

**Bergen Community College  
Division of Health Professions  
Diagnostic Medical Sonography Program**

**DMS 214- Echocardiography I Course Syllabus**

**Wednesday – Lecture 12:30 PM - 2:10 PM**

**Lab 2:30 PM –5:00 PM**

**Course Description:**

This course is an introduction to cardiovascular principles. Topics covered will be anatomy and physiology, pathophysiology, patient assessment that includes palpation and auscultation of the heart and arteries, cardiovascular medications, surgical intervention and interpretation of electrocardiograms. Students will also learn how to perform a limited echo procedure in an attempt to prepare them for Echocardiography Practicum IV.

Prerequisite(s): BIO-209, DMS-201, DMS-219

Co-requisite(s): DMS-220, DMS-229

**REQUIRED TEXT: Echocardiography, The Notebook: From a Sonographer's Perspective Susan K. DeWitt,BS, RDCS**

**Student Learning Objectives: As a result of meeting the requirements in this course, students will be able to:**

1. **Identify normal and abnormal cardiac structures on echocardiography.**
2. **Understand the effects of valvular pathology on hemodynamics.**
3. **Learn the criteria used for interpretation and assessment of cardiac valves and chambers.**
4. **Identify congenital heart defects.**
5. **Evaluate prosthetic heart valves.**
6. **Describe cardiomyopathies and infections that affect the heart.**
7. **Evaluate trauma and masses in the heart.**
8. **Learn the standard views in a transthoracic echocardiogram in a graduated sequence.**
9. **Perform a standard echocardiogram.**

**Review of Heart Anatomy**

**Mitral valve**

**2-D echo views-PLAX**

**Scanning Lab: Parasternal Long axis views/RVIT**

**Aortic Valve**

**2-D echo views-PSAX**

**Scanning Lab: Parasternal LAX and intro to Short axis views.**

**Tricuspid and Pulmonic Valve-- Right Heart Valve Disease**

**Scanning Lab: 2-D echo views-Apical Views**

**2-D echo views-Sub-costal views**

**Scanning Lab: Apical views w/ color and subcostal**

**Introduction to cardiac structures and measurements using M-Mode  
Wall segments of the heart  
Scanning Lab: PLAX w/M-modes**

**Assessment using color and spectral doppler  
Scanning Lab: PLAX w/M-modes**

### **MIDTERM**

**Prosthetic Heart Valves  
Scanning Lab: echo w/ m-modes and color**

**Congenital heart disease  
Scanning Lab: echo w/ m-modes and color**

**Cardiomyopathies, Endocarditis, Pericarditis  
Scanning Lab: echo w/ m-modes and color Doppler**

**Missiles and Masses  
Scanning Lab: practice echo**

**Lab test- limited echo- - all views**

### **FINAL EXAM and Paper due**

**\* This course syllabus is tentative and subject to change, depending upon the progress of the class.**

#### **Grade calculations:**

<b>Paper</b>	<b>5 %</b>
<b>Lab competency</b>	<b>20 %</b>
<b>Quiz (averaged)</b>	<b>20 %</b>
<b>Midterm</b>	<b>25 %</b>
<b>Final exam</b>	<b>30 %</b>

**\*A missed quiz or exam may result in a zero if not made-up prior to the next class.**

#### **Grading Scale:**

**All grading is "absolute" and will NOT be rounded off.**

**A "D" GRADE DOES NOT APPLY TO DMS COURSES**

<b>92 - 100</b>	<b>A</b>
<b>88 - 91.9</b>	<b>B+</b>
<b>83 - 87.9</b>	<b>B</b>
<b>79 - 82.9</b>	<b>C+</b>
<b>75 - 78.9</b>	<b>C</b>

