

# ASCeXAM/ReASCE REVIEW COURSE

The most comprehensive review to help you prepare for the NBE certification examinations.

# 22<sup>nd</sup> ANNUAL

## VIRTUAL EXPERIENCE

### Content available on May 8, 2021

#### Course Director

Vera H. Rigolin, MD, FASE  
Past President, ASE  
Northwestern Medicine  
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#### Course Co-Director

Muhamed Saric, MD, PhD, FASE  
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“Doing this  
fantastic virtual course  
at home, at my own  
speed, updated my echo  
knowledge immensely.”

*2020 Review Course  
Attendee*

#### Featuring:

- Access to All Presentation Recordings, including Physics
- New Faculty and Presentations

Register now at [ASEcho.org/ReviewCourse](https://ASEcho.org/ReviewCourse)

# Program Information

## Overview of the ASCeXAM/ReASCE Review Course: Virtual Experience

This online course will be available on **Saturday, May 8, 2021**, and will offer access to recordings and PDF slides of all scheduled presentations, including physics. ASE has specifically designed the ASCeXAM/ReASCE Review Course as a preparatory course for the National Board of Echocardiography, Inc.™ (NBE) ASCeXAM® and ReASCE® examinations. Lectures given will emphasize illustrative cases and as such will not be “canned talks” from other cardiovascular ultrasound courses.

This Review Course will cover all aspects of cardiovascular ultrasound essential to these examinations, including physics, valvular heart disease, strain and 3D imaging, contrast echocardiography, ischemic heart disease, congenital heart disease, and more.

The expert faculty will use case studies and lectures to help prepare attendees for the ASCeXAM® or ReASCE® examinations. The Review Course has been designed with the computer-based examination administration in mind.

## Learning Objectives

- Explain the essential physical principles of cardiac ultrasound.
- Recognize common ultrasound artifacts and their genesis.
- Estimate systolic function using standard M-mode and 2D echocardiography, as well as newer modalities such as strain imaging and 3D echocardiography.
- Identify and quantitate valvular heart disease severity.
- Describe the application of Doppler in the assessment of hemodynamics, diastolic function, and heart failure.
- Perform clinically relevant calculations of valve areas and intracardiac pressures.
- Explain proven techniques for interpreting stress echocardiographic examinations.
- Differentiate features of cardiac tamponade, constrictive pericarditis, and restrictive cardiomyopathy.
- List appropriate applications of echocardiography.
- Recognize newer applications of echocardiography such as myocardial contrast and 3D echocardiography.

## Why take the ASCeXAM® or ReASCE® Examinations?

NBE administers the ASCeXAM® and ReASCE® examinations to allow physicians to test and demonstrate their knowledge of echocardiography based on an objective standard. The ASCeXAM® is the Examination of Special Competence in Adult Echocardiography and is intended for those who wish to demonstrate special competence in all areas of echocardiography. The ReASCE® is the Recertification Examination of Special Competence in Adult Echocardiography designed specifically for those who have previously passed the ASCeXAM®. The purpose of ReASCE® is to promote continued excellence in all areas of echocardiography.

Passing these examinations is mandatory when applying for and maintaining NBE certification in any or all of the following areas: transthoracic echocardiography, transesophageal echocardiography, or stress echocardiography.

The examinations are given at testing centers throughout the United States. The test will consist of one case-oriented block and three multiple choice blocks covering the following content areas:

- physical principles of ultrasound;
- valvular heart disease;
- ventricular size and function, coronary artery disease, cardiomyopathies;
- congenital heart disease and fetal echocardiography;
- cardiac masses, pericardial disease, myocardial contrast, and newer applications of echocardiography.

Questions will test knowledge of M-mode, 2D and Doppler echocardiography, transesophageal, contrast, and stress echocardiography. The case-oriented block will last up to 1½ hours while the other three blocks will last up to 60 minutes per block.

As of now, the ASCeXAM® and ReASCE® exams will be held on Tuesday, July 20, 2021. More details concerning these examinations can be found on the NBE website at [echoboards.org](http://echoboards.org).

## Who Should Attend

This course is designed for physicians interested in sitting for the ASCeXAM® (Examination of Special Competence in Adult Echocardiography) or the ReASCE® (Recertification Examination of Special Competence in Adult Echocardiography), as well as physicians and sonographers interested in a broad review of cardiovascular ultrasound.

