



Introduction to Cardiac Clinical

DMS 196.I51

Winter 2021

Number of Credits: 5

Days Class Meets: TBD by Clinical Staff

Meeting Times: TBD by Clinical Staff

Location/Venue: Clinical location varies

Instructor: Lindsay Mercer BS, RDCS, Nicole Lenart, RDCS, RVT

Contact Phone: Lindsay Mercer, Lead Faculty 517-796-8529 (voicemail only)

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Online Office Hours: Lindsay Mercer W and Th 10 am – 2 pm, M by appointment

The best way to contact your instructor is by email.

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

- Palma, Richard, *Echocardiographer's Pocket Reference*, Fifth Edition 2020, ISBN 978-0578687179, 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 , www.cardiotextpublishing.com
- Harry, Mark J. *Essentials of Echocardiography: An Illustrative Guide*. Fourth Edition 2013, ISBN: 978-0989428002, Cardiac Ultrasound Consulting. www.cardiotextpublishing.com
- Dewitt, Susan K. *Echocardiography from a Sonographer's Perspective: Notebook & Workbook Package*, 7th Edition 2018, www.echonotebook.com

ADDITIONAL REQUIRED LEARNING RESOURCE

- Simulation Echocardiography by KeLabs. <https://www.kelabs.com/products/introduction-to-echocardiography> **This can only be purchased through the JC bookstore.

ADDITIONAL TEXT (NOT REQUIRED)

- Armstrong, Ryan, *Feigenbaum's Echocardiography*. Eighth Edition 2018, ISBN 978-1451194272, Lippincott Williams & Wilkins.

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

Follett Access

- Please [review the cost of your required materials](#) to determine the best option for you to purchase your materials.
- For more information on the Follett ACCESS Program, you can view the [view the frequently asked questions](#).

If after reviewing the costs, you choose to opt out, you may do so here: www.jccmi.edu/optout. Please note your opt out selection is for your entire semester schedule. You cannot opt out and opt in to individual courses. And you must opt out by the due date for your first class.

Class Starts On:	Opt Out Date:
January 11, 2021	January 14, 2021
February 15, 2021	February 18, 2021
March 15, 2021	March 18, 2021
March 30, 2021	April 2, 2021

If you have questions about materials, please contact the Jackson College Follett bookstore at jackson@bkstr.com . For account billing questions, please contact the Jackson College Cashier at jccashier@jccmi.edu .

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. A link to this form can be found in the JetNet course. 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 Addtl Comps (BP, Ppt Tx, PPE, HW) @ 5 each	20 points
4 Quizzes @ 30 pts each	120 points
Final scanning assessment	150 points
Affective Domain Evaluation	<u>30 points</u>
	620 points total

Grading Scale

GPA	GRADE RANGE
4.0	95-100%
3.5	90-94%

GPA	GRADE RANGE
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

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

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

Accessibility

Jackson College understands that cultivating a broadly diverse community is crucial to our educational mission and to our foundational commitment to leadership and service. Jackson College is fully committed to ensuring our courses are accessible to everyone including those with disabilities. We are currently working to increase accessibility and usability of our course materials in order to meet or exceed the requirements of Section 508 of the Rehabilitation Act of 1973, the Americans with Disabilities Act of 1991 and Web Content Accessibility Guidelines (WCAG) 2.0. For more information about Jackson College's efforts to ensure accessibility please visit the [Jackson College accessibility web page](#).

If you have an accessibility need in any of our classes please e-mail the Center for Student Success at JCCSS@jccmi.edu or visit the [Center for Student Success web page](#).

At the Center for Student Success (CSS), we are committed to providing all students the opportunity to achieve academic success by providing a variety of support services free of charge to Jackson College students. This includes, but is not limited to, peer and faculty tutoring, mental health referral, temporary assistance with transportation, various workshops/seminars, and the TRIO program.

In addition, the CSS staff is committed to adapting the College's general services to meet the individual needs of otherwise qualified students with disabilities, for the purpose of providing equal access to all programs and facilities.

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

Available learning services or opportunities for students seeking help with their course work. May include information about tutors, learning centers, reserved library materials, counseling services.

Academic Advising

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. Please e-mail JCCSS@jccmi.edu or visit the [Accommodations for Students with Disabilities](#) web page

Student Responsibilities

To be available and ready for each lab 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 your scheduled lab day** so that the student may have the best opportunity to understand the any 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 patient or volunteer'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 lab 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

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

1. Online off campus 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 biweekly 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 do not attend lab 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. **Students must contact their CI if expected to be tardy or absent ASAP.**

The student is responsible to keep track of their lab hours on the provided DMS 196 Monthly Lab Hour Log sheet. Lab Hour Log sheets 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.**

Attendance – Participation Policy for online sections:

Just as in a traditional classroom course, regular class participation and keeping up on the reading and assignments is strongly correlated with survival in college. It is my recommendation that you plan to do your assignments and take your exams BEFORE the last day they are due. If problems occur, there is time to fix them before the deadline.

In compliance with Federal Title IV funding requirements, as well as college initiatives, I will be monitoring student participation on a regular basis and officially reporting student activity throughout the term to assure compliance with college policy and federal regulations. It is imperative that you log in to the course and actively participate within the first couple of days of the term to validate your enrollment in the course. After that, not actively participating in class may result in you being withdrawn from the course. Being withdrawn from a course can have an impact on financial aid, billing, athletic eligibility, and housing status. As a college student you are responsible for how your participation impacts your academic progress; the accountability lies with you.

Cell Phone Policy

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

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 25	Intro to machines, lab policies, scan PLAX, AO, MV, RVIT,	Read/review cardiac clinical manual, videos, images, documents, and links

		RVOT, Affective domain, Ergonomics PLAX, RVIT, RVOT, Begin PSAX	
2	Feb. 1	PLAX, RVIT, RVOT, PSAX cont'd Apical 4, 5, 3, 2 Begin working on Comp 1	ASE Video, videos, images documents, links Quiz 1 Due - PLAX, RVIT, RVOT, PSAX, Anatomy Post in Private forum this week
3	Feb. 8	Apical 4, 5, 3, 2, Subcostal Begin working on Comp 2	Videos, Images, documents, links Quiz 2 Due - Apicals, Subcolstal, SSN
4	Feb 15	SSN and Wall Segments PLAX 2D measuring and M- Mode measure, ECG Begin working on Comp 3	Videos, Images, Documents, links Post in Private Forum this week
5	Feb. 22	PLAX 2D and M-Mode measuring cont'd Color, Doppler, Stenosis Begin working on Comp 4	Videos, Images, Documents, Links Comp 1 and 2 Due Quiz 3 Due - M-Mode, 2D
6	Mar. 1	Color, Doppler, Pedof, Stenosis cont'd Blood pressure, Patient Care, Patient Hx Catch up	Videos, Images, Documents, Links Comp 3 Due Comp – Handwashing, BP, PPE, Patient Transfer Due Post in Private Forum this week
	Mar. 8 -14	Winter Break – No Class	
7	Mar. 15	Putting It All Together	Comp 4 and Final Comp 5, Affective Domain Assessment Due

		<i>Begin working on Final Comp 5, Affective Domain Evaluation</i>	<i>Quiz 4 Due - Doppler</i>
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Important Dates:

DATE	EVENT
JAN 11 – MAY 1, 2021	FULL SEMESTER DATES
JAN 25 – MAR 19, 2021	COURSE DATES
MARCH 8 – 14, 2021	WINTER BREAK – NO CLASSES
MARCH 19, 2021	LAST DAY OF CLASS
MARCH 21, 2021	GRADES DUE