



Faculty of Medicine
Dept. of Internal Medicine



Sohag University

Medicine IV Cardiology & Chest (MCC-531) STUDY GUIDE



PULMONOLOGY

Prepared by	
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Under supervision of

Medical Education Department

Faculty of Medicine Sohag University

All staff member of Internal Medicine and department of

Chest diseases and tuberculosis

2024- 2025

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Basic Information about the Block

- Program on which the course is given:

Bachelor of Medicine and Surgery (M.B. B.Ch.).

- Elements (major or minor) of the program:

Undergraduate

- Departments offering the course:

Internal medicine and Chest diseases.

Academic. year/level:

5th year.

Prerequisites

Achieving 75% of points of blocks in the first 5 semesters

Date of specification approval:

2024 -2025

⊖ **Title: Medicine 1V**

⊖ **Code: (MCC- 531)**

⊖ **Credit points: 6.5**

⊖ **Lectures: 32 hours**

⊖ **Practicals : 42 hours**

⊖ **Case based discussions : 31 hours**

⊖ **Student learning activities: 98 hours**

83 hours for Portfolio Tasks (7 marks for cardiology / 6 marks for pulmonology):

- Attendance

- Formative assessment 0.5 point= 15 hours.

- Case presentations

⊖ **Total: 195 hours.**

Block Map

block	Total marks	Responsible department	Days/w weeks	Points	الوحدة التعليمية Block	year
MCC-531	130	Internal medicine and department of chest disease and tuberculosis	4 weeks	6.5	Medicine IV أمراض باطنة وامراض الصدر و التدرن	5 th year

NARS competencies covered by the block Clinical Rotations (Blocks)/ Competencies

The competency areas of the NARS- Medicine competency framework are:

- 1- The graduate as a health care provider.
- 2- The graduate as a health promoter.
- 3- The graduate as a professional.
- 4- The graduate as a scholar and scientist.
- 5- The graduate as a member of the health team and a part of the health care system.
- 6- The graduate as a lifelong learner and researcher.

Upon completion of this course students should be able to:

	NARS	ILO Type
The graduate as a health care provider.	1.1. Take and record a structured, patient centered history.	C
	1.2. Adopt an empathic and holistic approach to the patients and their problems.	C
	1.3. Assess the mental state of the patient.	C
	1.4. Perform appropriately timed full physical examination of patients appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.	C
	1.5. Prioritize issues to be addressed in a patient encounter.	A&C

	1.6. Select the appropriate investigations and interpret their results taking into consideration cost/ effectiveness factors.	A&C
	1.7. Recognize and respond to the complexity, uncertainty and ambiguity inherent in medical practice.	D&C
	1.8. Apply knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand.	A
	1.9. Retrieve, analyze, and evaluate relevant and current data from literature, using information technologies and library resources, in order to help solve a clinical problem based on evidence (EBM).	D&C
	1.10. Integrate the results of history, physical and laboratory test findings into a meaningful diagnostic formulation.	A&C
	1.11. Perform diagnostic and intervention procedureC2 in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances.	C
	1.12. Adopt strategies and apply measures that promote patient safety.	C
	1.13. Establish patient-centered management plans in partnership with the patient, his/her family and other health professionals as appropriate, using Evidence Based Medicine in management decisions.	A&C
	1.14. Respect patients' rights and involve them and /or their families in management decisions.	C&D
	1.15. Provide the appropriate care in cases of emergency, including cardio-pulmonary resuscitation, immediate life support measures and basic first aid procedures.	A&C
	1.16. Apply the appropriate pharmacological and nonpharmacological approaches to alleviate pain and provide palliative care for seriously ill people, aiming to relieve their suffering and improve their quality of life.	A&C
	1.17. Contribute to the care of patients and their families at the end of life, including	A&C

	management of symptoms, practical issues of law and certification.	
The graduate as a health promoter.	2.7 Provide care for specific groups including pregnant women, newborns and infants, adolescents and the elderly.	D&C
	2.9 Adopt suitable measures for infection control.	A&C
The graduate as a professional	3.1. Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect.	D
	3.2. Adhere to the professional standards and laws governing the practice, and abide by the national code of ethics issued by the Egyptian Medical Syndicate.	D&C
	3.3. Respect the different cultural beliefs and values in the community they serve.	C
	3.4. Treat all patients equally, and avoid stigmatizing any category regardless of their social, cultural, ethnic backgrounds, or their disabilities.	C&D
	3.5. Ensure confidentiality and privacy of patients' information.	D
	3.7. Recognize and manage conflicts of interest.	D
	3.8. Refer patients to appropriate health facility at the appropriate stage.	A&D&C
	3.9. Identify and report any unprofessional and unethical behaviors or physical or mental conditions related to himself, colleagues or any other person that might jeopardize patients' safety.	D
The graduate as a scholar and scientist	4.5 Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of illness/disease and explain the ways in which they operate on the body (pathogenesis).	A
	4.6 Describe altered structure and function of the body and its major organ systems that are seen in various diseases and conditions.	A
	4.7 Describe drug actions: therapeutics and pharmacokinetics; side effects and	A

	interactions, including multiple treatments, long term conditions and non-prescribed medication; and effects on the population.	
The graduate as a member of the health team and a part of the health care system	5.1 Recognize the important role played by other health care professions in patients' management.	C&D
	5.2 Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	C&D
	5.3 Implement strategies to promote understanding, manage differences, and resolve conflicts in a manner that supports collaborative work.	C&D
	5.4 Apply leadership skills to enhance team functioning, the learning environment, and/or the health care delivery system.	C&D
	5.5 Communicate effectively using a written health record, electronic medical record, or other digital technology.	C&D
	5.6 Evaluate his/her work and that of others using constructive feedback.	G
	5.7 Recognize own personal and professional limits and seek help from colleagues and supervisors when necessary.	C&D
	5.9 Use health informatics to improve the quality of patient care.	D
	5.10 Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements.	D
	5.12 Demonstrate accountability to patients, society, and the profession.	D
The graduate as a lifelong learner and researcher	6.1 Regularly reflect on and assess his/her performance using various performance indicators and information sources.	D
	6.2 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice	D
	6.3 Identify opportunities and use various resources for learning.	D
	6.4 Engage in inter-professional activities and collaborative learning to continuously	A&D

	improve personal practice and contribute to collective improvements in practice.	
	6.5 Recognize practice uncertainty and knowledge gaps in clinical and other professional encounters and generate focused questions that address them.	A&D
	6.6 Effectively manage learning time and resources and set priorities.	D
	6.10 Summarize and present to professional and lay audiences the findings of relevant research and scholarly inquiry.	D

Block Aims

Overall Aims

1. This block aims to provide students with fundamental knowledge and clinical skills that enable him/her to detect, manage and/or refer common and important **cardiology disorders and pulmonary medicine**.
2. By the end of the blocks, the students will be able to take informative history, perform appropriately timed physical examination of patients appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive, do some clinical procedures and interpret important investigations related to **cardiology disorders and pulmonary medicine**.
3. By the end of the blocks, the students will be able counsel patients and their families about common **cardiology disorders and pulmonary medicine**.

Learning Outcomes of the Block:

Each competency will be broken down into one or more learning outcomes that may be A, C or D or all.

NARS Key competencies	Learning outcomes for each key competencies	Domain Know,	Teaching method	Assessment method
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		Know how, Show how, Does		
1.1. Take and record a structured, patient centered history.	C1. Perform a focused history based on all relevant information (including obtaining data from secondary sources) in the following common clinical problems: • COPD patient • Asthma patients • Pneumonia • Suppurative Lung Diseases • Tuberculosis • Idiopathic Pulmonary Fibrosis • Lung Tumors • Respiratory Failure • Pulmonary Embolism • Pleural Effusion • Mediastinal Diseases • Pneumothorax and Pleural Tumors • Sleep Disorder • Diabetes mellitus • Heart failure • Valvular heart disease (native and prosthetic) • Infective endocarditis • Hypertension • Chest pain and stable angina • Acute coronary syndromes • Cardiac rhythm disturbances • Pulmonary hypertension and core pulmonale • Myocardial and pericardial diseases	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	C2. Document and present the clinical encounter (case) concisely in an oral	Show how	Skill lab or bed side Mini - CEX training	Portfolio OSCE ACC

	presentation, as a written document, and entered into an electronic medical record in the following common clinical problems: -Clinical problems Mentioned in C1.		OSCE training	
1.2. Adopt an empathic and holistic approach to the patients and their problems.	A1. D1. Address psychological and social factors when assessing patients and developing care plans in any clinical situations. - Mentioned in C1 & C10	Know how Show how	Cases Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	D2. Interact with patients showing 7 key tips of empathic and holistic approach: • Making eye contact • Let your patient know you're listening • Be aware of your body language • Be curious about your patient • Record details that humanize your patient • Show support to your patient • Look deeper for ways to empathize with your patient	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
1.3 Assess the mental state of the patient.	C4. Establish that patients are attentive—eg, by assessing their level of attention while the history is taken or by asking them to immediately repeat 3 words	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	C5. Perform an assessment of vital signs	Show how	Skill lab or bed side Mini - CEX training	Portfolio OSCE ACC

			OSCE training	
	C6. Perform a detailed physical examination of all body systems	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
1.4. Perform appropriately timed full physical examination of patients appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.	C7. Perform a focused physical examination based on the patient's chief complaint and review of systems in the following common clinical problems: -Mentioned in C1	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC
	C8. Detect all significant abnormal findings on physical examination in the following common clinical problems: • Mentioned in C1 & C7.	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC
	C9. Report findings in notes	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC
	C10. D3. Identify the cultural concerns and goals of patients and their families for a specific encounter during the interaction with a stable patient presenting with one of the following straightforward problems: • COPD patient • Asthma patients • Pneumonia • Suppurative Lung Diseases • Tuberculosis • Idiopathic Pulmonary Fibrosis • Lung Tumors • Pulmonary Embolism • Pleural Effusion	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC

	• Mediastinal Diseases • Pneumothorax and Pleural Tumors • Diabetes mellitus • Heart failure • Valvular heart disease (native and prosthetic) • Infective endocarditis • Hypertension • Chest pain and Ischemic heart disease • Cardiac rhythm disturbances • Pulmonary hypertension and core pulmonale. • Myocardial and pericardial diseases			
1.5. Prioritize issues to be addressed in a patient encounter. 1.6. Select the appropriate investigations and interpret their results taking into consideration cost/ effectiveness factors.	C11. Select common investigations relevant to the findings on history and physical examination in the following common clinical problems: mentioned in C1 & C10	Know how Show how	Cases in Cardiology and chest diseases Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	A3. Describe the purpose of common diagnostic tests, including blood tests, tests of other body fluids, and basic imaging tests relevant to the following common clinical problems: • Mentioned in C1, C7, C10 • Pulmonary function test • ABGs • Pleural fluid analysis • ECG • Echocardiography • Stress testing • Cardiac catheterization	Know	Lectures	Quizzes Formative written Final written

	• Holter • Ambulatory blood pressure monitoring			
	C12. Interpret in a simulated case, the results of the following commonly ordered tests. • ABG analysis • Pulmonary Function Tests • Pleural fluid analysis • ECG	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
1.7. Recognize and respond to the complexity, uncertainty, and ambiguity inherent in medical practice.	A4. & C13. Recognize that there is a degree of uncertainty in all clinical decision making.	Know how	Cases	Quizzes Formative written Final written
		Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	A5. & C14. Identify clinical situations in which complexity, uncertainty, and ambiguity may play a role in decision-making. • Pulmonary Embolism • Respiratory Failure • Diabetes mellitus • Heart failure • Valvular heart disease • Infective endocarditis • Hypertension • Chest pain and Ischemic heart disease • Acute coronary syndromes • Cardiac rhythm disturbances	Know how	Case 11-13 22, 23	Quizzes Formative written Final written
		Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC

	• Pulmonary hypertension and core pulmonale. • Myocardial and pericardial diseases			
	A6. Integrate and apply knowledge of foundational Biomedical and clinical topics together with clinical skills to diagnose and address the following common medical problems: Mentioned in C1, C7, C10	Know how	Cases	Quizzes Formative written Final written
1.8. Apply	A7. C15. Formulate a broad differential diagnosis for each problem, based on the clinical encounter and investigations done to date in a stable patient presenting with one of the following straightforward problems: • COPD patient • Asthma patients • Pneumonia • Suppurative Lung Diseases • Tuberculosis • Idiopathic Pulmonary Fibrosis • Lung Tumors • Pulmonary Embolism • Pleural Effusion • Mediastinal Diseases • Pneumothorax and Pleural Tumors • Diabetes mellitus • Heart failure • Valvular heart disease (native and prosthetic) • Infective endocarditis • Hypertension • Chest pain and stable angina • Acute coronary syndromes.	Know Know how Show how	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC

	• Cardiac rhythm disturbances • Pulmonary hypertension and core pulmonale. • Myocardial and pericardial diseases			
	A8. C16. Propose a most likely or working diagnosis for each problem based on the clinical encounter and investigations done to date in a stable patient presenting with one of the following straightforward problems: • Mentioned in A7. C15.	Know Know how Show how	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	A9. C17 Formulate a broad differential diagnosis for each problem, based on the clinical encounter and investigations done to date in an emergency or acute illness patient presenting with one of the following: • Acute exacerbation of COPD • Acute severe asthma • Pulmonary Embolism • Pneumothorax • Severe Pneumonia • Respiratory Failure • Diabetes mellitus • Heart failure • Acute coronary syndromes • Acute native and prosthetic valve dysfunction • Toxicity from commonly used cardiac drugs e.g. Digitalis and warfarin	Know Know how Show how	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC

	• Emergency Cardiac rhythm disturbances • Hypertensive emergencies and urgencies. • Myocardial and pericardial emergencies.			
knowledge of the clinical and biomedical sciences relevant to the clinical problem at hand. 1.10. Integrate the results of history, physical and laboratory test findings into a meaningful diagnostic formulation.	A10. Describe the indications for the following essential medical procedures (diagnostic and intervention), how they are performed, common risks, and follow-up care • ABG sampling • Use of Nebulizers for administration of Inhalation therapy • Administer Basic Oxygen Therapy • Basic Pulmonary Function Tests • ECG • Start, up titrate and follow up of anticoagulants when indicated • Accurate blood pressure measurement.	Know	Lecture	Quizzes Formative written Final written
	A11. C18. Implement plans for care prior to any of the following procedures • ABG sampling • Use of Nebulizers for administration of Inhalation therapy • Administration Basic Oxygen Therapy • Basic Pulmonary Function Tests • ECG performance and interpretation.	Know Show how	Lecture Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	C19. D4. Perform the following essential medical	Show how	Skill lab or bed side	Portfolio OSCE ACC

	procedures in a supervised or simulated setting • ABG sampling • Use of Nebulizers for administration of Inhalation therapy • Administration Basic Oxygen Therapy • Basic Pulmonary Function Tests • ECG interpretation • Blood pressure measurement		Mini - CEX training OSCE training	
	C20. Implement plans following the following procedures, including monitoring for post-procedure complications and intervening effectively for major complications that occur. • ABG sampling • Use of Nebulizers for administration of Inhalation therapy • Administer Basic Oxygen Therapy • Performing basic Pulmonary Function Tests • ECG	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
1.11. Perform diagnostic and intervention procedures in a skillful and safe manner, adapting to unanticipated findings or changing clinical circumstances.	A 12. Recognize examples of patient safety incidents (adverse events, error, near misses, preventable adverse event) in the clinical setting • ABG sampling • Use of Nebulizers for administration of Inhalation therapy • Administration Basic Oxygen Therapy	Know Know how	Lecture Case	Quizzes Formative written Final written

	- Performing basic Pulmonary Function Tests - ECG - Echocardiography - Stress testing - Cardiac catheterization			
	A 13. Differentiate between cases where an adverse event has occurred from those that are due to the underlying medical illness in the following clinical situation. - Respiratory Failure - Pulmonary Embolism - Patients on anticoagulation - Diabetes mellitus - Heart failure - Ischemic heart disease - Coronary intervention procedures - Valvular heart disease - Prosthetic valve implantation - Hypertension - Various rhythm disturbances - Myocardial and pericardial disease	Know how	Case	Quizzes Formative written Final written
	A 14. Demonstrate disclosure of a simple medical error to a patient or family (e.g., inadvertent cancellation of a test), In the following clinical case as an example - Thoracentesis in Pleural Effusion - Pericardiocentesis in pericardial effusion - Cardiac catheterization	Know how	Case	Quizzes Formative written Final written
	A15. Propose an approach to reducing the frequency of medical error in response	Know how	Case	Quizzes Formative written Final written

	to a patient safety using an example • Thoracentesis in Pleural Effusion • Pericardiocentesis in pericardial effusion • Cardiac catheterization			
1.12. Adopt strategies and apply measures that promote patient safety.	A16. C21. Formulate a broad differential diagnosis for each problem, based on the clinical encounter and investigations done to date in a stable patient presenting with one of the following straightforward problems: • COPD patient • Asthma patients • Pneumonia • Suppurative Lung Diseases • Tuberculosis • Idiopathic Pulmonary Fibrosis • Lung Tumors • Pulmonary Embolism • Pleural Effusion • Mediastinal Diseases • Pneumothorax and Pleural Tumors • Diabetes mellitus • Heart failure • Valvular heart disease (native and prosthetic) • Infective endocarditis • Hypertension • Chest pain and stable angina • Acute coronary syndromes. • Cardiac rhythm disturbances • Pulmonary hypertension and core pulmonale. • Myocardial and pericardial diseases	Know Know how Show	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	A17. C 22.	Know	Lecture	Quizzes

	Establish a therapeutic and management plan with appropriate timelines and follow up In a patient presenting with any of one or more of the following acute illnesses and/or complex problems, • Acute exacerbation of COPD • Acute severe asthma • Pulmonary Embolism • Pneumothorax • Respiratory failure • Severe Pneumonia • Diabetes mellitus • Heart failure • Valvular heart disease (native and prosthetic) • Infective endocarditis • Hypertension • Chest pain and stable angina • Acute coronary syndromes adopting primary percutaneous coronary intervention emergency attitudes • Cardiac rhythm disturbances • Pulmonary hypertension and core pulmonale. • Myocardial and pericardial diseases, including pericardial effusion and tamponade	Know how Show	Case Skill lab or bed side Mini - CEX training OSCE training	Formative written Final written Portfolio OSCE ACC
1.13. Establish patient-centered management plans in partnership with the patient, his/her family and other health professionals as appropriate, using	D5. Exhibit honesty and integrity with patients, physicians and o66666her health professionals. D6. Demonstrate caring and compassion during all interactions with patients. D7.	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC

Evidence Based Medicine in management decisions.	Recognize the importance of trusting relationships with patients and others. D8. Recognize and maintain boundaries when interacting with patients. A 9. Demonstrate sensitivity with respect to peers, colleagues, and patients. - As Mentioned in C1 & C10			
	A18. D10. Consistently maintain patient confidentiality in all clinical, social and electronic settings, while recognizing situations that require disclosure of confidential information.	Know how Show how	Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio ACC
	A19. Describe the underlying ethical principles and legal process of informed consent	Know how	Case	Quizzes Formative written Final written
	A20. C23. Describe the process of how to obtain informed consent for a test or treatment procedure	Know how Show how	Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
1.14. Respect patients' rights and involve them and /or their families/careers in management decisions. 1.15. Provide the appropriate care in cases of emergency, including cardio-	A21. Describe the characteristics of an acutely ill patient in terms of findings on history, physical examination and basic laboratory investigations in the following clinical situations - Acute exacerbation of COPD - Acute severe asthma	Know Know how	Lecture Case	Quizzes Formative written Final written

pulmonary resuscitation, immediate life support measures and basic first aid procedures.	• Pulmonary Embolism • Pneumothorax • Severe Pneumonia • Diabetes mellitus • Heart failure • Valvular heart disease (native and prosthetic) • Infective endocarditis • Hypertension • Chest pain and stable angina • Acute coronary syndromes • Cardiac rhythm disturbances • Pulmonary hypertension and core pulmonale. • Myocardial and pericardial diseases			
	A22. C24. Recognize when a patient has abnormal vital signs that requires immediate attention and investigation in the following clinical situations • Acute exacerbation of COPD • Acute severe asthma • Pulmonary Embolism • Tension Pneumothorax • Severe Pneumonia • Respiratory failure • Heart failure • Valvular heart disease • Infective endocarditis • Hypertension • Chest pain and stable angina • Acute coronary syndromes • Cardiac rhythm disturbances	Know Know how Show how	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC

	- Pulmonary hypertension and core pulmonale. - Myocardial and pericardial diseases			
	A23. C25. Recognize when a patient has a complaint or physical finding that suggests the possibility of a severe illness (including life- - threatening) and therefore requires immediate attention and investigation in the following clinical situations Mention in A22. C24.	Know Know how Show	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	A24. Apply the steps taken in the emergency care of acutely ill patients in the following clinical situations Mention in A22. C24.	Know Know how	Lecture Case	Quizzes Formative written Final written
	A25. C26. Identify potential underlying causes of a patient's deterioration in the following clinical situations Mention in A22. C24.	Know Know how Show how	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
	C27 Start the initial emergency care plan for a patient with the following common life- threatening conditions Mentioned in A9, C17	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	A 26. Identify role of integrating diet and physical activity on general health and well-being across the lifespan -Nutrition in COPD patients - Pulmonary Rehabilitation in COPD Patients Heart failure	Know Know how	Lecture Case	Quizzes Formative written Final written

	• Hypertension • Ischemic heart disease			
	C28. D11 Educate patients and populations about strategies that promote an active and healthy lifestyle along - Nutrition in COPD patients - Pulmonary Rehabilitation in COPD Patients • Heart failure • Hypertension • Ischemic heart disease	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC
	A 27. Apply preventive measures for the following health problems: • COPD • Asthma • Nosocomial Pneumonia • Pulmonary Tuberculosis • COVID 19 • Heart failure • Hypertension • Ischemic heart disease • Infective endocarditis	Know Know how	Lecture Case	Quizzes Formative written Final written
2.3 Discuss the role of nutrition and physical activity in health.	A28. Apply methods reducing the incidence and prevalence of following common diseases. -Mention in A27.	Know Know how	Lecture Case	Quizzes Formative written Final written
	A29 Identify and apply screening tests appropriate at different life stages	Know Know how	Lecture Case	Quizzes Formative written Final written
2.5 Describe the principles of disease prevention,	A30. C29. Apply principles of patient safety related to infection prevention and control	Know Know how	Lecture Case	Quizzes Formative written Final written

and empower communities, specific groups or individuals by raising their awareness and building their capacity.	practices in the following situations	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE OSPE ACC
	A31. C30. Demonstrate the procedures involved in universal body substance precautions, including handwashing, and donning and doffing of gowns, gloves, masks, and eye protection	Know Know how Show how	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
	A32. C31. Apply principles of infection control when dealing with a patient who may have a communicable disease	Know Know how Show how	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	A33. D12 Demonstrate the ability to give feedback to colleagues in a respectful manner.	Know how Show how	Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
2.6 Recognize the epidemiology of common diseases within his/her community, and apply the systematic approaches useful in reducing the incidence and prevalence of those diseases.	A34 D13. Demonstrate the application of patient autonomy and respect for	Show	Skill lab or bed side Mini - CEX training	Portfolio OSCE ACC

	persons in specific case situations		OSCE training	
2.9 Adopt suitable measures for infection control.	A35. A 14. Identify medicolegal principles that obligate physician to Treat all patients equally,	Know Know how Show how	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	A 15. Demonstrate in clinical encounters avoiding stigmatizing any category regardless of their social, cultural, ethnic backgrounds, or their disabilities.	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
3.1. Exhibit appropriate professional behaviors and relationships in all aspects of practice, demonstrating honesty, integrity, commitment, compassion, and respect. 3.3. Respect the different cultural beliefs and values in the community they serve.	A36. D16. Avoid disclosing confidential patient information in online communications.	Know how Show how	Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	A37. D17. Explain the potential abuses of technology-enabled communication and their relationship to professionalism.	Know how Show how	Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	A38. D18. Follow relevant policies regarding the appropriate use of electronic medical records	Know how Show how	Case Skill lab or bed side	Quizzes Formative written Final written Portfolio OSCE

			Mini - CEX training OSCE training	OSPE ACC
3.4. Treat all patients equally, and avoid stigmatizing any category regardless of their social, cultural, ethnic backgrounds, or their disabilities.	A39. A 19. Apply basics of medico legal practices in common clinical situations including: • Mentioned in A7. C15.	Know how	Case	Quizzes Formative written Final written
		Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	A40. D20. Demonstrate how to avoid common medical errors in the following common clinical situations: • Mentioned in A7. C15.	Know how	Case	Quizzes Formative written Final written
		Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	A41. C31. D 21. Demonstrate the capacity to reflect on their own competencies and identify situations where one requires help	Know how	Case	Quizzes Formative written Final written
		Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
3.5. Ensure confidentiality and privacy of patients' information.	A42. C32. Demonstrate the capacity to identify situations where cognitive biases may have affected their patient Management	Know how	Case	Quizzes Formative written Final written
		Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
3.6. Recognize basics of medico-	A43.	Know how	Case	Quizzes Formative written

legal aspects of practice, malpractice and avoid common medical errors. 3.7. Recognize and manage conflicts of interest. 3.7. Recognize and manage conflicts of interest.	Describe the nature of clinical expertise and of its limits			Final written
	A44. C33. Recognize the range of possible transitions a patient may encounter (e.g., hospital to home, hospital to long term care facility, emergency department to ward in the following clinical settings examples Mentioned in A7. C15.	Know Know how Show how	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	A45. List indications of admission to hospital in the following clinical situations Mentioned in A7. C15.	Know Know how	Lecture Case	Quizzes Formative written Final written
	A46 List criteria of home discharge in the following clinical situations Mentioned in A7. C15.	Know Know how	Lecture Case	Quizzes Formative written Final written
	A47 List the elements of a high quality written “handover of care” Document in the following clinical settings examples - COPD patients - Long term oxygen therapy - Respiratory Failure - COVID 19 - Diabetes mellitus - Heart failure - Valvular heart disease - Infective endocarditis - Hypertension emergencies - Chest pain and Ischemic heart disease - Cardiac rhythm disturbances - Pulmonary hypertension and core pulmonale - Myocardial and pericardial diseases	Know Know how	Lecture Case	Quizzes Formative written Final written

	A48. D22 List the elements of a high-quality verbal and written handover of care in the following clinical settings examples • COPD patients • Long term oxygen therapy • Respiratory Failure • COVID 19 • Diabetes mellitus • Heart failure • Valvular heart disease • Infective endocarditis • Hypertension • Chest pain and Ischemic heart disease • Cardiac rhythm disturbances • Pulmonary hypertension and core pulmonale. • Myocardial and pericardial diseases	Know Know how Show how	Lecture \ Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
3.8. Refer patients to appropriate health facility at the appropriate stage.	A49. D23. Participate in peer assessment	Know Know how Show how	Lecture Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC
	A50. Identify various causes (genetic, developmental, metabolic, toxic, microbiologic, autoimmune, neoplastic, degenerative, and traumatic) of the following diseases mentioned in C1 C10, D3 A7, C15	Know Know how	Lecture Case	Quizzes Formative written Final written
	A51. C34.	Know	Lecture	Quizzes

	Choose categories of Individual drugs in each of the following clinical conditions mentioned in C1 C10, D3 A7, C15 Principle of antimicrobial therapy Anti TB drugs • Drugs for heart failure • Drugs for various forms of ischemic heart disease • Drugs used in hypertension • Drug therapy for infective endocarditis • Anticoagulants • Antiarrhythmic drugs	Know how Show how	Case \ Skill lab or bed side Mini - CEX training OSCE training	Formative written Final written Portfolio OSCE OSPE ACC
	A 52. Mention mechanism of action, side effects and uses of drugs in the following clinical conditions mentioned in C1 C10, D3 A7, C15 Principle of antimicrobial therapy Anti TB drugs • Drugs for heart failure • Drugs for various forms of ischemic heart disease • Drugs used in hypertension • Drug therapy for infective endocarditis • Anticoagulants • Antiarrhythmic drugs	Know Know how	Lecture Case	Quizzes Formative written Final written
	A53. Demonstrate in the following clinical situations how to prescribe relevant drugs mentioned in	Know Know how	Lecture Case	Quizzes Formative written Final written

	C1 C10, D3 A7, C15			
	A54. C35 Interpret the following diagnostic imaging modalities - - Plain chest x-ray in pulmonary disorders and in Heart failure A55. C36 Interpret the following laboratory assays, • ABG interpretation • Pleural fluid analysis • Sputum Direct smear in Tuberculosis and Pneumonia • Sputum Culture and sensitivity • Blood culture • Inflammatory markers in Pneumonia • Inflammatory markers in COVID-19 • ECG • Cardiac biomarkers • Cardiovascular risk factors (blood glucose level, lipogram) • Kidney function test • Electrolyte disturbances A56, C37 Interpret the following pathologic studies, • Bronchogenic Carcinoma • Tuberculosis • Infective endocarditis A57, C38 Interpret the following functional assessment tests.	Know Know how Show how	Lecture Case Skill lab or bed side Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE OSPE ACC

	Participate in reflective processes to inform their personal leadership development. A66. D29 Appreciate that leadership is not demonstrated only by leaders but that all physicians will be required to demonstrate “leadership” in the course of their careers. A67. D30. Reflect on motivations, capabilities, skills, boundaries, and purpose as a leader. A68. D31. Demonstrate teamwork and collaboration STYLES in the healthcare setting and participate in team-building and collaboration exercises.		OSCE training	
	D32. C39. Communicate effectively with patients A 33. Communicate with colleagues D34. C40. Communicate in breaking bad news A 35. Communicate with relatives A 36. Communicate with disabled people D37. Communicate in seeking informed consent C 41. D38. Communicate in writing (including medical records) C 42. D39. Communicate in dealing with aggression	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC

4.8 Demonstrate basic sciences specific practical skills and procedures relevant to future practice, recognizing their scientific basis, and interpret common diagnostic modalities, including: imaging, electrocardiograms, laboratory assays, pathologic studies, and functional assessment tests.	D40. Consistently seek out and welcome feedback from others. A 41. Accept constructive feedback. D42. C43. Demonstrate the capacity to reflect upon feedback and use this as a basis for enhanced learning of relevant competencies. D43. C44. Provide constructive feedback to colleagues about aspects of their clinical competence when requested to do so.	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
5.2 Respect colleagues and other health care professionals and work cooperatively with them, negotiating overlapping and shared responsibilities and engaging in shared decision-making for effective patient management.	A69. C45. Shows how to refer to other professionals in the following clinical situations: • Bronchogenic Carcinoma • Pulmonary hypertension • Acute coronary syndromes • Refractory heart failure • Resistant hypertension • Infective endocarditis complications • Valvular heart disease. • Cardiac arrhythmias A70. C46. Shows how to seek further support and advice in the following clinical situations mentioned in • A69. C45.	Know how Show how	Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
5.3 Implement strategies to promote understanding, manage differences, and	C47. Use information and communication technologies to enhance knowledge, skills and judgment in providing	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC

supervisors when necessary.	improvement a modify behavior. C53. D46. Reflect on experiences in the clinical setting to identify areas requiring improvement and modify behavior by use of ethical frameworks. C54. D47. Evaluate teachers and programs in an honest, fair, and constructive manner.		OSCE training	
5.9 Use health informatics to improve the quality of patient care.	A73 Use portfolio as a tool to develop and monitor a learning plan.	Know	lecture	Quizzes Formative written Final written
	C55. A 48. Reflect on achievement of the required competencies. C56. D49. Use portfolio to improve self-awareness to enhance performance. D50. Demonstrate appropriate use and enhancement of resilience skills. C57. D51. Demonstrate the connection between self-care and patient safety.	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	C 58. Use various resources of learning including LMS. C59. A 52. Contribute to a positive atmosphere in the classroom and in clinical learning settings by demonstrating the following behaviors:	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC

	- Participating enthusiastically as a learner - Providing encouragement to colleagues - Refraining from belittling colleagues' efforts			
5.10 Document clinical encounters in an accurate, complete, timely, and accessible manner, in compliance with regulatory and legal requirements. 5.12 Demonstrate accountability to patients, society, and the profession. 6.1 Regularly reflect on and assess his/her performance using various performance indicators and information sources.	A74. Identify the various different collaborators they will work within the clinical environment to provide patient care.	Know how	Case	Quizzes Formative written Final written
	A75. D 53. Demonstrate a general understanding of the roles and responsibilities of collaborators in the clinical environment.	Know how Show how	Case Skill lab or bed side Mini - CEX training OSCE training	Quizzes Formative written Final written Portfolio OSCE ACC
	C60. Participate in inter-professional activities.	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
6.2 Develop, implement, monitor, and revise a personal learning plan to enhance professional practice 6.3 Identify opportunities and use various resources for learning. 6.4 Engage in inter-professional activities and collaborative learning to continuously	A76. Describe the concepts of the declared, taught, learned, and hidden Curriculum.	Know Know how	Lecture Case	Quizzes Formative written Final written
	A77. Describe factors that can positively or negatively affect the learning environment.	Know Know how	Lecture Case	Quizzes Formative written Final written
	A78. C61. D54. Develop a systematic approach to learning and a time management strategy.	Know Know how Show how	Lecture Case Skill lab or bed side Mini - CEX training	Quizzes Formative written Final written Portfolio OSCE ACC

improve personal practice and contribute to collective improvements in practice.			OSCE training	
	C62. A 55. Access supports available to students to deal with stress and the health issues that are common in medical school.	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	A79. a Describe strategies for reporting and managing witnessed or Experienced mistreatment.	Know Know how	Lecture Case	Quizzes Formative written Final written
	C63. Select appropriate sources of knowledge as they relate to addressing focused questions. Identify appropriate sources that answer a clinical question.	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
6.6 Effectively manage learning time and resources and set priorities.	C64. D56. Plan and deliver an effective presentation.	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC
	C65, D57. Explain to patients and families in general terms the results of research studies and their application to clinical issues.	Show how	Skill lab or bed side Mini - CEX training OSCE training	Portfolio OSCE ACC

Learning Methods

- 1- Lectures for knowledge outcomes.
- 2- Practical (Bedside/skill lab) sessions to gain clinical skills.
- 3-Task based log (may use inscion academy/clinical key cases).

4- Group discussions (Case – based).

Block Contents (Medicine IV)

Lecture Topics and Their Intended Learning Outcomes

Choose One Source for Each Topic

No.	Learning outcomes A	Lectures Titles And Specified References	Week No.	Contact Hours
1	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79 D1-3, D5- 57	Rheumatic fever Kumar & Clark's Clinical Medicine, 10th edition Davidson's Principles and Practice of Medicine 23rd edition	1 st week	1
2	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79 D1-3, D5- 57	Infective endocarditis Kumar & Clark's Clinical Medicine, 10th edition Davidson's Principles and Practice of Medicine 23rd edition	2 nd week	1
3	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79	Mitral and Tricusped Valve disease Kumar & Clark's Clinical Medicine, 10th edition Davidson's Principles and Practice of Medicine 23rd edition	1 st week	1
4	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79	Aortic and Pulmonary valve disease Kumar & Clark's Clinical Medicine, 10th edition Davidson's Principles and Practice of Medicine 23rd edition	2 nd week	1
5	A1-4, A6 -8, A16, A18-20, A33- 46, A49 - 55, A58 -68, A71-79	Heart failure I Kumar & Clark's Clinical Medicine, 10 th edition Davidson's Principles and Practice of Medicine 23 rd edition	3 rd week	1
6	A1-4, A6 -8, A16, A18-20, A33- 46, A49 - 55, A58 -68, A71-79	Heart failure II Kumar & Clark's Clinical Medicine, 10 th edition Davidson's Principles and Practice of Medicine 23 rd edition	4 th week	1
7	A1-4, A6 -8, A16, A18- 20, A29, A33- 46, A49 - 54, A56, A58 - 79	Coronary heart disease and acute coronary syndrome I Kumar & Clark's Clinical Medicine, 10 th edition Davidson's Principles and Practice of Medicine 23 rd edition	3 rd week	1
8	A1-4, A6 -8, A16, A18- 20, A29, A33- 46, A49 - 54, A56, A58 - 79	Coronary heart disease and acute coronary syndrome II Kumar & Clark's Clinical Medicine, 10 th edition Davidson's Principles and Practice of Medicine 23 rd edition	4 th week	1
9	A1-4, A6 -8, A16, A18- 20, A29,	Arrhythmia and antithrombotic therapy I Kumar & Clark's Clinical Medicine, 10 th edition Davidson's Principles and Practice of Medicine 23 rd edition	5 th week	1

	A33- 46, A49 - 54, A56, A58 - 79			
10	A1-4, A6 -8, A16, A18- 20, A29, A33- 46, A49 - 54, A56, A58 - 79	Arrhythmia and antithrombotic therapy II Kumar & Clark's Clinical Medicine, 10 th edition Davidson's Principles and Practice of Medicine 23 rd edition	6 th week	1
11	A1-9, A13, A16- 25, A33- 46, A49 - 54, A58 -68, A71- 79	Myocardial disease Kumar & Clark's Clinical Medicine, 10 th edition Davidson's Principles and Practice of Medicine 23 rd edition	5 th week	
12	A1-9, A13, A16- 25, A33- 46, A49 - 54, A58 -68, A71- 79	Pericardial disease Kumar & Clark's Clinical Medicine, 10 th edition Davidson's Principles and Practice of Medicine 23 rd edition	6 th week	1
13	A1-4, A6 -8, A16, A18- 20, A33- 46, A49 - 54, A58 -68, A71-79	Systemic hypertension Kumar & Clark's Clinical Medicine, 10 th edition Davidson's Principles and Practice of Medicine 23 rd edition	7 th week	2
14	A1-4, A6 -8, A16, A18- 20, A33- 46, A49 - 54, A58 -68, A71-79	Pulmonary hypertension and pulmonary embolism Kumar & Clark's Clinical Medicine, 10 th edition Davidson's Principles and Practice of Medicine 23 rd edition	7 th week	1
15	A1-4, A6 -8, A16, A18- 20, A33- 46, A49 - 54, A58 -68, A71-79	Shock Kumar & Clark's Clinical Medicine, 10 th edition Davidson's Principles and Practice of Medicine 23 rd edition	8 th week	1
		Total		16 hours

Lecture Topics and Their Intended Learning Outcomes of Pulmonology

No.	Learning outcomes A	Lectures Titles And specified reference	Week No.	Date*		Contact Hours
				From	to	
	A1-4, A6 -9, A16, -29, A33- 54, A58 -68, A71-79	Chronic obstructive pulmonary disease (COPD) <u>Electronic book- Chest department- Sohag University</u>	1 st week			2
	A1-4, A6 -9, A16- 25, A27 -29, A33- 46, A49 - 54, A58 -68, A71-79	Bronchial Asthma <u>Electronic book- Chest department- Sohag University</u> .	1 st week			1
	A1-4, A6 -9, A16- 25, A27 -29, A31, A32 - 46, A49 - 55, A58 - 68, A71-79	Pneumonia <u>Electronic book- Chest department- Sohag University</u>	2 nd week			1