## Course Registration

Registration fees include all recorded presentations, PDF downloads, post-test questions, Q&A sessions with expert faculty, and 28.75 CME credits. ASE members can take advantage of reduced registration fees as a benefit of membership. Register online today at [ASEcho.org/ReviewCourse](http://ASEcho.org/ReviewCourse). Registration closes on July 31, 2021, but registrants will have unlimited on-demand access to course content through May 2, 2022.

The expert faculty will host two 2-hour live Q&A sessions on **Saturday, July 10, 2021, from 10:00 AM – 12:00 PM ET, and 12:30 – 2:30 PM ET**. This will be another opportunity to review additional board type questions, different from those found in the course. It is also a time for faculty to answer your specific questions, review course material, and dive deeper into certain subjects. These live Q&A sessions are included with your course registration, and will be recorded for on-demand viewing. More information on these sessions will be available here in Spring 2021: [ASEcho.org/ReviewCourse](http://ASEcho.org/ReviewCourse).

## ASE Membership

You are welcome to join or renew your ASE membership when you register for the Review Course. Your membership will be active through **December 31, 2021**.

Membership rates are the same for new and renewing members.

U.S. Physician/Scientist Membership . . . . .	\$345
U.S. Sonographer/Allied Health/Vet Membership. . . . .	\$175
International Membership . . . . .	\$115
Fellow in Training & Student U.S. and International Membership. . .	\$75
Rising Star U.S. Membership. . . . .	\$160
Rising Star International Membership. . . . .	\$100
Professional Industry Affiliate . . . . .	\$345
Retired U.S. and International Membership. . . . .	\$100

ASE serves its members in numerous ways by providing education, advocacy, research, practice guidelines, and a community for their profession. ASE membership includes over \$750 of FREE CME credits a year, in addition to discounts on all ASE educational courses and products. Also included is a monthly subscription to the *Journal of the American Society of Echocardiography* (JASE), access to CASE, ASE's online case reports journal, help with legislative coding and reimbursement issues, and other career resources. A plethora of online tutorials, webinars, and other educational activities make membership beneficial to echocardiographers located around the world. View the extensive list of member benefits at [ASEcho.org/Benefits](http://ASEcho.org/Benefits).

## Accreditation and Designation

The CME Evaluation will be available beginning July 10, 2021. The American Society of Echocardiography is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

ASE designates this live activity for a maximum of **28.75 AMA PRA Category 1 Credits™** pending approval. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Successful completion of this CME activity enables the participant to earn up to **28.75 MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program**. Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity.



### Course Director

**Vera H. Rigolin, MD, FASE**  
Past President, ASE  
Northwestern Medicine  
Chicago, IL



### Course Co-Director

**Muhamed Saric, MD, PhD, FASE**  
New York University  
New York, NY

## Expert Faculty

**Karima Addetia, MD, FASE**  
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**Gerard P. Aurigemma, MD, FASE**  
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Virginia Commonwealth University  
Richmond, VA

**James A. Zagzebski, PhD**  
University of Wisconsin-Madison  
Madison, WI

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# Course Content

## TTE, TEE, Right and Left Ventricular Hemodynamics, Endocarditis, Chamber Quantitation, Systolic Function and Handheld Echo

Welcome and Overview of ASCeXAM/ReASCE Exam	<i>V. Rigolin</i>
Normal TTE Examination: Doppler Echocardiography and Normal Antegrade Flow Patterns	<i>D. Phelan</i>
Normal TEE Examination: Applications, Pitfalls, Probe Insertion and Manipulation, Risks and Complications	<i>R. Jain</i>
Echo-Doppler Assessment of Right and Left Ventricular Hemodynamics	<i>G. Aurigemma</i>
Endocarditis and Its Complications: The Role of Echocardiography	<i>M. Saric</i>
Chamber Quantitation: Left Ventricle, Left Atrium, Aorta (2D&3D)	<i>G. Aurigemma</i>
Global and Regional Systolic Function: Basics of Remodeling, Hypertrophy and Left Ventricular Mass	<i>G. Aurigemma</i>
Handheld Echo	<i>M. Saric</i>

