
Total General Education Semester Hours Credit: 25/26						
Total Program Semester Hours Credit: 49						
Total Semester Hours Credit Required to Graduate: 74/75						



Course Descriptions

ACA 122 Transfer & Career Success

This course introduces students to career and transfer opportunities while building skills for academic success, career exploration, and transfer preparation, ensuring readiness for success in community college and beyond. Topics include transfer agreements with public and independent institutions, programs and processes that facilitate transfer, and transfer tools and resources; career topics include career exploration and information and skills such as resume writing, portfolio development, and professional communication. Upon completion, students will be able to identify the community college program that matches their transfer and career goals, navigate transfer policies and processes, use Transfer Guides, develop an academic plan for future success, and identify professional application materials. This course has been approved for transfer under the CAA/ICAA as a premajor and/or elective course requirement.

BIO 163 Basic Anat & Physiology

Local requisite: Take ENG-045 - Must be taken either prior to or at the same time as this course.

This course provides a basic study of the structure and function of the human body. Topics include a basic study of the body systems as well as an introduction to homeostasis, cells, tissues, nutrition, acid-base balance, and electrolytes. Upon completion, students should be able to demonstrate a basic understanding of the fundamental principles of anatomy and physiology and their interrelationships. This course has been approved for transfer under the CAA/ICAA as a premajor and/or elective course requirement.

COM 110 Introduction to Communication

This course provides an overview of the basic concepts of communication and the skills necessary to communicate in various contexts. Emphasis is placed on communication theories and techniques used in interpersonal group, public, intercultural, and mass communication situations. Upon completion, students should be able to explain and illustrate the forms and purposes of human communication in a variety of contexts. This course has been approved for transfer under the CAA as a general education course in Communication.

ENG 111 Writing and Inquiry

Requisites: Take ENG-045 - Must be taken either prior to or at the same time as this course.

This course is designed to develop the ability to produce clear writing in a variety of genres and formats using a recursive process. Emphasis includes inquiry, analysis, effective use of rhetorical strategies, thesis development, audience awareness, and revision. Upon completion, students should be able to produce unified, coherent, well-developed essays using standard written English. This course has been approved for transfer under the CAA/ICAA as a general education course in English Composition.

PHI 240 Introduction to Ethics

Requisites: Take ENG-111 - Must be completed prior to taking this course.

This course introduces theories about the nature and foundations of moral judgments and applications to contemporary moral issues. Emphasis is placed on moral theories such as consequentialism, deontology, and virtue ethics. Upon completion, students should be able to apply various ethical theories to moral issues such as abortion, capital punishment, poverty, war, terrorism, the treatment of animals, and issues arising from new technologies. This course has been approved for transfer under the CAA/ICAA as a general education course in Humanities/Fine Arts.

PHY 110 Conceptual Physics

Requisites: Take PHY-110A - Must be taken either prior to or at the same time as this course.

This course provides a conceptually-based exposure to the fundamental principles and processes of the physical world. Topics include basic concepts of motion, forces, energy, heat, electricity, magnetism, and the structure of matter and the universe. Upon completion, students should be able to describe examples and applications of the principles studied. This course has been approved for transfer under the CAA/ICAA as a general education course in Natural Science.

**PHY 110A Conceptual Physics Lab***Requisites:*

Take PHY-110 - Must be taken either prior to or at the same time as this course.

This course is a laboratory for PHY 110. Emphasis is placed on laboratory experiences that enhance materials presented in PHY 110. Upon completion, students should be able to apply the laboratory experiences to the concepts presented in PHY 110. This course has been approved for transfer under the CAA/ICAA as a general education course in Natural Science.

PSY 150 General Psychology

This course provides an overview of the scientific study of human behavior. Topics include history, methodology, biopsychology, sensation, perception, learning, motivation, cognition, abnormal behavior, personality theory, social psychology, and other relevant topics. Upon completion, students should be able to demonstrate a basic knowledge of the science of psychology. This course has been approved for transfer under the CAA/ICAA as a general education course in Social/Behavioral Sciences.

