



Adult Echo I

DMS 141.11

Winter 2021

Number of Credits: 4

Office: BBB Virtual Office

Days Class Meets: Online

Contact Phone: 517.796.8529 (voicemail only)

Meeting Times: Online

Contact Email: mercerlindsayl@jccmi.edu

Location/Venue: JetNet

Online Office Hours: W and TH 10 am – 2 pm,
M by appointment

Instructor: Lindsay Mercer, BS, RDCS

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

Students should not hesitate to contact me as needed. The best method is through email. I will reply within 24-36 hours unless notice is given otherwise.

Course Description

In this course, students learn fundamentals of the cardiac pressures, cardiac cycle, and the cardiac conduction system. Studies include: cardiac valves - normal and abnormal conditions, flow abnormalities, and physiological complications from these conditions. These studies are for preparation of applying correct techniques in the acquisition of sonographic cardiac images.

Prerequisite(s)

Acceptance into the program.

Co-requisite(s)

DMS 140, DMS 142 and DMS 196

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

- Demonstrate understanding of fundamental of the ECG and its patterns
- Describe mitral and aortic valve normal and abnormal conditions
- Recognize valve regurgitation
- Describe the process to perform the complete echocardiographic 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
- 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 textbook 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 at the following link to determine the best option for you to purchase your materials: <https://www.bkstr.com/jacksonstore>

For more information on the Follett ACCESS Program, you can view the frequently asked questions here: <https://www.jccmi.edu/bookstore/student-services-follett-access/>.

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 into 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

Exam Process – Respondus

To protect the fairness and integrity of the exams, students will be required to take exams using Respondus Lockdown Browser and Monitor. This is an online test proctoring software that requires a download to your computer. Training and practice of Respondus technology will be provided in advance of the first exam. A Mac or PC that has a webcam and microphone is required to use Respondus. If you

do not have this technology, please contact your instructor right away. Students are expected to complete the Respondus Practice quiz on time. This is to give our IT department time to help troubleshoot issues **before** exam 1 begins. Failure to complete the Respondus quiz on time may result in instructor-initiated drop.

Grading Procedure

ONLINE QUIZZES, TESTS, EXAMS: You must have a reliable internet connection to be successful in this course. If you do have Internet problems, you will need to take your assessments at the JC testing center, local library, or a college-testing center near you. Tests, quizzes and exams cannot be reset if you should lose your connection while taking your exam. The resetting of exams diminishes the integrity of the exam. **Proctoring requirements will be required for some exams.** If you have any questions regarding this, please speak to me ASAP.

**** YOU MUST COMPLETE ALL QUIZZES, ASSIGNMENTS, AND EXAMS FOR THIS COURSE. FAILURE TO DO SO CAN RESULT IN AN INCOMPLETE GRADE. JPEG FILES ARE NOT ACCEPTED ****

5 quizzes	95 pts.
Mitral Worksheet	25 pts.
Mark Harry x 2 (AS and MS)	20 pts.
WorkBook 7 Questions	150 pts.
KeLabs Sim Echo Cases	35 pts.
2 tests at approx. 100 pts. each	200 pts.
1 mid-term exam	191 pts.
1 final exam	225 pts.
Total points possible	941 pts.

Grading Scale

GPA	GRADE RANGE
4.0	95-100%

3.5	90-94%
3.0	84-89%
2.5	80-83%
2.0	75-79%
1.5	70-74%
1.0	65-69%

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

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

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/clerkal 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

Calendar

Reading assignments should be completed prior to each week's lesson in order to maximize learning. See JetNet for assignment instructions and due dates. Reading assignments and/or assessments may be modified to enhance student learning.

***Syllabus is subject to modification as needed throughout the course. See JetNet for assignment instructions and due dates. Reading assignments and/or assessments may be added to enhance learning.*

