

MAYO CLINIC

2025 Echocardiography Course

Complete Curriculum & Content Guide

11 Learning Sections · 50+ Lectures · Slides (PDF) + Video (MP4/TS)

World-class faculty from Mayo Clinic

Course Overview

Section	# Lectures	Content
Congenital and Aortic Diseases	4	Slides (PDF) + Video
Echocardiography in Structural Heart Disease	3	Slides (PDF) + Video
Echocardiography in Valvular Heart Disease	5	Slides (PDF) + Video
Fundamentals of Echocardiography I	5	Slides (PDF) + Video
Fundamentals of Echocardiography II	5	Slides (PDF) + Video
Infective Endocarditis and Echo Hemodynamics	2	Slides (PDF) + Video
Myocardial Function Imaging	6	Slides (PDF) + Video
Myocardial Function, Heart Failure and Cardiomyopathies	5	Slides (PDF) + Video
Special Sessions	8	Slides (PDF) + Video
Supplemental Material	11	Slides (PDF) + Video
Systemic and Coronary Diseases	5	Slides (PDF) + Video

CONGENITAL AND AORTIC DISEASES

1. Aortic Atherosclerosis, Aneurysms and Aortopathies

Instructor: *Crystal R. Bonnichsen* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~9 MB
Slides (Part 2)	PDF	~9 MB
Video	MP4	478 MB
Video (Full)	TS	499.5 MB

2. Cardiac Masses

Instructor: *Kyle Klarich* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~56 MB
Slides (Part 2)	PDF	~56 MB
Video	MP4	~cons MB
Video (Full)	TS	632 MB

3. Complex Congenital Heart Disease

Instructor: *Luke J. Burchill* M.B.B.S., Ph.D.

Format	Type	Size
Slides (Part 1)	PDF	~14 MB
Slides (Part 2)	PDF	~14 MB
Video	MP4	~651 MB
Video (Full)	TS	657.1 MB

4. Simple Congenital Heart Disease

Instructor: *Crystal R. Bonnichsen* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~40 MB
Slides (Part 2)	PDF	~40 MB
Video	MP4	~679 MB
Video (Full)	TS	705.2 MB

ECHOCARDIOGRAPHY IN STRUCTURAL HEART DISEASE

5. Interventional Echocardiography

Instructor: *Jeremy J. Thaden* M.D.

Format	Type	Size
Slides (Part 1)	PDF	252 MB
Slides (Part 2)	PDF	252 MB
Video	MP4	2,912 MB
Video (Full)	TS	921.8 MB

6. Intraoperative Echocardiography

Instructor: *Hayan Jouni* M.D.

Format	Type	Size
Slides (Part 1)	PDF	296 MB
Slides (Part 2)	PDF	295 MB
Video	MP4	~427 MB
Video (Full)	TS	871.5 MB

7. Prosthetic Valve Assessment

Instructor: *Sorin V. Pislaru* M.D., Ph.D.

Format	Type	Size
Slides (Part 1)	PDF	238 MB
Slides (Part 2)	PDF	229 MB
Video	MP4	766 MB
Video (Full)	TS	793.5 MB

ECHOCARDIOGRAPHY IN VALVULAR HEART DISEASE

8. Aortic Valve Regurgitation

Instructor: *Hector L. Michelena* M.D.

Format	Type	Size
Slides (Part 1)	PDF	166 MB
Slides (Part 2)	PDF	166 MB
Video	MP4	443 MB
Video (Full)	TS	463 MB

9. Aortic Valve Stenosis

Instructor: *Vuyisile T. Nkomo* M.D., M.P.H.

Format	Type	Size
Slides (Part 1)	PDF	45 MB
Slides (Part 2)	PDF	45 MB
Video	MP4	549 MB
Video (Full)	TS	572.6 MB

10. Mitral Valve Regurgitation

Instructor: *Jeremy J. Thaden* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~69 MB
Slides (Part 2)	PDF	~69 MB
Video	MP4	515 MB
Video (Full)	TS	537.4 MB

11. Mitral Valve Stenosis

Instructor: *Rekha Mankad* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~2 MB
Slides (Part 2)	PDF	~19 MB
Video	MP4	~235 MB
Video (Full)	TS	453 MB

12. Tricuspid and Pulmonary Valve Diseases

Instructor: *C. Charles Jain* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~cam MB
Slides (Part 2)	PDF	98 MB
Video	MP4	369 MB
Video (Full)	TS	386.8 MB

FUNDAMENTALS OF ECHOCARDIOGRAPHY I

13. Doppler and Color Flow Imaging for Non-Invasive Hemodynamics

Instructor: *Jared G. Bird* M.D.