SOC 210 Introduction to Sociology

This course introduces the scientific study of human society, culture, and social interactions. Topics include socialization, research methods, diversity and inequality, cooperation and conflict, social change, social institutions, and organizations. Upon completion, students should be able to demonstrate knowledge of sociological concepts as they apply to the interplay among individuals, groups, and societies. This course has been approved for transfer under the CAA/ICAA as a general education course in Social/Behavioral Sciences.

SON 110 Intro to Sonography

This course provides an introduction to medical sonography. Topics include applications, sonographic terminology, history, patient care, ethics, and basic skills. Upon completion, students should be able to define professionalism and sonographic applications and perform basic patient care skills and preliminary scanning techniques.

SON 111 Sonographic Physics

This course introduces ultrasound physical principles, bioeffects, and sonographic instrumentation. Topics include sound wave mechanics, transducers, sonographic equipment, Doppler physics, bioeffects, and safety. Upon completion, students should be able to demonstrate knowledge of sound wave mechanics, transducers, sonography equipment, the Doppler effect, bioeffects, and safety.

SON 120 SON Clinical Ed I

Prerequisite: Take SON-110

This course provides active participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations.

SON 121 SON Clinical Ed II

Prerequisite: Take SON-120

This course provides continued active participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations.

SON 130 Abdominal Sonography I

This course introduces abdominal and small parts sonography. Emphasis is placed on the sonographic anatomy of the abdomen and small parts with correlated laboratory exercises. Upon completion, students should be able to recognize and acquire basic abdominal and small parts images.

**SON 131 Abdominal Sonography II**

Prerequisite: Take SON-130

This course introduces abdominal and small parts sonography. Emphasis is placed on the sonographic anatomy of the abdomen and small parts with correlated laboratory exercises. Upon completion, students should be able to recognize and acquire basic abdominal and small parts images.

SON 140 Gynecological Sonography

Prerequisite: Take SON-110

This course is designed to relate gynecological anatomy and pathology to sonography. Emphasis is placed on gynecological relational anatomy, endovaginal anatomy, and gynecological pathology. Upon completion, students should be able to recognize normal and abnormal gynecological sonograms.

SON 220 SON Clinical Ed III

Prerequisite: Take SON-121

This course provides continued active participation in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations.

SON 221 SON Clinical Ed IV

Prerequisite: Take SON-220

This course provides continued active participation off campus in clinical sonography. Emphasis is placed on imaging, processing, and technically evaluating sonographic examinations. Upon completion, students should be able to image, process, and evaluate sonographic examinations.

SON 225 Case Studies

Prerequisite: Take SON-110 or CVS-163

This course offers the opportunity to present interesting cases found during clinical education. Emphasis is placed on presentation methods which integrate patient history, laboratory results, and sonographic findings with reference to current literature. Upon completion, students should be able to correlate information necessary for complete presentation of case studies.

SON 241 Obstetrical Sonography I

Prerequisite: Take SON-110

This course covers normal obstetrical sonography techniques, the normal fetal environment, and abnormal first trimester pregnancy states. Topics include gestational dating, fetal anatomy, uterine environment, and first trimester complications. Upon completion, students should be able to produce gestational sonograms which document age, evaluate the uterine environment, and recognize first trimester complications.

SON 242 Obstetrical Sonography II

Prerequisite: Take SON-241

This course covers second and third trimester obstetrical complications and fetal anomalies. Topics include abnormal fetal anatomy and physiology and complications in the uterine environment. Upon completion, students should be able to identify fetal anomalies, fetal distress states, and uterine pathologies.

SON 250 Vascular Sonography

This course provides an in-depth study of the anatomy and pathology of the vascular system. Topics include peripheral arterial, peripheral venous, and cerebrovascular disease testing. Upon completion, students should be able to identify normal vascular anatomy and recognize pathology of the vascular system.



SON 289 Sonographic Topics

Prerequisite: Take SON-110

This course provides an overview of sonographic topics in preparation for certification examinations. Emphasis is placed on registry preparation. Upon completion, students should be able to demonstrate a comprehensive knowledge of sonography and be prepared for the registry examinations.