## Spectral Doppler, Deformation, Stress Echo, Mitral Stenosis, Mitral Valve Disease, and Mitral Regurgitation

Spectral Doppler and M-Mode Echo Cases	<i>G. Aurigemma</i>
Deformation Imaging	<i>S. Lester</i>
Stress Echocardiography: Theoretical and Practical Considerations	<i>D. Phelan</i>
Mitral Stenosis	<i>R. Mankad</i>
Degenerative Mitral Valve Disease	<i>K. Addetia</i>
Functional Mitral Valve Disease	<i>V. Rigolin</i>
Hemodynamic Assessment of Mitral Regurgitation	<i>S. Mankad</i>

## Mitral Valve Prostheses, Aortic Stenosis, HCM, Systemic Disease, and Formulas

Echocardiographic Evaluation of Mitral Valve Prostheses	<i>S. Lester</i>
How to Assess Aortic Stenosis	<i>V. Rigolin</i>
Different Variants of Aortic Stenosis	<i>S. Mankad</i>
Hypertrophic Cardiomyopathy	<i>S. Lester</i>
The Athlete's Heart	<i>D. Phelan</i>
Echocardiography in Systemic Disease	<i>R. Mankad</i>
Which Formulas Should I Know for the Exam?	<i>A. Narang</i>

## Physics, Knobology, Artifacts, Right Ventricular Function, Tricuspid and Pulmonary Valve Disease

Basic Ultrasound Physics	<i>J. Zagzebski</i>
Concepts of Imaging and Knobology	<i>R. Mankad</i>
Fundamentals in Doppler Physics	<i>J. Zagzebski</i>
Artifacts: Theory and Illustrative Examples	<i>M. Saric</i>
Evaluation of the Right Ventricle	<i>V. Rigolin</i>
Tricuspid and Pulmonary Valve Disease	<i>K. Addetia</i>
More Formulas I Know for the Exam	<i>A. Narang</i>

## Aortic Regurgitation, Aortic Prosthesis, Cardiac Masses, Myocardial Infarction, and Interventional Echocardiography

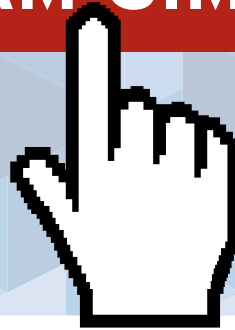
Quantitation of Aortic Regurgitation	<i>V. Rigolin</i>
Evaluation of Aortic Prosthesis	<i>S. Mankad</i>
Cardiac Masses and Cardiac Sources of Embolism	<i>A. Narang</i>
Complications of Myocardial Infarction	<i>S. Mankad</i>
Primer of Interventional Echo	<i>R. Jain</i>

## Contrast, Congenital Heart Disease, Diastolic Function, Pericardial Disease, Diseases of the Aorta, Heart Failure, and LVADs

Contrast Echocardiography	<i>M. Saric</i>
Commonly Encountered Congenital Heart Disease in Adults	<i>S. Shah</i>
Pregnancy and Heart Disease	<i>S. Shah</i>
Congenital Heart Disease: An Approach for Simple and Complex Anomalies	<i>B. Eidem</i>
Primer on Fetal Echo	<i>B. Eidem</i>
Echocardiographic Evaluation of Diastolic Function and Findings in Normal Aging	<i>P. Sengupta</i>
Echocardiographic Evaluation of Pericardial Disease: Constriction vs. Restriction	<i>P. Sengupta</i>
Diseases of the Aorta	<i>M. Saric</i>
Echocardiography in Heart Failure, Left Ventricular Assist Devices and Heart Transplant	<i>K. Addetia</i>



# The ASCeXAM/ReASCE Online PRACTICE EXAM SIMULATION



The **ASCeXAM/ReASCE Online Practice Exam Simulation** is designed to prepare physicians for the National Board of Echocardiography's ASCeXAM® or ReASCE® certification examinations. Developed by renowned experts in the field of echocardiography, the test bank consists of 300 multiple choice questions containing over 400 images and videos covering: the physical principles of cardiovascular ultrasound; valvular heart disease; ventricular size and function; coronary artery disease and cardiomyopathies; congenital heart disease and fetal echocardiography; as well as cardiac masses, pericardial disease, myocardial contrast, and the latest applications in echocardiography. M-mode, 2-Dimensional, and Doppler echocardiography are also covered.