A1-4, A6 -8, A16, A18-20, A33-46, A49 - 55, A58 -68, A71-79	Suppurative Lung Diseases (bronchiectasis and lung abscess) <u>Electronic book- Chest department- Sohag University</u>	2 nd week			1
A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79	Tuberculosis <u>Electronic book- Chest department- Sohag University</u>	3 rd week			1
A1-4, A6 -8, A16, A18- 20, A33- 46, A49 - 54, A58 -68, A71-79	Interstitial Pulmonary Fibrosis <u>Electronic book- Chest department- Sohag University</u>	3 rd week			1
A1-4, A6 -8, A16, A18- 20, A29, A33- 46, A49 - 54, A56, A58 - 79	Lung Tumors <u>Electronic book- Chest department- Sohag University</u>	4 th week			1
A1- 6, A9, A13, A17- 20, A22- 25, A30- 38, A41-44, A47 - 53, A55, A58 -68, A71-79	Respiratory Failure and ARDS <u>Electronic book- Chest department- Sohag University</u>	4 th week			1
A1-9, A13, A16- 25, A33- 46, A49 - 54, A58 -68, A71-79	Pulmonary Embolism <u>Electronic book- Chest department- Sohag University</u>	5 th week			1
A1-4, A6 -8, A14, A15, A16, A18- 20, A33- 46, A49 - 55, A58 -68, A71-79	Pleural Effusion <u>Electronic book- Chest department- Sohag University</u>	5 th week			2
A1-4, A6 -9, A16- 25, A27 -29, A33- 46, A49 - 54, A58 -68, A71-79	Pneumothorax <u>Electronic book- Chest department- Sohag University</u>	6 th week			1
A1-4, A6 -8, A16, A18- 20, A33- 46, A49 - 54, A58 -68, A71-79	Mediastinum and pleural tumour <u>Electronic book- Chest department- Sohag University</u>	6 th week			1
A1-4, A6 -8, A16, A18- 20, A33- 46, A49 - 54, A58 -68, A71-79	Corpulmonale and Pulmonary Hypertention <u>Electronic book- Chest department- Sohag University</u>	7 th week			1
A1-4, A6, A10, A11, A12, A18- 20, A33- 38, A41 -43, A50 -53, A58- A68, A71-79	Breathing related Sleep Disorders <u>Electronic book- Chest department- Sohag University</u>	8 th week			1
	Total				16 Hours

Skills and tasks and Their Learning Outcomes

In addition to real patients and skills stated in the NARS should be learned either in practical or group discussion

No	Learning outcomes C and D	Bedside/skill lab sessions and titles	Weeks	Hours
1.	C1-C10, C24, C25, C31, C39, C40 -44, C50, C52- 56, C58, C59, C61- 64 D1, D2, D5- D10, D12, D15-18, D21, D22, D24- 43, D45-D57	Revise the following: History taking Pulse Blood pressure JVP examination General examination Student perform heart sound pretest	1 st Week	2
2.	C1-C10, C24, C25, C31, C39, C40 -44, C50, C52- 56, C58, C59, C61- 64 D1, D2, D5- D10, D12, D15-18, D21, D22, D24- 43, D45-D57	Revise the following: Cardiac Examination and Heart sound auscultation	1 st Week	3
3.	C1-11, C13- 17, C21- 37, C39- C65 D1-3, D5- 57	Take history and examine a Mitral valve disease case	1 st Week	2
4.	C1-11, C13- 17, C21- 37, C39- C65 D1-3, D5- 57	Take history and examine an Aortic valve disease case	1 st Week	2
5.	C1-11, C13- 17, C21- 37, C39- C65 D1-3, D5- 57	Take history and examine a Heart Failure case	1 st Week	2
6.	C1-11, C13- 17, C21- 37, C39- C65 D1-3, D5- 57	Take history and examine a Heart Failure case	2 nd week	2
7.	C1-11, C13- 17, C21- 37, C39- C65 D1-3, D5- 57	Take history and examine an AF case Interpret ECG of cardiac rhythm disturbances	2 nd week	2
8.	C1-11, C13- 17, C21- 37, C39- C65 D1-3, D5- 57	Take history and examine an arrhythmia case Interpret ECG of cardiac rhythm disturbances	2 nd week	2
9.	C1-11, C13- 17, C21- 37, C39- C65 D1-3, D5- 57	Take history and examine a chest pain case Interpret ECG of cardiac rhythm disturbances	2 nd week	2
10.	C1-11, C13- 17, C21- 37, C39- C65 D1-3, D5- 57	Take history and examine a hypertension case Interpret ECG of cardiac rhythm disturbances	2 nd week	2
		Total		21

Skills and tasks and Their Intended Learning Outcomes

In addition to real patients and skills stated in the NARS should be learned either in practical or group discussion (**Pulmonology**)

No.	Learning outcomes C and D	Bedside/skill lab sessions and titles	weeks	Date*		Hours
				From	To	
1.	C1-C10, C24, C25, C31, C39, C40 -44, C50, C52- 56, C58, C59, C61- 64 D1, D2, D5- D10, D12, D15-18, D21, D22, D24-43, D45-D57	Revise History taking and General Examination	1 st week			2
2.	C1-C10, C24, C25, C31, C39, C40 -44, C50, C52- 56, C58, C59, C61- 64 D1, D2, D5- D10, D12, D15-18, D21, D22, D24-43, D45-D57	Revise chest Examination Inspection Palpation Percussion Auscultation	1 st week			3
3.	C1-11, C13- 17, C21-37, C39- C65 D1-3, D5- 57	Take history and examine COPD	1 st week			2
4.	C1-11, C13- 17, C21-37, C39- C65 D1-3, D5- 57	Take history and examine chest Bronchial asthma	1 st week			2
5.	C1-11, C13- 17, C21-37, C39- C65 D1-3, D5- 57	Take history and examine pleural effusion	1 st week			2
6.	C1-11, C13- 17, C21-37, C39- C65 D1-3, D5- 57	Take history and examine Bronchiectasis	2 nd week			2
7.	C1-11, C13- 17, C21-37, C39- C65 D1-3, D5- 57	Take history and examine interstitial pulmonary fibrosis	2 nd week			2
8.	C1-11, C13- 17, C21-37, C39- C65 D1-3, D5- 57	Evaluate a patient with Respiratory Failure	2 nd week			2
9.	C12, C18, C19, C20, C29, C36	Interpret Arterial Blood Gases	2 nd week			2

	D4					
10.	C12, C18, C19,C20, C29, C36 D4	Interpret pulmonary function reports	2 nd week			2
		Total				21

Self- Directed Learning and Group Discussion (SDL &GD) (cases scenario with 10 MCQs)

No.	Learning outcomes A and D	Title of cases and reference	Weeks	Hours
1.	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79 D1- 3, D5- 57	Case1: Rheumatic fever Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition	1 st week	1
2.	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79 D1- 3, D5- 57	Case 2:Infective endocarditis Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition	1 st week	1
3.	A10, A11, A12, A33- A35, A41, A42, A51,A52, A58, A73 A74, A75, D1-3, D5- 57	Case 3: Mitral valve disease Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition, Chapter 1, P. 51 Chapter 1, P81, First id cases P. 62	1 st week	1
4.	A10, A11, A12, A33- A35, A41, A42, A51,A52, A58, A73, A74, A75, D1-3, D5- 57	Case 4: Aortic Valve disease Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition, Chapter 1, .45, First aid cases P. 46/p.34	1 st week	1
5.	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79 D1-3, D5- 57	Case 5: Prosthetic valve and anticoagulation Handout.	1 st week	1

6.	A1-4, A6 -9, A16- 25, A27 -29, A33- 46, A49 - 54, A58 -68, A71-79 D1-3, D5- 57	Case 6: Congestive Heart Failure To cover symptomatology and examination First Aid Cases, chapter 1, P. 45	1 st week	1
7.	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79 D1-3, D5- 57	Case 7: Hypertension case Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition, Chapter 6, case 10, P 375, First Aid for USEMLE step 2 CK, 2nd ,edition, Chapter 1, p. 48	2 nd week	2
8.	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79 D1-3, D5- 57	Case 8: Chest pain First Aid for USEMLE step 2 CK, 2nd edition,, p29 (crescendo Angina??), P31 Aortic dissection, DD chest pain	2 nd week	2
9.	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79 D1-3, D5- 57	Case 9: Atrial Fibrillation Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition, Chapter 1p.57 , First Aid for USEMLE step 2 CK, 2nd edition, case p. 35	2 nd week	2
10.	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79	Case 10: cardiomyopathy First Aid for USEMLE step 2 CK, 2nd edition P. 37, 43, 51, 59	2 nd week	2
11	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79 D1-3, D5- 57	Case 11: Shock Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition First Aid for USEMLE step 2 CK, 2nd edition	2 nd week	1
Total				15

**Self -Directed Learning and Group Discussion (SDL &GD) (cases based discussion
(real patients) in addition to cases scenario)**

(Pulmonology)

No.	Learning outcomes A and D	Title of cases and reference	Weeks	Date*		Hours
				from	To	

1.	A1-4, A6 -9, A16, -29, A33-54, A58 -68, A71-79 D1-3, D5- 57	Case 1a: Chronic Obstructive Pulmonary Disease (COPD) and Respiratory failure Initial Diagnosis and Treatment Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition, Chapter 7, P:391-399	1 st week			2
2.	A1-4, A6 -9, A16- 25, A27 -29, A33- 46, A49 - 54, A58 - 68, A71-79 D1-3, D5- 57	Case 2a: Bronchial Asthma Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition, Chapter 7, P:384-391	1 st week			1
3.	A1-4, A6 -9, A16- 25, A27 -29, A31, A32 -46, A49 - 55, A58 -68, A71-79 D1-3, D5- 57	Case 4a: Pneumonia Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition, Chapter 7, P:399-404	1 st week			1
4.	A1-4, A6 -8, A16, A18-20, A33- 46, A49 - 55, A58 -68, A71-79 D1-3, D5- 57	Case 5a: Suppurative Lung Diseases Handout	1 st week			1
5.	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79 D1-3, D5- 57	Case 6a: Old pulmonary tuberculosis. Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition, Chapter 7, P:410-416	1 st week			1
6.	A1-4, A6 -8, A16, A18- 20, A33- 46, A49 - 54, A58 -68, A71-79 D1-3, D5- 57	Case 7a: Interstitial pulmonary fibrosis. First Aid for USEMLE step 2 CK, 2nd edition, case 8, P: 469	2 nd week			2
7.	A1-4, A6 -8, A16, A18- 20, A29, A33- 46, A49 - 54, A56, A58 - 79 D1-3, D5- 57	Case 8a: Lung cancer First Aid for USEMLE step 2 CK, 2nd edition, case 7, P: 468.	2 nd week			2
8.	A1-9, A13, A16- 25, A33- 46, A49 - 54, A58 -68, A71-79 D1-3, D5- 57	Case 10a: Case of respiratory failure	2nd week			2
9.	A1-4, A6 -8, A14, A15,	Case 11a: Pleural effusion	2nd week			2

	A16, A18- 20, A33- 46, A49 - 55, A58 -68, A71-79 D1-3, D5- 57	First Aid for USEMLE step 2 CK, 2nd edition, case 11, P: 473-474				
10.	A1-4, A6 -9, A16- 25, A27 - 29, A33- 46, A49 - 54, A58 - 68, A71-79 D1-3, D5- 57	Case 12a: Pneumothorax First Aid for USEMLE step 2 CK, 2nd edition, case 12, P: 475-476	2nd week			2
Total						16

Methods of Student Assessment

1. Formative:

This is used to monitor student's learning to provide ongoing feedback that can be used by instructors to improve their teaching and by students to improve their learning.

