

# CARDIAC SONOGRAPHY

Saint Joseph's University offers a two-year curriculum of full-time study in cardiac sonography leading to an Associate in Applied Science degree. The program also offers an academic certificate program in cardiac sonography to students who hold an academic degree. Students receive theoretical and clinical instructions in all aspects of cardiac ultrasound in preparation for entry-level positions as cardiac sonographers. Upon satisfactory completion of program requirements and one year of cardiac sonography employment, graduates are eligible to take the American Registry for Diagnostic Medical Sonography (ARDMS) examinations in physics and adult echocardiography. Students are also eligible to take the Cardiovascular Credentialing International (CCI) examination in adult echocardiography with 800 clinical hours after program completion.

The faculty of the Cardiac Sonography program believes in the potential for the individual to grow in knowledge as well as in professional importance. The objective, through this program, is to provide the opportunity, instruction, and education to assist in this personal endeavor. The profession of cardiac sonography is recognized as an integral part of the diagnostic medical team. Through the practiced skill of the sonographers, both the patient and the physician are assisted in the possible detection of disease.

Education is a process of learning through a balance of didactic and clinical instruction that adequately prepares the individual equally for registry examinations and employment. Through the flexible design of our program, we strive to achieve this goal and take advantage of the full learning potential of each individual.

## Learning Goals and Objectives

**Goal 1:** To provide all students with didactic and clinical education, including hands-on, practical scanning experience.

**Goal 2:** To prepare competent entry-level sonographers in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains for the concentration it offers: Adult cardiac sonography.

**Goal 3:** Obtain, review, and integrate pertinent patient history and supporting clinical information to facilitate optimum diagnostic results.

**Goal 4:** Function as an integral part of the diagnostic medical imaging team, providing patient services efficiently and in a professional, sensitive manner.

**Goal 5:** Incorporate concepts learned through classroom instruction and clinical practice, ensuring accurate, meaningful sonographic evaluations.

**Goal 6:** Demonstrate appropriate communication skills with patients and colleagues.

**Goal 7:** Provide patient education related to cardiac ultrasound and/or other diagnostic techniques.

## Associate Requirements

Code	Title	Hours
<b>General Education</b>		
ENG 101	Craft of Language	3
BIO 175	A&P for Nursing & Allied Health	4
BIO 175L	A&P Nursing & Allied Health Lab	0
PSY 100	Introductory Psychology	3

MAT 120	Precalculus	3
CSS 101	College Studies Seminar	3
BIO 176	A&P Nursing & Allied Health II	4
BIO 176L	A&P Nursing & Allied Hlth II Lab	0
INT 103	Methods of Patient Care	1
PHY 200	Survey of Physics	3
PHY 200L	Survey of Physics Laboratory	1
SOC 101	Intro to Sociology	3
or SOC 270	Special Topics	
HSC 390	Medical Terminology	1
<b>Cardiac Sonography</b>		
CVT 203	Rhythm & 12 Lead ECG Analysis	3
DMS 111	Intro to Sonography	1
DMS 221	Ultrasound Physics	3
CAS 113L	Echo Lab I	1
CAS 206	Ultrasound Cardiac Anat & Phys	3
CAS 222	Echo Hemodynamics	1
CAS 220	Cardiac Pathophysiology I	3
CAS 225L	Echo Lab II	1
CAS 224	Echo Clinical I	4
CAS 223	Cardiac Pathophysiology II	3
CAS 229L	Echo Lab III	1
CAS 228	Echo Clinical II	6
CAS 227	Introduction to Pediatric Echo	2
CAS 226	Adv Echo & Therapeutic Techniq	1
CAS 232	Echo Clinical III	4
<b>Total Hours</b>		<b>66</b>

## Certificate Requirements

Code	Title	Hours
DMS 111	Intro to Sonography	1
CVT 203	Rhythm & 12 Lead ECG Analysis	3
CAS 113L	Echo Lab I	1
PHL 490	Ethical & Legal Dimen Hlth Sci	1
DMS 221	Ultrasound Physics	3
CAS 206	Ultrasound Cardiac Anat & Phys	3
CAS 220	Cardiac Pathophysiology I	3
CAS 222	Echo Hemodynamics	1
CAS 223	Cardiac Pathophysiology II	3
CAS 224	Echo Clinical I	4
CAS 225L	Echo Lab II	1
CAS 226	Adv Echo & Therapeutic Techniq	1
CAS 227	Introduction to Pediatric Echo	2
CAS 228	Echo Clinical II	6
CAS 229L	Echo Lab III	1
HSC 390	Medical Terminology	1
CAS 232	Echo Clinical III	4
INT 103	Methods of Patient Care	1
<b>Total Hours</b>		<b>40</b>

# Typical Course Sequence

Course	Title	Hours
<b>First Year</b>		
<b>Fall</b>		
Associate Degree Only		
BIO 175	A&P for Nursing & Allied Health	4
BIO 175L	A&P Nursing & Allied Health Lab	0
ENG 101	Craft of Language	3
MAT 120	Precalculus	3
PSY 100	Introductory Psychology	3
CSS 101	College Studies Seminar	3
<b>Hours</b>		<b>16</b>
<b>Spring</b>		
Associate Degree Only		
BIO 176	A&P Nursing & Allied Health II	4
BIO 176L	A&P Nursing & Allied Health II Lab	0
SOC 101 or SOC 270	Intro to Sociology or Special Topics	3
PHY 200	Survey of Physics	3
PHY 200L	Survey of Physics Laboratory	1
INT 103	Methods of Patient Care	1
HSC 390	Medical Terminology	1-2
<b>Hours</b>		<b>13-14</b>
<b>Summer</b>		
Associate Degree and Certificate Program		
CAS 113L	Echo Lab I	1
CVT 203	Rhythm & 12 Lead ECG Analysis	3
DMS 111	Intro to Sonography	1
<b>Hours</b>		<b>5</b>
<b>Second Year</b>		
<b>Fall</b>		
Associate Degree and Certificate Program		
DMS 221	Ultrasound Physics	3
CAS 206	Ultrasound Cardiac Anat & Phys	3
CAS 222	Echo Hemodynamics	1
CAS 220	Cardiac Pathophysiology I	3
CAS 224	Echo Clinical I	4
CAS 225L	Echo Lab II	1
<b>Hours</b>		<b>15</b>
<b>Spring</b>		
Associate Degree and Certificate Program		
CAS 223	Cardiac Pathophysiology II	3
CAS 228	Echo Clinical II	6
CAS 229L	Echo Lab III	1
CAS 227	Introduction to Pediatric Echo	2
CAS 226	Adv Echo & Therapeutic Techniq	1
PHL 490	Ethical & Legal Dimen Hlth Sci	1
<b>Hours</b>		<b>14</b>
<b>Summer</b>		
Associate Degree and Certificate Program		
CAS 232	Echo Clinical III	4
<b>Hours</b>		<b>4</b>
<b>Total Hours</b>		<b>67-68</b>