



Introduction to Cardiac Clinical

DMS 196.11

Winter 2019

Number of Credits: 5

Office: JW 228

Days Class Meets: TBD

Contact Phone: 517.796.8529

Meeting Times: TBD

Contact Email: mercerlindsayl@jccmi.edu

Location: Online

Office Hours: T by appt, W & TH 10 am – 2 pm

Instructor: Lindsay Mercer, BS, RDCS

Online: <https://jetnet.jccmi.edu/>

The best way to contact your instructor is by email. You may also send a message in JetNet.

Course Description

This course prepares cardiac sonography students for their clinical externship. Students will study and practice the technical as well as personal skills as they relate and are required for the on-site work experience. Students will demonstrate sonographic scanning of their program discipline with the expected outcome of a basic level competency.

Prerequisite(s)

Acceptance into the Cardiac Sonography Program

Course Goals

The philosophy of the Cardiac Sonography Program is unified by common goals, which include thoughtful intentional course design, role modeling, and classroom and clinical experiences that provide the student with the knowledge, skills, and attitudes of an entry-level cardiac sonographer. The educational process conveys caring for the whole person and promotes a balance of knowledge, technical skills, spiritual awareness, emotional intelligence, and physical health in performing professional services. The program has set common goals for students that include but are not limited to the following **program goals**:

- Prepare students through a comprehensive, quality curriculum to become competent entry-level cardiac sonographers.
- Provide students with a program that meets or exceeds professional standards and guidelines of CAAHEP accreditation.
- Prepare students for successful completion of American Registry for Diagnostic Medical Sonographers (ARDMS) credentialing exams.

- Encourage and prepare students to be analytical thinkers.
- Prepare students for employment as staff cardiac sonographers within current and future healthcare systems.
- Prepare and assist students for transfer into four-year institutions and baccalaureate completion options.
- Prepare students to be caring and effective communicators within healthcare delivery systems and among patients of normal and altered states, other healthcare team members and paraprofessionals.
- Help students become safe, knowledgeable, caring health professionals
- Prepare students to appropriately respond efficiently and effectively to emergency situations.
- Encourage students to care for their patients and themselves as whole persons with physical, emotional and mental needs.
- Prepare students to be active contributing participants in professional organizations and their community.

Course Objectives

At the completion of this course, the student will have the ability to display that he/she understands and is competent to recite, perform and/or demonstrate the following:

1. Sonographic and echocardiographic terminology.
2. Sonographic scanning planes, windows and views of the cardiac exam.
3. Patient positioning for the cardiac exam.
4. Scanning motions and transducer manipulations.
5. Knowledge of cardiac anatomy on the ultrasound exam.
6. Basic scanning techniques that include scanning a complete exam.
7. Proper ergonomics during the course of the exam.

Textbook

- Reynolds, Terry, *The Echocardiographer's Pocket Reference*, Fourth Edition 2013, ISBN 978-0615768359, Arizona Heart Foundation.
- Otto, Catherine M. *Textbook of Clinical Echocardiography*, Sixth Edition 2018, ISBN 978-0323480482, Elsevier Saunders. www.elsevier.com
- ***Textbook Zero!** This textbook is available in a digital format from amazon.com (Kindle). You can also check with the JC bookstore or your local library regarding possible digital formats.
- Anderson, Bonita, *Echocardiography, The Normal Examination and Echocardiography Measurements*, Third Edition 2017, ISBN 978-0992322212, MGA Graphics, Australia, www.echotext.com, www.amazon.com
- Harry, Mark J. *Essentials of Echocardiography: An Illustrative Guide*. Fourth Edition 2013, ISBN: 978-0989428002, Cardiac Ultrasound Consulting. www.cardiotextpublishing.com
- Armstrong, Ryan, *Feigenbaum's Echocardiography*. Eighth Edition 2018, ISBN 978-1451194272, Lippincott Williams & Wilkins.