It's given at least once in the form of quizzes that is made available for the students at the E-learning site at the end of the block.

Answers are presented instantly after the attempts and discussed on the students groups or in person with the teaching staff

Questions should be consistent with the level of the final exam. The student's attendance is a condition for entering the summative exams. The electronic or paper achievement file must be used to follow up on the students' evaluation, and its completion is a condition for entering the final exams

2. Summative It is used to evaluate student's achievements at the end of an instructional unit. The grades tell whether the student achieved the learning goal or not.

The student's performance will be assessed according to the following:

Assessment task	Type of assessment	Proportion of total assessment			
		%	Marks	Medicine	Chest
End block exam	MCQ	20%	26 marks	13 marks	13 marks
Portfolio	May include inscion academy certificates	10%	13 marks	7 marks	6 marks

Final written Exam 40%	75% MCQ (39 marks) 25 % Short answer and modified essay questions (13 marks)	40%	52 marks	26 marks	26 marks
OSCE final	Typical OSCE . using standardized, real or skill lab encounters	30%	39 marks	19 marks	20 marks
Total		100%	130 marks	65 marks	65 marks

Medicine IV Blueprint of the block

No.	List of topics (Lectures/cases)	Total Marks	Final written exam including 25% مقالي SAQs & MEQs =6.5 marks	Mid term exam
1	Rheumatic fever	4	3	1
2	Infective endocarditis	3	2	1
3	Mitral and Tricusped heart disease	4	2	2
4	Aortic and Pulmonary valve disease	4	2	2
2	Heart failure	4	2	2
3	Coronary heart disease and acute coronary syndroe	5	2	3
4	Arrhythmia and antithrobotic therapy	3	1	2
5	Pericardial disease	2	2	-----
6	Myocardial disease	2	2	-----
7	Systemic hypertension	4	4	-----
8	Pulmonary hypertension and pulomary ebmolism	2	2	-----
9	Shock	2	2	
	Total	39	26	13

	List of skills	NO of stations	Marks of OSCE
1	History taking and examination of Valvular heart disease case	1	4
2	History taking and examination of heart failure case	1	3
3	History taking and examination of infective endocarditis and rheumatic fever case	1	2
4	History taking and examination of stable angina case	1	2
5	History taking and examination of hypertension case	1	2
6	History taking and examination of pericarditis	1	2
7	History taking and examination of cardiomyopathy	1	2
8	History taking and examination of pulmonary hypertension	1	2
	Total		19

Blueprint of the block(Pulmonology)

No.	List of Topics (Lectures/cases)	Learning outcomes	Weight* % From total	Total marks	End of the block (marks)	Final written exam (marks) including 25% مقالی SAQs& MEQs=6.5 m
1.	Chronic Obstructive Pulmonary Diseases (COPD)	A1-4, A6 -9, A16, -29, A33- 54, A58 -68, A71-79		4 marks	2	2
2.	Bronchial Asthma	A1-4, A6 -9, A16-25, A27 -29, A33-46, A49 - 54, A58 -68, A71-79		4 marks	2	2
3.	Pneumonia	A1-4, A6 -9, A16-25, A27 -29, A31, A32 - 46, A49 - 55, A58 -68, A71-79		4 marks	2	2
4.	Suppurative Lung Diseases	A1-4, A6 -8, A16, A18-20, A33- 46, A49 - 55, A58 -68, A71-79		4 marks	2	2

5.	Tuberculosis	A1-4, A6 -9, A16-, A18- 20, A27 -29, A31- 46, A49 - 56, A58 -68, A71-79		4 marks	2	2
6.	Interstitial Pulmonary Fibrosis	A1-4, A6 -8, A16, A18- 20, A33- 46, A49 - 54, A58 -68, A71-79		3 marks	2	1
7.	Lung Tumors	A1-4, A6 -8, A16, A18- 20, A29, A33- 46, A49 - 54, A56, A58 - 79		2 marks	1	1
8.	Respiratory failure and ARDS	A1- 6, A9, A13, A17- 20, A22-25, A30- 38, A41-44, A47 - 53, A55, A58 -68, A71- 79		2 marks	-----	2
9.	Pulmonary Embolism	A1-9, A13, A16- 25, A33- 46, A49 - 54, A58 -68, A71-79		2 marks	-----	2
10.	Pleural Effusion	A1-4, A6 -8, A14, A15, A16, A18- 20, A33- 46, A49 - 55, A58 -68, A71-79		2 marks	-----	2
11.	Pneumothorax	A1-4, A6 -9, A16- 25, A27 -29, A33- 46, A49 - 54, A58 -68, A71-79		2 marks	-----	2
12.	Mediastinum and Pleural Tumors	A1-4, A6 -8, A16, A18- 20, A33- 46, A49 - 54, A58 -68, A71-79		2 marks	-----	2
13.	Core pulmonale	A1-4, A6 -8, A16, A18- 20, A33- 46, A49 - 54, A58 -68, A71-79		2 marks	-----	2
14.	Breathing related sleep disorders	A1-4, A6, A10, A11, A12, A18- 20, A33- 38, A41 -43, A50 - 53, A58- A68, A71- 79		2 marks	-----	2
				39 marks	13 marks	26 marks

List of skills	Number of stations	Marks of OSCE
CASE (1)	1	10

Taking history and examination of a chest case		
CASE (2) Taking history and examination of a chest case	1	10
*Chest cases include : COPD , Bronchial asthma, Bronchiectasis, Interstitial lung disease, Pleural effusion, Respiratory Failure.		

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Exam	Final (60%)	Practical (40%)	Total
Internal medicine	39 75% MCQ (29 marks) 25% short answer and modified essay questions (10 marks)	26 marks	65
Chest diseases	39 75% MCQ (29 marks) 25% short answer and modified essay questions (10 marks)	26 marks	65
Total	78	52	130

Lecture Outlines

Cardiology lectures:

Lecture (1)

Rheumatic fever

Source :

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition

Specific learning Objectives:

- 1- Identify the definition, pathogenesis and etiology of rheumatic fever
- 2- Describe the diagnostic criteria, complications and outline the treatment lines and prophylaxis of Rheumatic fever.

Contents:

- Definition
- Pathogenesis
- Clinical presentation
- Diagnosis

- Complications
- Treatment
- Prophylaxis

Lecture (2)

Infective endocarditis

Source :

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition

Specific learning Objectives:

By the end of the lecture the student will be able to:

- 3- Identify the definition, pathogenesis and etiology of infective endocarditis
- 4- Describe the diagnostic criteria, complications and outline the management and treatment lines and prophylaxis of infective endocarditis.

Contents:

- Definition
- Classification
- Pathogenesis
- Clinical presentation
- Diagnosis
- Complications
- Treatment
- Prophylaxis

Lecture (3)

Heart Failure (diagnosis and classification)

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition

Specific learning Objectives

By the end of the lecture the student will be able to:

- Identify definition, classification and causes of HF
- Discuss diagnosis of HF.

Contents:

- Definition of HF .
- Classification of HF.
- Causes of HF
- Diagnosis of HF.

Lecture (3)

Valvular Heart Disease

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition

Specific learning Objectives

By the end of the lecture the student will be able to:

- Describe the anatomy and function of heart valves and their role in cardiac physiology.

- Define valvular heart disease and differentiate between stenosis and regurgitation.
- Identify the causes and risk factors of valvular heart disease, including congenital and acquired conditions.
- Understand the pathophysiology of valvular heart disease, including changes in valve structure, function, and hemodynamics.
- Recognize the clinical manifestations of valvular heart disease, including symptoms and physical exam findings.
- Discuss the diagnostic workup of valvular heart disease, including imaging modalities and laboratory tests.
- Describe the management of valvular heart disease, including medical therapy, valve repair, and valve replacement.
- Understand the complications associated with valvular heart disease, including heart failure, arrhythmias, and endocarditis.

Recognize the importance of prevention and follow-up care in patients with valvular heart disease.

- Apply evidence-based guidelines for the evaluation and treatment of valvular heart disease.

Contents:

- Major causes of valvular heart disease in adults.
- Aortic Stenosis and Regurgitation.
- Mitral Stenosis and Regurgitation
- Mitral valve prolapse.
- Tricuspid Stenosis and Regurgitation.
- Pulmonic Stenosis and Regurgitation.
- Prosthetic Heart Valves.

Lecture (4)

Heart Failure (Treatment)

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition.

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Define heart failure and its types.
- Describe the pathophysiology of heart failure, including the mechanisms that lead to its development.
- Identify the signs and symptoms of heart failure.
- Describe the diagnostic tests used to diagnose heart failure, including physical exam findings, lab tests, and imaging studies.
- Identify the various treatment options for heart failure, including medication, lifestyle changes, and surgical interventions.
- Describe the prognosis for heart failure and the factors that can affect it.

