

Jackson College  
DMS 144.I1 Cardiovascular Principles  
3 Credit hours  
Online Delivery  
Spring 2017  
May 22 – August 15

Instructor: Carol Hoch, MA, RDMS, RDCS, RVT, RT(R)  
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Summer office Hours: by appointment

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

**COURSE DESCRIPTION:** This course is a study of cardiac anatomy and physiology, cardiac hemodynamics, principles of Doppler, and ECG interpretation. Problem solving, evaluation, and echo interpretation will be emphasized in this course. This course contains materials and instruction that will prepare the student in meeting the program's final objective of independent performance and evaluation of the complete adult echocardiogram. Pre-requisites: DMS 140, DMS 141. Co-requisite: DMS 148

**COURSE OBJECTIVES:**

- ❖ Describe various cardiac pathologies and their effect on the heart and state of health of the patient.
- ❖ Describe the correlation between auscultation findings with cardiac hemodynamic abnormalities.
- ❖ Explain how normal and abnormal hemodynamic situations affect cardiac physiology.

**SPECIAL COURSE REQUIREMENTS:**

- ❖ This course requires you to possess a reliable high-speed internet connection.
- ❖ This course requires that you are knowledgeable in a word processing program that allows you to save documents in .rtf , .doc, or .docx format.
- ❖ This course requires that you are familiar to the online learning environment and the requirements of assignment acquisition and uploading to the JetNet course management system.
- ❖ This course requires that you have a PowerPoint viewer downloaded to your computer.

**PRE-REQUISITES:** DMS 140 and DMS 141.

**CO-REQUISITES:** DMS 148

**REQUIRED TEXTS:**

- ❖ Reynolds, Terry, *The Echocardiographer's Pocket Reference*, Fourth Edition 2013, ISBN 978-0-9615-76835-9, Arizona Heart Foundation.
- ❖ Otto, Catherine M. *Textbook of Clinical Echocardiography*, Fifth Edition 2013, ISBN 978-1-4557-2857-2, Elsevier/Saunders. **\*Textbook Zero!** This textbook is available in a digital format from amazon.com
- ❖ Anderson, Bonita, *Echocardiography, The Normal Examination and Echocardiography Measurements*, Second Edition 2007, ISBN 978-0-646-46863-1, MGA Graphics, Australia, www.echotext.com
- ❖ Harry, Mark J. *Essentials of Echocardiography: An Illustrative Guide*. Fourth Edition 2013, ISBN: 9780989428002, Cardiac Ultrasound Consulting. www.cardiotextpublishing.com
- ❖ Feigenbaum, Armstrong, Ryan, *Feigenbaum's Echocardiography*. Seventh Edition 2010, ISBN 978-0781795579, Lippincott Williams & Wilkins. **\*Textbook Zero!** E-book (Kindle) option available from amazon.com

**COURSE SCHEDULE OF ASSIGNMENTS AND REQUIREMENTS:** Reading assignments must be completed prior to each class in order to maximize 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	Topic	Reading	Assignment
1 May 22	Aortic Insufficiency Tricuspid and Pulmonic Regurge	Otto 318-325, 335-339. Anderson 231 right column to 234 left column, 117 'Doppler Examination of the Descending Aorta, page 79 figure 3.4, 234 'Flow Reversal in Atrioventricular Valve Regurgitation', 237-238, 243- 245. Feigenbaum 280-292, 348-353, 232 top image. This reading is put together better than what Otto did for AI. You should view images, captions and video clips found within this reading.  Otto 155-159, 335-339, 247-250, 298-301, 296 Pulmonary Hypertension.	Lesson 1 Harry AI PDF 147-162, 163-166, 169-171, 173-175, 178-180 Questions 1, 3-7, 9-13, 21-23, 29, 31, 32-36, 46-47.  Lesson 2 - 3 Harry RT Heart PDF - 101-104 top, 105 lower, 106, 115 Questions 6-8  Harry RT Heart PDF 120-122 Questions 20-30 Quiz 1 Quiz 2

2 May 29	Coronary Artery Disease Myocardial Infarction Cardiac Catheterization Stress Echo I	Otto 197-207, 209-217 Feigenbaum 427-436, 438-445, 448-471, 473-493 Feigenbaum Images, captions, and video clips. It is to your benefit that you watch the DVD video clips during your reading	Worksheet CAD Quiz 3
3 June 5	Continued week 2		
4 June 12	Heart Sounds/Auscultation	Website: <a href="http://www.blaufuss.org/tutorial/#">http://www.blaufuss.org/tutorial/#</a> Follow through with the Heart Sounds Tutorial	Quiz 4
5 June 19	Test I	Test I	Test I
6 June 26	Embryology Adult Congenital ASD, VSD Cardiac Physiology	Otto 443-472 Feigenbaum 585-602 All images, captions and video clips	
7 July 3	Hemodynamics I Doppler Characteristics of Flow		Doppler Worksheet Q & A Worksheet
8 July 10	Test II	Test II	Test II
9 July 17	Hemodynamics II Wall motion detection		Worksheet
10 July 24	Related Modalities	Videos	Q and A
11 July 31	Test III	Test III	Test III
12 Aug 7	TBA		

### Grading System

#### Grading Scale

Quiz 1	32 pts	95-100%	4.0
Quiz 2	24 pts	90-94%	3.5
Quiz 3	36 pts	84-89%	3.0
Quiz 4	22 pts	80-83%	2.5
Quiz 5	30pts	75-79%	2.0
Harry	25 pts	70-74%	1.5
Test I	138 pts	65-69	1.0
Test II	107 pts		
Test III	100 pts		
Worksheet I	50 pts		
Worksheet II	25 pts		
Worksheet III	25 pts		
Total points	614 pts		

**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 complete 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. If you have any questions regarding this, please speak to me ASAP.

**LATE ASSIGNMENTS:** No late assignments will be accepted unless prior arrangements have been made.

**GRADE POLICY:** STUDENT MUST RECEIVE A 2.0 OR HIGHER IN ALL ECHO 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.

**INSTRUCTOR'S 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.

**STUDENT'S 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 a secure Internet connection at JC campus, local library or local 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.

**COLLEGE ACADEMIC HONESTY POLICY:**

<https://www.jccmi.edu/wp-content/uploads/2015/11/1004.pdf>

**STUDENT COMPLAINT PROCESS:**

<https://www.jccmi.edu/ombudsman/>

**CENTER FOR STUDENT SUCCESS:**

<https://www.jccmi.edu/center-for-student-success/>

*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 8270/8553 as soon as possible to ensure that such accommodations are implemented in a timely fashion.*

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