Format	Type	Size
Slides (Part 1)	PDF	98 MB
Slides (Part 2)	PDF	97 MB
Video	MP4	449 MB
Video (Full)	TS	468.6 MB

14. M-Modes for the Boards

Instructor: *Michael W. Cullen* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~79 MB
Slides (Part 2)	PDF	~19 MB
Video	MP4	~257 MB
Video (Full)	TS	267.2 MB

15. Transesophageal Echocardiography Including 3-D Echocardiography

Instructor: *Hayan Jouni* M.D.

Format	Type	Size
Slides (Part 1)	PDF	199 MB
Slides (Part 2)	PDF	199 MB
Video	MP4	~440 MB
Video (Full)	TS	722.3 MB

16. Transthoracic Quantitation of LV Dimension, Volume, and EF

Instructor: *Benjamin D. Nordhues* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~13 MB
Slides (Part 2)	PDF	~13 MB
Video	MP4	295 MB
Video (Full)	TS	228.8 MB

17. Transthoracic Quantitation of RA and RV Dimensions, Volume and Function

Instructor: *Garvan C. Kane* M.D., Ph.D.

Format	Type	Size
Slides (Part 1)	PDF	49 MB
Slides (Part 2)	PDF	49 MB
Video	MP4	~maau MB
Video (Full)	TS	286.3 MB

FUNDAMENTALS OF ECHOCARDIOGRAPHY II

18. Contrast Echocardiography

Instructor: *Mays T. Ali* M.D.

Format	Type	Size
Slides (Part 1)	PDF	94 MB
Slides (Part 2)	PDF	~94 MB
Video	MP4	427 MB
Video (Full)	TS	444.6 MB

19. Diastolic Dysfunction: Complex and Challenging Cases

Instructor: *Jae K. Oh* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~588 MB
Slides (Part 2)	PDF	~428 MB
Video	MP4	864 MB
Video (Full)	TS	897.7 MB

20. Diastolic Function: The Basics

Instructor: *Garvan C. Kane* M.D., Ph.D.

Format	Type	Size
Slides (Part 1)	PDF	72 MB
Slides (Part 2)	PDF	71 MB
Video	MP4	288 MB
Video (Full)	TS	304.1 MB

21. NBE Exam Format and Overview

Instructor: *Garvan C. Kane* M.D., Ph.D.

Format	Type	Size
Slides (Part 1)	PDF	~17 MB
Slides (Part 2)	PDF	~17 MB
Video	MP4	199 MB
Video (Full)	TS	210.5 MB

22. Physics in Practice: Illustrative Cases

Instructor: *Vidhu Anand* M.B.B.S.

Format	Type	Size
Slides (Part 1)	PDF	~6.7 MB
Slides (Part 2)	PDF	~6.7 MB
Video	MP4	302 MB
Video (Full)	TS	312 MB

INFECTIVE ENDOCARDITIS AND ECHO HEMODYNAMICS

23. Hemodynamic Workshop

Instructor: *Jae K. Oh, Jeffrey B. Geske, and William R. Miranda* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~108 MB
Slides (Part 2)	PDF	~547 MB
Video	MP4	~10.8 GB
Video (Full)	TS	1.13 GB

24. Infective Endocarditis

Instructor: *Ratnasari (Sari) Padang* M.B.B.S., Ph.D.

Format	Type	Size
Slides (Part 1)	PDF	~8.7 MB
Slides (Part 2)	PDF	~8.7 MB
Video	MP4	~838 MB
Video (Full)	TS	838.4 MB

MYOCARDIAL FUNCTION IMAGING

25. Cardiac Amyloidosis

Instructor: *Daniel D. Borgeson* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~9 MB
Slides (Part 2)	PDF	~709 MB
Video	MP4	~287 MB
Video (Full)	TS	300.7 MB

26. Essentials of Strain Imaging

Instructor: *Ian Chang* M.D.

