

Advanced Echocardiography

Class

DSAE 2335

Advanced echocardiographic procedures. Topics include stress echo, related diagnostic imaging, and related noninvasive cardiac testing. (2-2-0)

Course Learning Objectives

Describe the procedures and applications of stress echocardiography; identify alternate diagnostic modalities and their correlation with echocardiography; and demonstrate the ability to write technical reports based upon the findings of the echocardiographic exam.

Required Textbooks

Textbook of Clinical Echocardiography. 6th edition. Catherine Otto.

Elsevier. ISBN: 978-0-323-48048-2

Adult Echocardiography Review 2nd Edition. Carol Mitchell, PhD, RDMS, RDCS, RVT, RT(R), ACS, FASE, FSDMS,

Bridgett Willey, MS, RDMS, RVT, RDCS, RT(R) Davies Publishing. ISBN: 978-0-9410-2281-1

Recommended Textbooks

Adult Echocardiography Mock Exam 2nd Edition./ CD or Download
Carol Mitchell, PhD, RDMS, RDCS, RVT, RT(R), ACS, FASE, FSDMS,

Bridgett Willey, MS, RDMS, RVT, RDCS, RT(R) Davies Publishing / Download Format ISBN: 978-0-9410-2282-8 /
Catalog No: 11065-DL

Evaluation Standards

- A 92-100%
- B 85-91%
- C 78-84%
- F <78%

You must achieve a minimum of 78% or higher to pass this course. The components of your course grade are the Assignments (30%); the Quizzes (30%); and the exams - Midterm (20%) & Final (20%).

Course Progression

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

1. **Identify appropriate indications for Exercise or Pharmacologic Stress Echocardiography and why it is an important diagnostic tool.** (F1-5, 7-12, 15, C1, 11-15, 19, 20)
1. Describe procedures and applications
2. List and describe indications
3. Identify abnormalities and reasons to stop a Stress Echocardiogram
4. Describe findings of a normal Stress Echocardiogram
5. Demonstrate ability to write a technical report describing findings of the Stress Echocardiography procedure.

II. Identify and describe alternate diagnostic modalities and their correlation with

Echocardiography. (F1-5, 7-12, 15, C1, 11-15, 19, 20)

- A. Describe procedures and applications for Contrast Echocardiography
- B. List and describe indications for Contrast Echocardiography
- C. Identify and describe possible contraindications

III. Demonstrate knowledge and applications of the indications, utility, limitations, and technical procedures for related echocardiographic studies. (F1-5, 7-12, 15, C1, 11-15, 19, 20)

- 1. Transthoracic echocardiography
- 2. Stress echocardiography – exercise and pharmacologic
- 3. Transesophageal echocardiography
- 4. Intraoperative echocardiography
- 5. Enhanced cardiac ultrasound (transpulmonary agents, agitated saline, contrast media)
- 6. IV administration techniques
- 7. Three-dimensional echocardiography
- 8. Echo-guided procedures
- 9. Strain echocardiography
- 10. Speckle tracking
- 11. Cardiac ultrasound respirogram

Absences

Attendance is the biggest predictor of your success. Attendance at every class is expected. You will be allowed to miss 2 class days (except for test days) and/or two lab days (if applicable) without it adversely affecting your grade. Every absence over the allotted days will result in your final grade being reduced by one letter grade. Three tardies of 1-14 minutes each count as one day absent. If you are more than 15 minutes late to lecture or lab it will constitute an absence. You are required to notify the instructor prior to any absence. Failure to do so will result in an unexcused absence.

An exam missed because of an excused absence must be made up the day that you return to class. An exam missed because of an unexcused absence may not be made up, and you will receive a grade of zero (0) for that exam. Pop quizzes may not be made up under any circumstances.

All class and clinical assignments are due on their appointed dates at the designated time. Failure to submit an assignment on time will result in a grade of "0" to be given for the assignment. Although a grade of "0" will be given, the individual instructor reserves the right to ask for completion of the assignment. Failure to comply with request will result in incompleteness of the course.

Cell phones shall be stored on silent in your backpack, handbag, or purse. Cell phones may be accessed during breaks.

A student shall retain all rights to work created as part of instruction or using College District technology resources.

Disabilities

ADA Statement:

Any student with a documented disability (e.g. learning, psychiatric, vision, hearing, etc.) may contact the Office on the Weatherford College Weatherford Campus to request reasonable accommodations. *Phone:* 817-598-6350
Office Location: Office Number 118 in the Student Services Building, upper floor. *Physical Address:* Weatherford College 225 College Park Drive Weatherford, TX.

Academic Integrity

Academic Integrity is fundamental to the educational mission of Weatherford College, and the College expects its students to maintain high standards of personal and scholarly conduct. Academic dishonesty of any kind will not be

tolerated. Academic dishonesty includes, but is not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials including unauthorized use of Generative AI. Departments may adopt discipline specific guidelines on Generative AI usage approved by the instructional dean. Any student who is demonstrated to have engaged in any of these activities will be subject to immediate disciplinary action in accordance with institutional procedures.

SCANS

The Secretary's Commission on Achieving Necessary Skills (SCANS) identified Competencies in the area of Resources, Interpersonal, Information, Systems, and Technology; and foundation skills in the areas of Basic Skills, Thinking Skills, and Personal Qualities. This course is part of a program in which each of these Competencies and skills are integrated. The specific SCANS Competencies that are recognized throughout this course are noted at the end of the appropriate Competencies or task listed.