COURSE SYLLABUS

Course Number: **DI 135**

Course Title: **Echo Imaging**

Course Credit: **2 units**

Pre-Requisite: **DI 125**

COURSE DESCRIPTION

Review and interpretation of echocardiographic imaging, M-Mode and Doppler study for detection of Heart abnormalities including Valve diseases, Pericardial and Pleural effusions and disorders, Cardiomyopathies, Cardiac masses and tumors. Interpretation of Systolic and Diastolic functions of the heart. Interpretation of wall motion abnormalities in Stress Echocardiogram.

COURSE OBJECTIVES AND STUDENT LEARNING OUTCOMES

Upon satisfactory completion of this course, the student will be able to:

- Recognize Heart pathology including Valvular disorders such as Mitral stenosis, Mitral prolapse, Mitral annulus calcification.
- Recognize Aortic stenosis on echocardiogram, determination of the level of Aortic stenosis using special formulas.
- Utilize the echocardiograms to determine the grade of Valvular insufficiency (aortic, mitral, pulmonic and tricuspid).
- Demonstrate the ability to use Echo/Doppler measurements and calculations.
- Demonstrate knowledge in determination of pericardial and pleural disease.
- Recognize signs of Systemic and Pulmonary hypertensive heart diseases by echocardiogram.
- Utilize the echocardiograms to measure valve leaflet excursion/velocity, wall thickness and chamber dimension.
- Recognize Cardiac masses and tumors.
- Determine Ventricular function, Wall motion abnormalities.
- Demonstrate knowledge to interpret stress echocardiogram.
- Recognize Congenital heart diseases in the adults.
- Utilize the echocardiograms to determine disorders of the Aorta.
- Recognize and interpret different types of Cardiomyopathies.

- Demonstrate knowledge of normal and abnormal measurements and dimensions from 2-D and M-mode echocardiography.

INSTRUCTIONAL METHODS:

Instructional methods will include instructor lecture and in-class hands-on learning activities. Classroom activities are collaborative - Students may and should help each other. The instructor will be available to help students with all tutorials and other assignments.

30 hours lecture = 2 unit

EVALUATION

1. Homework – Written homework assignments will be given periodically. Additionally, announced projects will be given during class time.
2. Midterm Examination.
3. Final Examination

Grading Scale:

Class Participation	10%
Projects	20%
Homework	10%
Midterm	30%
Final Exam	30%
	100%

90 -- 100	A
80 -- 89	B
70 -- 79	C
60 -- 69	D
below 60	F

To successfully complete this course, the student must pass the lectures, quizzes, homework and final exam portions with a combined grade of 70% or better.

RESOURCE MATERIALS

The Echo Manual
by Jae K. Oh, J. B. Seward, A. Jamil Tajik

The Echocardiographer's Pocket Reference
By Terry Reynolds, BS, RDCS