WEEK #	DATE	TOPIC	HOMEWORK
1	Jan 11 - 17	Orientation, Anatomy of the chest and heart. Cardiac cycle	<i>Dewitt</i> pgs 5-24 (stop at #9.), <i>Palma</i> pgs 7-14 WorkBook 7 Qs – See JetNet Quiz 1 – DUE Jan 17th
2	Jan 18 - 24	Cardiac Conduction	<i>Dewitt</i> pgs 29-34, <i>Harry</i> pgs 15-16, 20, & 22, <i>Palma</i> pgs 15-15 (electrophysiology) WorkBook 7 Qs – See JetNet Quiz 2 – DUE Jan 24th
3	Jan 25 - 31	Systole and Diastole, Normal cardiac physiology, and Coronary vessels.	<i>Dewitt</i> pgs 1-4, <i>Palma</i> pgs 16-17 (wiggers) WorkBook 7 Qs pages 7-17 - DUE Jan 31st
4	Feb 1 - 7	Catch up and odds and ends Review pressures, diastole, systole, IVRT, IVCT, Wigger's	<i>Otto</i> pgs 204-207 & review <i>Dewitt</i> pgs 17-18 Test I – DUE Feb 7th

		Diagram. Coronary arterial and venous circulation.	
5	Feb 8 - 14	Valves, M-mode and 2D	<i>Anderson 75-80, Otto 49-52 and images, Harry 23-24</i>
6	Feb 15 - 21	The complete Exam and Regurgitation (what is it and what does it look like)	<i>Part I – Anderson pgs 129-137, Dewitt pgs 164-166, 169-170</i> <i>Part II - Anderson 33-81, Harry 72-104, Dewitt pgs 65-106</i> WorkBook 7 Qs – See JetNet KeLabs Folder Lesson 6 – DUE Mar 21st
7	Feb 22 - 28	Aortic Valve Aortic Stenosis	<i>Anderson pgs 233-240, Dewitt 155-157 (Bernoulli), 164-168, 187-194 Otto 288-305, Palma 196-208, 524, 525-526 (Bernoulli), 531-532 Mark Harry 105-113, 115-120, Mark Harry PDF extra reading on JetNet</i> WorkBook 7 Qs – See JetNet KeLabs Folder Lesson 7 – DUE Mar 21st Quiz 3-Aortic WS & Mark Harry WS DUE Feb 28th
8	Mar 1 - 7	Midterm	Midterm Exam – DUE Mar 7th
9	Mar 8 - 14	Winter Break	
10	Mar 15 - 21	Continue week of Aortic Valve and Aortic Stenosis	<i>Continue readings from week 7 on AS</i> KeLabs Cases Lesson 6 & 7, WorkBook 7 Qs pages 57-65 & Quiz 4 – ALL DUE Mar 21st

11	Mar 22 - 28	Mitral Valve Part I	<p><i>Otto 305-315, Anderson 244-247, Harry 149-161, Dewitt pgs 171-176, Palma 240-246</i></p> <p>WorkBook 7 Qs – See JetNet</p> <p>Mitral WS and Mark Harry Q&A WS - DUE Mar 28th</p>
12	Mar 29 – Apr 4	Mitral Valve Part II	<p><i>Palma pgs 246 – 250, 521-522, 533, 548</i></p> <p>WorkBook 7 Pages 58-60 & Test II – DUE Apr 4th</p>
13	Apr 5 - 11	<p>Regurgitation, Prolapse and Pressures</p> <p>PISA</p>	<p><i>Dewitt pgs 177-186, 203 Otto pgs 324-336 ,345-359, Harry 163-169, 171-176</i></p> <p>Addtl reading reference Palma pg 218-231</p> <p><i>PISA - Anderson pgs 207, 211-212, 270-273, Palma 542-544</i></p> <p>WorkBook 7 Qs – See JetNet</p> <p>KeLabs Folder Lesson 10 – DUE Apr 18th</p>
14	Apr 12 - 18	ASE Guidelines for Native Valvular Regurge Webinar and ASE MR in MVP Case presentation	<p>WorkBook 7 Qs pages 60-62 & Quiz 5 - DUE Apr 18th</p>
15	Apr 19 - 25	Review for Final Exam	<p>KeLabs Cases Lesson 8/9 & 10 – DUE Apr 25th</p> <p>BBB Review Session - TBD</p>
16	Apr 26 – May 1	Final Exam	<p>Proctored Final Exam – Opens April 23rd and closes April 30th</p>

Important Dates: Winter 2021

DATE	EVENT
JAN 11, 2021	DAY AND EVENING CLASSES BEGIN
JAN 11 – MAY 1, 2021	SEMESTER DATES
MARCH 8 – 14, 2021	WINTER BREAK. NO CLASSES
MAY 1, 2021	END OF WINTER SEMESTER
MAY 3, 2021	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

Courtesy toward everyone (instructor and fellow students) is expected and will be monitored and maintained at all times. 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.

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.

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.