***Textbook Zero!** This textbook is available in a digital format from www.amazon.com E-book (Kindle) option available and through the JC Bookstore.

The above texts are a requirement for all courses in the cardiac sonography program.

Scanning Policy and Scan Release Form

In order to learn the scanning techniques to prepare for the clinical experience, we must scan student volunteers. For the optimal learning experience, all students are asked to volunteer.

All students that volunteer are required to sign a **Scan Release Form**. All non-student volunteers are required to sign the same form. The person being scanned is aware that this is in no way designed to be a diagnostic test for medical purposes. The JC Cardiac Sonography program is not responsible for any diagnostic information obtained from scanning.

You are not required to be a scan model. Grades are not affected whether you volunteer or do not volunteer. If you object to participate as a scan model, please notify your Program Director Lindsay Mercer.

Grading Procedure

Grading System:

4 Scanning competencies/assessments	300 points
4 Quizzes @ 30 pts each	120 points
Final scanning assessment	150 points
Affective Domain Evaluation	<u>30 points</u>
	600 points total

Grading Scale

GPA	GRADE RANGE
4.0	95-100%
3.5	90-94%
3.0	85-89%
2.5	80-84%
2.0	75-79%
1.5	70-74%

Failure

GRADE POLICY: STUDENT MUST RECEIVE A 2.0 OR HIGHER IN ALL CORE CURRICULUM COURSES TO REMAIN IN THE PROGRAM. STUDENTS WHO EARN BELOW A 2.0 WILL BE UNABLE TO CONTINUE FURTHER COURSEWORK AND WILL BE REMOVED FROM THEIR CLINICAL EDUCATION CENTER.

A 2.0 is a passing grade. Only courses with passing grades count toward graduation. Other colleges transfer in only courses with passing grades. Many financial aid sources, including most employers, require passing grades. Additionally, earning less than a 2.0 in a class results in not being able to participate in the next level of courses in a discipline that requires this course as a prerequisite. If you attempt to register for the next course sequence and have not passed the prerequisite course, you will be dropped from that class.

Academic Honesty Policy

Academic Honesty is defined as ethical behavior that includes student production of their own work and not representing others' work as their own, by cheating or by helping others to do so.

Plagiarism is defined as the failure to give credit for the use of material from outside sources.

Plagiarism includes but is not limited to:

- Submitting other's work as your own
- Using data, illustrations, pictures, quotations, or paraphrases from other sources without adequate documentation
- Reusing significant, identical or nearly identical portions of one's own prior work without acknowledging that one is doing so or without citing this original work (self-plagiarism)

Cheating is defined as obtaining answers/material from an outside source without authorization.

Cheating includes, but is not limited to:

- Plagiarizing in any form
- Using notes/books/electronic material without authorization
- Copying
- Submitting others' work as your own or submitting your work for others
- Altering graded work
- Falsifying data
- Exhibiting other behaviors generally considered unethical
- Allowing your work to be submitted by others

Course Management

If a student feels they are struggling or may be unable to complete the course, they must contact the instructor/program director as soon as possible to discuss options for moving forward in the program.

Grades will be changed only for incomplete grades or faculty/clerical error. The last grade earned will be used in computing a student's cumulative grade point average. All grades will remain on the student's academic records and any grade not used to compute a student's GPA will be designated. The complete credit hours will be counted only once for each degree/certificate purposes.

The DMS student must complete all course/program requirements for graduation within a maximum of two (2) years.

Makeup Policy

No late assignments will be accepted unless prior arrangements have been made.

Help

Students with disabilities who believe that they may need accommodations in this class are encouraged to contact the office of Learning Support Services at 787-0800, extension 8415 as soon as possible to ensure that such accommodations are implemented in a timely fashion.

It is important to contact a Center for Student Success professional prior to the start of the semester in order to receive accommodations in a timely manner. While we will make every effort to coordinate accommodations in a timely manner, failure to self-identify prior to the start of the semester may delay notification to instructors and timeliness of acquiring accommodations. Accommodations do not automatically carry over to the next semester.