Format	Type	Size
Slides (Part 1)	PDF	45 MB
Slides (Part 2)	PDF	45 MB
Video	MP4	~203 MB
Video (Full)	TS	316.2 MB

27. HFpEF and LA Strain

Instructor: *Garvan C. Kane* M.D., Ph.D.

Format	Type	Size
Slides (Part 1)	PDF	47 MB
Slides (Part 2)	PDF	46 MB
Video	MP4	236 MB
Video (Full)	TS	248.3 MB

28. Pulmonary Hypertension

Instructor: *Garvan C. Kane* M.D., Ph.D.

Format	Type	Size
Slides (Part 1)	PDF	~21 MB
Slides (Part 2)	PDF	~72 MB
Video	MP4	~480 MB
Video (Full)	TS	479.7 MB

29. Strain Imaging for Cardio-Oncology

Instructor: *Carolyn M. Larsen* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~21 MB
Slides (Part 2)	PDF	~22 MB
Video	MP4	~298 MB
Video (Full)	TS	311.7 MB

30. Strain Imaging for Cardiomyopathies and Valvular Heart Disease

Instructor: *Jae K. Oh* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~29 MB
Slides (Part 2)	PDF	~29 MB
Video	MP4	~508 MB
Video (Full)	TS	526.5 MB

MYOCARDIAL FUNCTION, HEART FAILURE AND CARDIOMYOPATHIES

31. HFrEF, Dilated Cardiomyopathy, and Transplantation

Instructor: *Daniel D. Borgeson* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~26 MB
Slides (Part 2)	PDF	~26 MB
Video	MP4	540 MB
Video (Full)	TS	562.7 MB

32. Hypertrophic Cardiomyopathy

Instructor: *Jeffrey B. Geske* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~115 MB
Slides (Part 2)	PDF	~14 MB
Video	MP4	~eu MB
Video (Full)	TS	647.2 MB

33. Left Ventricular Devices and Cardiac Resynchronization

Instructor: *Rosalyn O. Adigun* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~37 MB
Slides (Part 2)	PDF	~37 MB
Video	MP4	~490 MB
Video (Full)	TS	470.2 MB

34. Pericardial Diseases I: Cyst, Absent Pericardium, Effusion, and Tamponade

Instructor: *S. Allen Luis* M.B.B.S.

Format	Type	Size
Slides (Part 1)	PDF	~55 MB
Slides (Part 2)	PDF	~57 MB
Video	MP4	~325 MB
Video (Full)	TS	338.5 MB

35. Pericardial Diseases II: Constrictive Pericarditis

Instructor: *Jae K. Oh* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~32 MB
Slides (Part 2)	PDF	~133 MB
Video	MP4	~940 MB
Video (Full)	TS	973.5 MB

SPECIAL SESSIONS

36. Advanced Echo Hemodynamics

Instructor: *Jae K. Oh and William R. Miranda* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~113 MB
Slides (Part 2)	PDF	~113 MB
Video	MP4	~782 MB
Video (Full)	TS	780.6 MB

37. Applying Strain in Practice: Chemotherapy and Beyond

Instructor: *Ian Chang and Carolyn M. Larsen* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~785 MB
Slides (Part 2)	PDF	~145 MB
Video	MP4	~405 MB
Video (Full)	TS	422.6 MB

38. Congenital Cases

Instructor: *Luke J. Burchill and C. Charles Jain* M.B.B.S., Ph.D. / M.D.

Format	Type	Size
Slides (Part 1)	PDF	~11 MB
Slides (Part 2)	PDF	~11 MB
Video	MP4	~635 MB
Video (Full)	TS	634.9 MB

39. Hands-on 3-D Knobology Workshop

Instructor: *Kathleen F. Kopecky, Bas L. Kietselaer, and Jared G. Bird* M.D., M.S. / M.D., Ph.D. / M.D.