- Explain the importance of monitoring patients with heart failure and the different monitoring techniques used in clinical practice.
- Discuss the prevention and management of heart failure exacerbations.
- Identify the potential complications associated with heart failure, including co-morbidities such as renal dysfunction, anemia, and thromboembolic events.
- Understand the importance of patient education and the role of healthcare professionals in providing education and support to patients with heart failure.

Contents:

- Nonpharmacologic treatment of HF.
- Pharmacologic treatment of HF.

Diuretics

Vasodilators

Inotropic Agents

β Blockers

Anticoagulation

- Refractory Heart Failure

Lecture (5)

Coronary Heart Disease

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Define coronary artery disease and describe its prevalence and impact on public health.
- Understand the anatomy of the coronary arteries and their role in supplying blood to the heart muscle.
- Identify the risk factors for coronary artery disease, including modifiable and non-modifiable factors.
- Describe the pathophysiology of coronary artery disease, including the role of atherosclerosis and the development of plaques in the coronary arteries.
- Explain the clinical manifestations of coronary artery disease, including stable angina, unstable angina, myocardial infarction, and sudden cardiac death.
- Discuss the diagnostic tools used to evaluate coronary artery disease, including electrocardiogram, stress testing, coronary angiography, and imaging techniques such as CT and MRI.
- Describe the various treatment options for coronary artery disease, including lifestyle modifications, medications, and revascularization procedures such as percutaneous coronary intervention (PCI) and coronary artery bypass grafting (CABG).
- Understand the importance of secondary prevention measures in reducing the risk of future cardiovascular events in patients with coronary artery disease.

- Recognize the importance of interdisciplinary collaboration in the management of patients with coronary artery disease, including the roles of primary care physicians, cardiologists, and other healthcare professionals.

Contents:

- Risk factors of coronary artery disease.
- Clinical presentation
- Angina Pectoris
- Evaluation of the patient with angina
- Medical management of stable angina-
- Revascularization in patients with angina -
- Variant angina

Lecture (6)

Acute Coronary Syndromes

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Identify definition and classification of ACS. -
- Discuss diagnostic approach to a case of ACS.

Discuss management of a case of ACS.

Contents:

- definition and classification of ACS.
- diagnostic approach to unstable angina and non-ST-segment elevation myocardial infarction
- treatment of unstable angina and non-ST-segment elevation myocardial infarction
- diagnostic approach to ST-segment elevation myocardial infarction
- Treatment of ST-segment elevation myocardial infarction
- Reperfusion therapy

Complications of Acute Myocardial Infarction-

Lecture (7)

Cardiac Arrhythmias

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Define cardiac arrhythmia and differentiate it from normal cardiac rhythm.
- Understand the etiology and pathophysiology of cardiac arrhythmia.
- Classify cardiac arrhythmia based on their origin and mechanisms of action.
- Identify the common clinical manifestations of cardiac arrhythmia and its effect on cardiac output.

- Understand the diagnostic tools used for evaluating cardiac arrhythmia, including electrocardiography (ECG) and Holter monitoring.
- Analyze ECG patterns to diagnose and differentiate the various types of cardiac arrhythmia.
- Describe the management options for cardiac arrhythmia, including pharmacological therapy, cardioversion, ablation, and pacemaker implantation.
- Discuss the indications and contraindications of the different management options.
- Understand the potential complications of cardiac arrhythmia and its management.
- Identify the common risk factors for developing cardiac arrhythmia and the strategies to prevent its occurrence.

Contents:

- Definition of cardiac arrhythmias.
- Types of cardiac arrhythmias
 - Premature Beats
 - Bradyarrhythmias
 - Tachyarrhythmias
- Approach to the Patient with Suspected Arrhythmias -
- Management of cardiac arrhythmias.
- Pharmacotherapy
- Nonpharmacotherapy

Lecture (8)

Pericardial and Myocardial Disease

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition

Specific learning Objectives:

By the end of the lecture the student will be able to:

Pericardial Disease

- Understand the anatomy and function of the pericardium.
- Identify the different types of pericardial diseases, including acute pericarditis, pericardial effusion, and constrictive pericarditis.
- Recognize the signs and symptoms of pericardial diseases.
- Understand the diagnostic workup for pericardial diseases, including laboratory testing, electrocardiography, echocardiography, and cardiac MRI.
- Learn about the medical and surgical treatment options for pericardial diseases.
- Understand the potential complications of pericardial diseases, including cardiac tamponade and constrictive pericarditis.
- Identify the risk factors and potential causes of pericardial diseases.

Myocardial Diseases:

- Understand the anatomy and function of the myocardium.

- Identify the different types of myocardial diseases, including cardiomyopathy, myocarditis, and ischemic heart disease.
- Recognize the signs and symptoms of myocardial diseases.
- Understand the diagnostic workup for myocardial diseases, including laboratory testing, electrocardiography, echocardiography, and cardiac MRI.
- Learn about the medical and surgical treatment options for myocardial diseases.
- Understand the potential complications of myocardial diseases, including heart failure, arrhythmias, and sudden cardiac death.
- Identify the risk factors and potential causes of myocardial diseases, including genetic predisposition, infection, and lifestyle factors.

Contents:

- Pericardial Disease

Acute pericarditis

Causes of Pericarditis

Pericardial effusion

Cardiac tamponade

Constrictive pericarditis

- Diseases of the Myocardium.

Myocarditis

Cardiomyopathies

Dilated cardiomyopathy=

Hypertrophic cardiomyopathy=

Restrictive cardiomyopathy=

=Arrhythmogenic right ventricular

=Unclassified Cardiomyopathies

Lecture (9)

Arterial Hypertension

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Understanding the definition and pathophysiology of arterial hypertension, including risk factors and causes.
- Recognizing the signs and symptoms of hypertension and its complications.
- Identifying the various stages of hypertension and their management, including lifestyle changes and medications.
- Understanding the importance of early diagnosis and appropriate treatment of hypertension to prevent complications such as cardiovascular disease, stroke, and kidney disease.
- Recognizing the role of primary care physicians and specialists in the management of hypertension.

- Understanding the importance of patient education and empowerment in the management of hypertension.
- Identifying the evidence-based guidelines for hypertension management and applying them to clinical practice.
- Understanding the pharmacology and potential adverse effects of antihypertensive medications.
- Recognizing the importance of monitoring and follow-up of hypertensive patients to optimize their treatment and prevent complications.
- Understanding the relationship between hypertension and other comorbidities, such as diabetes and obesity, and their management.

Contents:

- Staging of Office Blood Pressure
- Essential hypertension
- Secondary hypertension
- Complications of hypertension
- Approach to a case of hypertension.
- Treatment of hypertension

Lecture (10)

Pulmonary Hypertension and Pulmonary Embolism

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Define pulmonary hypertension and describe the pathophysiology of the disease.
- List the different classifications of pulmonary hypertension and their corresponding etiologies.
- Describe the clinical manifestations of pulmonary hypertension, including symptoms and signs.
- Explain the diagnostic approach to pulmonary hypertension, including imaging and laboratory tests.
- Outline the treatment options for pulmonary hypertension, including medical and surgical interventions.
- Discuss the prognosis of pulmonary hypertension and factors that affect outcome.
- Identify potential complications of pulmonary hypertension and their management.
- Explain the role of multidisciplinary teams in the management of pulmonary hypertension.
- Describe ongoing research and future directions in the field of pulmonary hypertension.
- Define pulmonary embolism and describe its pathophysiology

- Identify the risk factors for pulmonary embolism
- Explain the clinical presentation of pulmonary embolism, including common signs and symptoms
- Discuss the diagnostic tests used to confirm the diagnosis of pulmonary embolism
- Describe the management of pulmonary embolism, including medical and surgical interventions
- Identify the potential complications of pulmonary embolism and their management
- Discuss strategies for preventing pulmonary embolism, including prophylactic measures and early recognition and treatment of risk factors.
- Understand the role of anticoagulant therapy in the management of pulmonary embolism, including appropriate dosing, monitoring, and duration of treatment.

Contents:

- Definition of pulmonary Hypertension
- Causes of pulmonary Hypertension
- Pathophysiology of pulmonary hypertension
- Clinical presentation and diagnosis of pulmonary hypertension
- Treatment strategies for pulmonary hypertension
- Pulmonary hypertension in specific patient populations (e.g., pediatric patients, pregnant patients)

- Case-based discussions of pulmonary hypertension management
- Emerging therapies for pulmonary hypertension

Multidisciplinary management of pulmonary hypertension

- Pulmonary hypertension in the context of other pulmonary diseases (e.g., COPD, interstitial lung disease)
- Definition of pulmonary embolism
- Causes and risk factors for pulmonary embolism
- Diagnosis of pulmonary embolism
- Treatment of pulmonary embolism

Lecture (11)

Shock

Kumar & Clark's clinical medicine. 10th edition

Davidson's principles and practice of medicine 23th edition

Specific learning Objectives:

By the end of the lecture the student will be able to:

- 1- Identify the definition, pathogenesis, etiology and classification of Shock
- 2- Describe the clinical presentation, complications and outline the management and treatment lines and prophylaxis of different types of shock.

Contents:

- Defenition
- Classification
- Pathogenesis
- Clinical presentation

- Diagnosis
- Complications
- Treatment
- Prophylaxis

Outlines of topics for self- directed learning and case based discussions

Case(1):

Rheumatic fever and Infective Endocarditis

First Aid for USMLE step 2 CK, 2nd edition,,

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 2- Select the appropriate investigations.
- 3- Construct appropriate management algorithm (both diagnostic and therapeutic) for patients with Rheumatic fever and Infective Endocarditis.

Case (2):

Mitral stenosis

Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition,
Chapter 1, P. 51

Mitral regurgitation case

Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition,
Chapter 1, P81, First id cases P. 62

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 2- Select the appropriate investigations.
- 3- Construct appropriate management algorithm (both diagnostic and therapeutic) for patients with mitral stenosis/ mitral regurgitation.

Case (3):

Aortic stenosis

Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition,
Chapter 1, .45, First aid cases P. 46

Aortic regurgitation

First Aid cases p.34

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 2- Select the appropriate investigations.
- 3- Construct appropriate management algorithm (both diagnostic and therapeutic) for patients with aortic valve disease (stenosis/ regurgitation).

