

Jackson College  
DMS 144.I50 Cardiovascular Principles  
3 Credit hours  
Online Delivery  
Spring 2014

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Summer office Hours: by appointment

Students should not hesitate to contact me as needed. The best method is through the JCC course management system, JetNet message or 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 EKG 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.

**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:** Successful completion of DMS 140 and DMS 141.

**REQUIRED TEXTS:**

- ❖ Reynolds, Terry, *The Echocardiographer's Pocket Reference*, Third Edition 2007, ISBN 9780963576798, Arizona Heart Foundation, Ph. 800.835.2920.

- ❖ Otto, Catherine M. *Textbook of Clinical Echocardiography*, Fifth Edition 20013, ISBN 9781455728572, W.B. Saunders Company.
- ❖ Anderson, Bonita, Echocardiography, *The Normal Examination and Echocardiography Measurements*, Second Edition 2007, ISBN 9780646468631, Blackwell Publishing Ltd.
- ❖ Harry, Mark J. *Essentials of Echocardiography: An Illustrative Guide*. Fourth Edition 2013
- ❖ Feigenbaum, Armstrong, Ryan, *Feigenbaum's Echocardiography*. Seventh Edition 2010, ISBN 9780781795579, Lippincott Williams & Wilkins.

**ASSOCIATE DEGREE OUTCOME (ADO) ADDRESSED IN THIS COURSE:** The Board of Trustees of Jackson College has determined that all JC graduates should develop or enhance certain essential skills while enrolled in the college. The ADO addressed within this course is ADO 7, Critical Thinking.

**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 5 | Aortic Insufficiency<br>Tricuspid and Pulmonic<br>Regurge | Otto 318-325, 335-339.<br>Anderson 231 right column to<br>234 left column, 117 'Doppler<br>Examination of the Descending<br>Aorta, page 79 figure 3.4, 234<br>'Flow Reversal in<br>Atrioventricular Valve<br>Regurgitation', 237-238, 243-<br>245.<br>Feigenbaum 280-292, 348-353,<br>232 top image. This reading is<br>put together better than what Otto<br>did for AI. You should view<br>images, captions and video clips<br>found within this reading.<br><br>Otto 155-159, 335-339, 247-250,<br>298-301, 296 Pulmonary<br>Hypertension. | Lesson 1 Harry<br>Workbook 147-<br>162, 163-166,<br>169-171, 173-175,<br>178-180<br>Questions 1, 3-7,<br>9-13, 21-23, 29,<br>31, 32-36, 46-47.<br><br>Lesson 2 Harry<br>Workbook-Due<br>May 12<br>Workbook 101-<br>104 top, 105<br>lower, 106, 115<br>Questions 6-8<br><br>Workbook 120-<br>122<br>Questions 20-30<br><br>Quiz 1<br>Quiz 2 |

|            |  |  |                                      |
|------------|--|--|--------------------------------------|
| 2 May 12   | Coronary Artery Disease<br>Myocardial Infarction<br>Cardiac Catheterization<br>Stress Echo I | Otto 197-207, 209-217<br>Feigenbaum 427-436, 438-445, 448-471, 473-493<br>Feigenbaum Images, captions, and video clips. It is to your benefit that you watch the DVD video clips during your reading | Worksheet CAD<br>Quiz 3              |
| 3 May 19   | Continued week 2   |  |                                      |
| 4 May 26   | Heart Sounds/Auscultation  | Website:<br><a href="http://www.blaufuss.org/tutorial/#">http://www.blaufuss.org/tutorial/#</a><br>Follow through with the Heart Sounds Tutorial   | Quiz 4                               |
| 5 June 2   | Test I   | Test I   | Test I                               |
| 6 June 9   | Embryology<br>Adult Congenital ASD, VSD<br>Cardiac Physiology                                | Otto 443-472<br>Feigenbaum 585-602<br>All images, captions and video clips   |                                      |
| 7 June 16  | Hemodynamics I<br>Doppler<br>Characteristics of Flow   |  | Doppler Worksheet<br>Q & A Worksheet |
| 8 June 23  | Test II  | Test II  | Test II                              |
| 9 June 30  | Hemodynamics II<br>Wall motion detection   |  | Worksheet                            |
| 10 July 7  | Related Modalities   | Videos   | Q and A                              |
| 11 July 14 | Test III   | Test III   | Test III                             |
| 12 July 21 | 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        | 24 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   | 25 pts  |         |     |
| Worksheet II  | 25 pts  |         |     |
| Worksheet III | 25 pts  |         |     |
| Total points  | 591pts  |         |     |

**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 JCC 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 JCC 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.

**JC ACADEMIC HONESTY POLICY:** On occasion academic dishonesty (cheating) occurs. Typically, these occasions are used by faculty as instructional opportunities. The faculty helps students reform their behavior and hopefully it does not occur again. In serious cases, the

Academic Honesty Policy provides a process for reporting, tracking, and disciplining academic dishonesty.

Academic honesty is expected of all students. It is the ethical behavior that includes producing their own work and not representing others' work as their own, either by plagiarism, by cheating or by helping others to do so.

Plagiarism: is the failure to give credit for the use of material from outside sources. Plagiarism includes but is not limited to:

Using data, quotations, or paraphrases from other sources without adequate documentation

Submitting other's work as your own

Exhibiting other behaviors generally considered unethical

Cheating means obtaining answers/material from an outside source without authorization.

Cheating includes, but is not limited to:

- Plagiarizing in all forms
- Using notes/books 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

Collaboration: While JC encourages students to collaborate in study groups, work teams, and with lab partners, each student should take responsibility for accurately representing his/her own contribution.

Consequences/Procedures: Faculty members who suspect a student of academic dishonesty may penalize the student by taking appropriate action up to and including assigning a failing grade for the paper, project, report, exam, or the course itself. Instructors must document all instances of academic dishonesty beyond those of a very minor nature, in writing to the academic dean.

The Office of the Academic Deans will record and track students who have been reported as having cheated. If the same student cheats in other courses, the dean will enact sanctions appropriate to level of infraction. The sanction will be selected in consultation with the involved faculty. The Dean can administer consequences up to and including suspension.

Student Appeal Process: In the event of a dispute, all parties should follow the Academic Complaint policy. This policy is presented in Student Rights and Responsibilities Handbook and the Master Agreement.

### **STUDENT COMPLAINT PROCESS:**

<http://www.jccmi.edu/administration/deans/StudentComplaintProcess.htm>

### **CENTER FOR STUDENT SUCCESS:**

<http://www.jccmi.edu/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.*