<https://www.jccmi.edu/center-for-student-success/accommodations-for-students-with-disabilities/>

Calendar

Topics of instruction and practice. For success on quizzes and competencies in DMS 196, students are expected to apply information gained in accompanying courses DMS 140 and DMS 141.

**Syllabus subject to minor adjustments and changes with adequate notification to students.*

WEEK #	DATE	TOPIC	HOMEWORK
1	Jan 15	Program Orientation, Intro to machines, Lab Policies, Scan PLAX	Read Cardiac Clinical Manual, Videos
	Jan 17	PLAX, Ao, MV, Ergonomics	ASE Video, Ergonomics PPT
	Jan 18	PLAX, AO, MV, PSAX	Videos, PPT
2	Jan 22	PSAX, RVIT, RVOT	ASE Video
	Jan 24	PSAX, RVIT, RVOT	

	Jan 25	All parasternal views, 2D Put it all together	Quiz 1 PLAX, PSAX Competency 1
3	Jan 29	Apical 4, 5, 3, 2	Apical 2D PPT, ASE Videos, Diagrams Competency 1
	Jan 31	Apical 4, 5, 3, 2	
	Feb 1	No Class	
4	Feb 5	Apical 4, 5, 3, 2	
	Feb 7	Subcostal, SSN	Videos, Diagrams
	Feb 8	Subcostal, SSN, Wall Segmentation	
5	Feb 12	PLAX M-Mode and 2D measurements	Videos, Diagrams, PPT, Documents Quiz 2 Apicals, SSN, Subcostal Competency 2
	Feb 14	PLAX M-Mode and 2D measurements	Competency 2
	Feb 15	PSAX measure	
6	Feb 19	Spectral and color Doppler PLAX, Blood Flow	Videos
	Feb 21	Spectral and color Doppler PSAX, Apical 4	
	Feb 22	Spectral and color Doppler Apical 4	Quiz 3 Measurements Competency 3
7	Feb 26	Spectral and color Doppler Apical 4, 5, 3, 2	Competency 3

	Feb 28	Spectral and color Doppler 4, 5, 3, 2, Aortic Stenosis	
	Mar 1	Spectral and color Doppler 4, 5, 3, 2, Aortic Stenosis Record blood pressure, Patient care, Patient history	
8	Mar 5	Pedoff probe- introduction	Competency 4
	Mar 7	Put it all together	Competency 4
	Mar 8	Record blood pressure, patient care, patient history	Quiz 4 Doppler
9	Mar 12 - 15	Winter Break, No Class	
10	Mar 19	Putting it all together	
	Mar 21	Final Competency	Final Competency & Affective Domain Evaluation
	Mar 22	Final Competency	Final Competency & Affective Domain Evaluation

Important Dates: Winter 2019

DATE	EVENT
JAN 14, 2019	DAY AND EVENING CLASSES BEGIN
JAN 14 – MAY 5, 2019	SEMESTER DATES
FEBRUARY 1, 2019	IN-SERVICE DAY. NO CLASSES
	PATHWAY SHOWCASES DAY. NO CLASSES
MARCH 11 – 15, 2019	WINTER BREAK. NO CLASSES
MAY 5, 2019	END OF FALL SEMESTER
MAY 7, 2019	GRADES DUE

Student Responsibilities

To be available and ready for each session to cover the necessary topics and to demonstrate their ability to meet performance objectives. It is expected by the instructor that all assignments and readings will be completed on time prior to class so that the student may have the best opportunity to understand the lecture material and make inquiries of difficult topics. The very nature of this program makes it very difficult for one to catch up once they have gotten behind.

It is also the student's responsibility to possess a secure Internet connection for testing purposes. If the students' ISP kicks them off the Internet during a test, the student will not be allowed to take test again and will receive a zero for that test. Students can find secure Internet connection at their local library or community college.