Case (4):
Prosthetic valve and anticoagulation
[Handout/Amboss website](#)

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 4- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 5- Select the appropriate investigations.
- 6- Construct appropriate management algorithm (both diagnostic and therapeutic) for patients with prosthetic valves on anticoagulants.

Case (5):
Congestive Heart Failure

[Internal Medicine correlation & clinical scenarios p.37, First aid cases p. 39, 45](#)

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.

Case (6):
Congestive heart failure

[Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition, Chapter 1, P. 37](#)

[First Aid for USEMLE step 2 CK, 2nd edition, chapter 1 case 12 diastolic heart failure p. 45](#)

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 2- Select the appropriate investigations.
- 3- Construct appropriate management algorithm (both diagnostic and therapeutic) for patients with heart failure..

Case(7):
Hypertension case

Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition,
Chapter 6, case 10, P 375,
First Aid for USEMLE step 2 CK, 2nd edition, Chapter 1, p. 48,

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 2- Select the appropriate investigations.
- 3- Construct appropriate management algorithm (both diagnostic and therapeutic) for patients with essential hypertension.

Case (8):

Chest pain and stable angina

First Aid for USEMLE step 2 CK, 2nd edition,, p29 (crescendo Angina), P31 Aortic dissection, DD chest pain

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 2- Select the appropriate investigations.
- 3- Construct appropriate management algorithm (both diagnostic and therapeutic) for patients with chest pain.

Case (9):

acute coronary syndrome:

Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition,
Chapter 1
, P. 42,

First Aid for USEMLE step 2 CK, 2nd edition,, 33, 55, 57

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 2- Select the appropriate investigations.
- 3-Construct appropriate management algorithm (both diagnostic and therapeutic) for patients with acute coronary syndrome.

Case (10):

Supraventricular Tachycardia, Ventricular Tachycardia, and Wolff-Parkinson-White Syndrome

Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition,
Chapter 1p. 61,

First Aid for USEMLE step 2 CK, 2nd edition, case p. 65

Atrial Fibrillation

Internal Medicine Correlation and Clinical Scenarios for USMLE Step 3, 1st Edition,
Chapter 1p.57,

First Aid for USEMLE step 2 CK, 2nd edition, case p. 35

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 2- Select the appropriate investigations.
- 3-Construct appropriate management algorithm (both diagnostic and therapeutic) for patients with atrial fibrillation and supraventricular tachycardia.

Case (11):

Myocardial and pericardial disease

First Aid for USEMLE step 2 CK, 2nd edition P. 37, 43, 51, 59

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 2- Select the appropriate investigations.
- 3-Construct appropriate management algorithm (both diagnostic and therapeutic) for patients with pericardial effusion, hypertrophic and dilated cardiomyopathy

Case(12):

Shock

First Aid for USEMLE step 2 CK, 2nd edition,,

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Integrate the results of history, physical examination and laboratory test findings into a meaningful diagnostic formulation.
- 2- Select the appropriate investigations.
- 3- Construct appropriate management algorithm (both diagnostic and therapeutic) for patients with Shock.

Practical sessions outlines

1. Obtain and record informative history.
2. Examine the patients systematically appropriate to the age, gender, and clinical presentation of the patient while being culturally sensitive.

3. Design and /or present a structured, patient centered history and an appropriately timed full physical examination of patients.
4. Show how to do proper general chest and cardiac examination and interpret imaging.
5. Show how to examine for cyanosis in respiratory failure.
6. Describe how to obtain a sample of arterial blood gases, how to use nebulizer for inhalation therapy and basics of oxygen therapy.
7. Show how to interpret pulmonary function tests, ABGs and ECG.
8. Integrate the results of history, physical examination, and laboratory test findings into a meaningful diagnostic formulation.
9. Apply measures that promote patient safety.
10. Apply suitable measures for infection control when dealing with the patients and instruments.
11. Construct appropriate management algorithm (both diagnostic and therapeutic) for patients.

Lecture Outlines of Pulmonology

Source (Electronic book- Chest department- Sohag University)

Lecture (1)

Chronic Obstructive Pulmonary Diseases (COPD)

Specific learning Objectives

By the end of the lecture the student will be able to:

- Mention definition and etiology,
- Identify symptoms, diagnosis, and management of stable COPD.
- Describe symptoms and management of acute exacerbation of COPD.

Contents:

- Definition.
- Types and pathogenesis.
- Clinical manifestation, diagnosis, and management.
- Acute exacerbation.

Lecture (2)

Bronchial Asthma

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Identify bronchial asthma and its types

- Describe clinical presentations
- Describe Diagnosis and treatment of asthma patients

Contents:

- Definition.
- Classification of asthma.
- Management of asthma.
- Pathological conditions associated with asthma

Lecture (3)

Pneumonia

Specific learning Objectives

By the end of the lecture the student will be able to:

- Identify Community-acquired pneumonia (CAP) and Hospital-acquired pneumonia (HAP) causative organisms.
- Identify clinical picture and diagnostic approach in a case of pneumonia.
- Identify lines of treatment in both CAP and HAP

Contents:

- Definition of CAP and HAP.
- Causative organisms.
- Pathophysiology
- Diagnosis
- Treatment

Lecture (4)

Suppurative Lung Diseases (bronchiectasis and lung abscess)

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Identify a case of bronchiectasis.
- Differentiate between CF and non-CF bronchiectasis.
- Describe diagnostic approach and management to a case of lung abscess.

Contents:

- Definition, clinical presentation, and management of non-CF bronchiectasis.
- Definition, clinical presentation, and management of CF bronchiectasis.
- Definition, clinical presentation, and management of lung abscess.

Lecture (5)

Tuberculosis

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Describe etiology and modes of infection transmission.
- Identify clinical presentation of pulmonary tuberculosis.
- Identify diagnostic lines in a case of pulmonary tuberculosis.
- Describe diagnosis and treatment in a case of Latent TB infection.

Contents:

- Etiology and modes of transmission.
- Clinical Presentation.
- Methods for Diagnosis.
- Complications.
- Lines of Treatment.
- Latent TB; diagnosis and treatment.

Lecture (6)

Interstitial Pulmonary Fibrosis

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Define IPF and determine histopathology.
- Identify clinical manifestations.
- Identify classification of IPF.
- Describe diagnostic approach to a case of IPF.
- Describe main lines of treatment.

Contents:

- Definition, pathogenesis and histopathology.
- Clinical manifestations
- Diagnostic criteria.
- Lines of treatment.
- Prognosis.

Lecture (7)

Lung Tumors

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Identify risk factors and pathology of Lung tumors.
- Identify clinical presentation.
- Outline diagnostic modalities in a case of Lung cancer.
- Outline different lines of treatment.

Contents:

- Risk Factors and pathological classification.
- Clinical manifestations, diagnosis and treatment of Lung Cancer.
- Screening for Lung Cancer.

Lecture (8)

Respiratory Failure and ARDS

Specific learning Objectives:

By the end of the lecture the student will be able to

- Define RF.
- Detect types of RF.
- Recognize diagnosis and management of RF.
- Define ARDS and causes, diagnosis and treatment.

Contents:

- Definition and classification.
- Pathogenesis and etiology.
- Clinical picture and blood gas criteria for each type.
- Management of each type of Respiratory Failure.
- Definition, causes, diagnosis and treatment of ARDS.

Lecture (9)

Pulmonary Embolism

Specific learning Objectives:

By the end of the lecture the student will be able

- Identify causes and clinical manifestations of pulmonary embolism.
- **Describe** clinical approach to management of a case of pulmonary embolism.

Contents:

- Risk factors, etiology, clinical manifestations of PE.
- Diagnostic approach and treatment of PE including different therapeutic lines of treatment including their role and possible side effects.

Lecture (10)

Pleural Effusion

Specific learning Objectives:

By the end of the lecture the student will be able to

- Identify a case of pleural effusion and determine causes of transudative and exudative pleural effusion.
- **Describe** different modalities for diagnosis of pleural effusion.
- **Outline** different lines of treatment.

Contents:

- Definition.
- Causes of transudate and exudative pleural effusion.
- Clinical picture.
- Modalities for diagnosis
- Lines of treatment.

Lectures (11)

Pneumothorax

Specific learning Objectives:

By the end of the lecture the student will be able to:

- **Define Pneumothorax**
- **Identify** classification of Pneumothorax and Clinical presentation.
- Outline Investigations and Lines of treatment.

Contents:

- Definition and classification of Pneumothorax.
- Clinical presentation of Pneumothorax
- Investigations
- Lines of treatment.

Lecture (12)

Mediastinum and mesothelioma

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Describe the compartments of the mediastinum.
- Enumerate different mediastinal space occupying lesions according to their site.
- Demonstrate clinical picture of mediastinal syndrome.
- Identify different modalities for diagnosis
- Plan for patient management.
- **Identify** Pleural Tumors, Mesothelioma, risk factors, pathology clinical picture and treatment. -

Contents:

- Anatomy and compartments of the mediastinum.
- Contents of the mediastinum.
- Disorders of the mediastinum.
- Clinical presentation and investigation of mediastinal syndrome.
- Clinical presentation, investigations and line of ttt of Mesothelioma.

Lectures (13)

Core pulmonale and Pulmonary hypertension

Specific learning Objectives:

By the end of the lecture the student will be able to :

- 1- Definition, Pathogenesis, causes, clinical pictures, investigations and treatment of Corpulmonale.
- 2- Describe definition, clinical classification, pathophysiology, clinical features, investigations and line of treatment of pulmonary hypertension.

Contents:

Pulmonary hypertension and Corpulmonale:

- 1- Definition.
- 2- Classification
- 3- Pathogenesis
- 4- Clinical features
- 5- Diagnosis
- 6- Treatment

Lecture (14)

Breathing related Sleep disorders

Specific learning Objectives:

By the end of the lecture the student will be able to:

- Determine Sleep disorders mainly Sleep apnea both central and obstructive sleep apneas and method for diagnosis.

Contents:

- Central sleep apnea
- Obstructive sleep apnea