In addition to objective-based questions, case studies are included to evaluate your knowledge of the field. After purchasing this exam simulation, you have access for 18 weeks and are given the opportunity to take two simulated exams consisting of 150 questions each, assessing your skills and knowledge in all areas. You may repeat these exams a total of six times. The grading and feedback for all six attempts will be saved. In addition to an overall grade, a percentage breakdown of your incorrect and correct answers over the five categories will be provided for each attempt, allowing you to focus your study accordingly. Feedback includes explanations of the correct and incorrect answers, offering valuable instruction.

In a recent survey conducted by ASE, 97% of the people who took ASE's ASCeXam/ReASCE Review Course and used the Simulation Exam passed the echo boards.

**The American Society of Echocardiography strives to be  
the premier source for ASCeXAM/ReASCE preparation.**

**Take advantage of this valuable preparation tool**

**\$199 ASE Members**

**\$250 Nonmembers**



**ASE**

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ECHOCARDIOGRAPHY

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# ASCEXAM/ReASCE REVIEW COURSE

## NEW! VIRTUAL EXPERIENCE

Register online at:  
[ASEcho.org/ReviewCourse](http://ASEcho.org/ReviewCourse)  
Content available on May 8, 2021

Your ASCeXAM/ReASCE Review Course registration fee includes all recorded presentations, post test questions, Q&A session with faculty, and 28.75 CME credits.

Name: \_\_\_\_\_  
FIRST NAME MIDDLE INITIAL LAST NAME  
Credential:  MD  DO  PhD  RN  RCS  RDCS  Other

Institution: \_\_\_\_\_

Email Address: \_\_\_\_\_

(All correspondence regarding your registration including your confirmation will be sent to this email address.)

Street Address: \_\_\_\_\_

City: \_\_\_\_\_ State/Province: \_\_\_\_\_ Zip/Postal Code: \_\_\_\_\_ Country: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_

ASE encourages participation by all individuals. If you have a disability or other specific needs, advance notification will help ASE to better serve you. Please contact ASE by email at [ASEVirtual@ASEcho.org](mailto:ASEVirtual@ASEcho.org) or by telephone at 919-861-5574.

I have reviewed the ASE Code of Conduct for Virtual Events here: [ASEcho.org/ASE-Code-of-Conduct](http://ASEcho.org/ASE-Code-of-Conduct)

<b>Registration Fees</b> <i>Prices include access to all online lecture recordings, post test questions, and Q&amp;A session with faculty.</i>	<b>Member Pricing</b> <i>Through July 31, 2021</i>	<b>Nonmember Pricing</b> <i>Through July 31, 2021</i>
Physician	\$1,045	\$1,240
Sonographer/Allied Health/Veterinarian	\$915	\$1,030
Fellow	\$915	\$1,030
International*	\$615	\$800

\*International registration is available for anyone who resides outside of the United States.

<b>ASE Membership</b> <i>Renew or Join Today!</i>	<b>Membership Category</b>	<b>Dues Rate</b>
Please enter your membership category and dues rate here.*		

\*Please visit [ASEcho.org/Pricing](http://ASEcho.org/Pricing) for more information.

## ASCEXAM/ReASCE Online Practice Exam Simulation

Order your ASCeXAM/ReASCE Online Practice Exam at the same time you register. \$199 ASE member \$250 Nonmember.

## Payment Information

 Payment must accompany this form.

**Check** (payable to American Society of Echocardiography in U.S. dollars drawn on a U.S. bank) **Credit Card:**  Visa  MasterCard  American Express

Cardholder's Name: \_\_\_\_\_

Card Number: \_\_\_\_\_ Expiration Date: \_\_\_\_\_ CVC #: \_\_\_\_\_

Registration cancellation fees may apply and ASE reserves the right to determine if a refund is possible. Please see the full cancellation policy online at [ASEcho.org/ReviewCourse](http://ASEcho.org/ReviewCourse).

## Register online and receive an immediate receipt! [ASEcho.org/ReviewCourse](http://ASEcho.org/ReviewCourse)

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