Expectations and Requirements of Students

- Show up to lab on time and be prepared by reviewing materials provided.
- Have reading assignments completed by date posted.
- Be a scanner and a scannee. (Please refer to the Student Scanning Policy on page 10 of the Cardiac Sonography Handbook)
- Protect your volunteer and/or patient's modesty, display professionalism
- Keep your equipment and working space clean and in order
- Share the probe!
- Adhere to lab rules
- Be responsible for your learning
- Help others with your knowledge and skills

- Students are expected to participate and be prepared for each session. Student grades and evaluations will not be affected by participation or non-participation as a scan model.
- It is presumed by the facilitator that assignments, including reading and viewing of all videos, will be completed on time and prior to class. Studying the material on assigned topics prior to being presented in class allows the student the best learning opportunities and to be prepared to pose questions in areas requiring clarity. The pace of this course makes it very difficult for a student to catch up once that student falls behind.
- It is highly suggested by the instructor that students utilize as many references as possible to enhance their learning.
- Courtesy toward everyone (instructor and fellow students) is expected and will be monitored and maintained at all times. If applicable, online forums are a place for learning, sharing, and communication with one another. If there is disagreement, that's fine, but we handle it with professionalism and courtesy.

<https://www.jccmi.edu/student-life/student-conduct/>

Instructor Responsibilities

To facilitate learning, provide and explain the necessary materials for each student to understand the assignments and develop course performance objectives to a near mastery level.

Monitoring of Student Progress

B. Monitoring students located at **out-of-state clinical affiliate** sites:

1. Out-of-state students are monitored throughout each semester by the Clinical Instructor at the affiliate site and the course instructor for assessment of educational progress in the introduction to cardiac clinical course.
2. Phone calls and email contacts are conducted bi-weekly to assess and discuss student progress, scanning progress and resolve any conflicts or problems that arise.
3. The instructor will meet triweekly with each student via online communication in a Private Clinical Forum. Scanning progress, accomplishments, issues and concerns are presented in this private forum. Questions and concerns about scanning progress are addressed.
4. Attendance calendars are submitted electronically and biweekly.

Attendance Policy

Your success in this course relies heavily on your attendance. It is not possible to advance and excel in the scanning skills needed prior to beginning your clinical experience if you are not here on a consistent basis.

One absence will not affect your grade. Subsequent absences will result in a deduction of 10 points each. **Three or more absences will result in a warning process that may also apply to DMS 142, Clinical I.**

Tardiness is a disruption to the instructor as well as to the echo lab. Students are expected to arrive at their clinical site prior to their start time, and be present in the echo lab ready to work at the start time. Arriving at the start time is considered a tardy.

The student is responsible to keep track of their lab hours on the provided calendar and have this calendar signed (initialed) by their clinical instructor weekly. Calendars are to be uploaded to the JetNet course **biweekly**. Hours and days worked must reflect exact attendance.

Falsifying documents is a serious infraction and is reason for immediate dismissal from the program. Please see DMS handbook for warning/dismissal procedure.

Tardiness will affect your grade on the 'affective domain' assessment. **Excessive tardiness (more than 2) will result in a warning process that may also apply to DMS 142, Clinical I.**

In compliance with Federal Title IV funding requirements, as well as college initiatives, reporting of student participation in classes will occur at three designated times each semester. Instructors will assign one of three non-transcripted letter symbols to each student during each reporting period (see below). Students identified as no longer participating will be dropped or administratively withdrawn from the class, and students identified as needing academic assistance will be contacted.

Participation/Progress Symbols

- H – The student is not doing acceptable work and needs **H**elp to be successful.
- Q – The student has not participated and the instructor believes they have unofficially withdrawn (**Q**uit). These students will be dropped/withdrawn from the class.
- V – The instructor **V**erifies that the student is participating and doing acceptable work.

Cell Phone Policy

Cell phones are to be kept out of site. You may check your cell phone while on scheduled breaks.