Format	Type	Size
Slides (Part 1)	PDF	~544 MB
Slides (Part 2)	PDF	~544 MB
Video	MP4	~507 MB
Video (Full)	TS	549.4 MB

40. Interesting Cases

Instructor: *Jae K. Oh, Lara Greittinger, and Wong (multiple presenters)* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~368 MB
Slides (Part 2)	PDF	~368 MB
Video	MP4	~509 MB
Video (Full)	TS	839.4 MB

41. Point of Care Ultrasound: Lung and Heart

Instructor: *Jared G. Bird and Brad Ternus* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~46 MB
Slides (Part 2)	PDF	~24 MB
Video	MP4	~233 MB
Video (Full)	TS	242.7 MB

42. Q&A Discussion

Instructor: *Garvan C. Kane and Jae K. Oh* M.D., Ph.D. / M.D.

Format	Type	Size
Slides (Part 1)	PDF	~130 MB
Slides (Part 2)	PDF	~150 MB
Video	MP4	~545 MB
Video (Full)	TS	866.6 MB

43. Valve Cases

Instructor: *S. Allen Luis and Vuyisile T. Nkomo* M.B.B.S., Ph.D. / M.D., M.P.H.

Format	Type	Size
Slides (Part 1)	PDF	~90 MB
Slides (Part 2)	PDF	~99 MB
Video	MP4	~630 MB
Video (Full)	TS	629.2 MB

SUPPLEMENTAL MATERIAL

44. Aortic Stenosis Doppler Hemodynamics: Working through the Math

Format	Type	Size
Video	MP4	~wae MB
Video (Full)	TS	50.7 MB

45. Assessment of Pulmonary Pressures

Format	Type	Size
Video	MP4	~768 MB
Video (Full)	TS	80.8 MB

46. Calculation of LV Stroke Volume and Cardiac Output by Doppler

Format	Type	Size
Video	MP4	~462 MB
Video (Full)	TS	48.9 MB

47. Doppler Hemodynamics Cases: Working through the Math

Format	Type	Size
Video	MP4	~347 MB
Video (Full)	TS	36.8 MB

48. Physics I

Format	Type	Size
Video	MP4	~707 MB
Video (Full)	TS	181.7 MB

49. Physics II

Format	Type	Size
Video	MP4	~50 MB
Video (Full)	TS	96.4 MB

50. Physics III and IV: Image Artifacts Theory and Illustrative Cases

Format	Type	Size
Video	MP4	~1,269 MB
Video (Full)	TS	445.4 MB

51. Physics in Practice: Illustrated Cases

Format	Type	Size
Video	MP4	~1,556 MB
Video (Full)	TS	885.5 MB

52. The Dyspneic Patient: Lung Ultrasound

Format	Type	Size
Video	MP4	~257 MB
Video (Full)	TS	267.8 MB

53. Tips and Tricks for LV Tracings

Format	Type	Size
Video	MP4	~se MB

54. Valvular Regurgitation Pearls

Format	Type	Size
Video	MP4	~250 MB

SYSTEMIC AND CORONARY DISEASES

55. Coronary Artery Disease Including Mechanical Complications

Instructor: *Sunil Y. Mankad* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~99 MB
Slides (Part 2)	PDF	~98 MB
Video	MP4	~790 MB
Video (Full)	TS	~552.3 MB

56. Diastolic Stress Echocardiography

Instructor: *Jae K. Oh* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~14 MB
Slides (Part 2)	PDF	~14 MB
Video	MP4	~550 MB
Video (Full)	TS	~18 MB

57. Echo in Systemic Diseases and Pregnancy

Instructor: *Kathleen (Katie) A. Young* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~17 MB
Slides (Part 2)	PDF	~16 MB
Video	MP4	~512 MB
Video (Full)	TS	~117.2 MB

58. Hemodynamic Stress Echo for Structural Heart Disease

Instructor: *Ratnasari (Sari) Padang* M.B.B.S., Ph.D.

Format	Type	Size
Slides (Part 1)	PDF	~some MB
Slides (Part 2)	PDF	~some MB
Video	MP4	~851 MB
Video (Full)	TS	~533 MB

59. Stress Echocardiography

Instructor: *Kathryn F. Larson* M.D.

Format	Type	Size
Slides (Part 1)	PDF	~69 MB
Slides (Part 2)	PDF	~69 MB
Video	MP4	~snow MB
Video (Full)	TS	~521.7 MB