**Course Description Form**

|  |
| --- |
| 1. Course Name: Respiratory
 |
|  |
| 1. Course Code: MEDResp-41
 |
|  |
| 1. Semester / Year: 1st semester/ 4th year
 |
|  |
| 1. Description Preparation Date: 1/3/2024
 |
|  |
| 1. Available Attendance Forms: Physical (mandatory) and Virtual(complementary)
 |
|  |
| 1. Number of Credit Hours (Total) / Number of Units (Total)
 |
| 2 credit/ hour: 30 hours in total |
| 1. Course administrator's name (mention all, if more than one name)
 |
| Name: Haider Abdulhameed AlqaraghuliEmail: dr.haider.abdulhameed@nahrainuniv.edu.iq |
| 1. Course Objectives Knowledge
 |
| **Course Objectives**  |

|  |
| --- |
| 1. Demonstrate knowledge in the basic sciences pertinent to respiratory system.
2. Explain the signs and symptoms of common respiratory presentations in terms of their underlying scientific principles.
3. Explain the scientific principles of common respiratory complaints and investigative techniques and critique their appropriateness and results.
4. Explain the scientific principles of common approaches to the management of patients with respiratory complaints.
 |
| **Skills**  |
| 1. Apply acquired knowledge to identify and interpret signs and symptoms associated with respiratory disorders.
2. Utilize scientific principles to analyze and interpret imaging and investigative techniques commonly used in diagnosing respiratory diseases.
3. Develop critical thinking skills to assess the appropriateness of investigative techniques and management approaches for patients with respiratory diseases.
4. Demonstrate effective communication skills in explaining complex scientific principles related to respiratory diseases to patients and colleagues.
 |
|  |
| **Ethics**  |
| 1. Uphold ethical standards in the application of diagnostic and investigative techniques, ensuring patient well-being and autonomy.
2. Respect patient confidentiality, privacy and autonomy in the management of respiratory complaints.
3. Recognize and address potential biases in the evaluation and management of patients with respiratory diseases, ensuring equitable care for all.
4. Demonstrate integrity and honesty in critiquing investigative techniques and management approaches, prioritizing patient welfare above all else.
 |

 |
| 1. Teaching and Learning Strategies
 |
| **Strategy** | 1. Interactive Lectures: Physical attendance2. Problem-Based Learning (PBL): Via the Google Classroom3. Small Group Discussions4. Hands-on Workshops (selected students: optional)5. Case-Based Learning (CBL): integrated within the lectures6. Self-Directed Learning7. Assessment Strategies1. Continuous Assessment: - Regular quizzes and assignments. - Participation in interactive sessions.2. Case Presentations: - Students present clinical cases. - Evaluation based on diagnosis and management.3. Group Participation: - Active involvement in group discussions. - Criteria include contribution and engagement.4. Skills Assessment: - Practical assessments of clinical skills. - Evaluation of proficiency in interventions.5. Case Analysis: - Analysis of written or virtual case studies. - Focus on clinical reasoning and management.6. Self-Assessment: - Online quizzes and reflective exercises. - Students evaluate understanding and set goals.7. Comprehensive Examinations: - End-of-course MCQs and case-based assays. - Assess overall comprehension and application. |
| 1. Course Structure
 |
| **Week**  | **Hours**  | **Required Learning Outcomes**  | **Unit or subject name**  | **Learning method**  | **Evaluation method**   |
| 1 | 1 | Demonstrate knowledge of the basic anatomy of the respiratory system Apply the knowledge of the physiological basis of ventilation and gas exchange in the assessment of patient complain.List the lung defense mechanismsPredict the consequences of failing defense mechanisms of lung defences | **Clinically relevant anatomy and physiology of the respiratory system** | Lecture | MCQ |
| 1 | 1 | Analyze the patient complain Construct a differential diagnosis based on that complainRecognize the causes of different physical signsPlan the evaluation process according to clinical data | Presenting complains in patients with respiratory diseases Physical signs in patients with respiratory diseases | Lecture+PBL |  |
| 2 | 2 | Choose the most appropriate investigation according to the clinical encounterAnalyze the results of spirometry Construct a differential diagnosis based on parameters of lung function testsDifferentiate the types of respiratory diseases based on the results of arterial blood gas analysisAnalyze the result of exercise testing Recognize the different radiological termsInterpret the radiological signsAppraise the benefits of flexible | Pulmonary function tests Arterial Blood Gas analysisExercise testingRadiology of the chestFlexible bronchoscopy | Lecture+case discussion | MCQ+Formative |
| 3 | 2 | Recognize the different types of rhinitis Differentiate the treatment options for each typeClassify sleep – related breathing disorders Distinguish obstructive sleep apnea from simple snoringInterpret the results of sleep study | Diseases of the upper airways:Allergic rhinitisSleep – related disorders | Lecture+classroom activity | MCQ+Formative |
| 4 | 2 | Differentiate the different types of upper respiratory tract infectionsAssess the need for antibiotic therapy in patients with URTiDefine bronchitis Define pneumonia Differentiate between pneumonia and bronchitisList the different causes of pneumonia Describe the clinical features of pneumonia Demonstrate knowledge in the differences between clinical features with regard to microbiologic etiologyFormulate plan for management of pneumonia Assess severity of pneumonia Appraise pneumonia complicationsChoose the appropriate management planEvaluate readiness for dischargeDefine hospital acquired pneumoniaRecognize the clinical features of hospital acquired pneumonia Choose the appropriate treatment of hospital acquired pneumonia Distinguish the clinical features of ventilator associated pneumoniaChoose the appropriate investigations for ventilator associated pneumoniaElect the best treatment strategy for ventilator associated pneumonia Recognize the clinical features of aspiration pneumonia Elect the best treatment for aspiration pneumoniaDefine lung abscess Assemble a differential diagnosis for lung abscessDistinguish between treatment options for lung abscessList clinically relevant fungal infections of the lungClassify the types of aspergillosis Demonstrate knowledge in the management of aspergillosis subtypes6 | **Infections of the respiratory system**  | lecture | MCQ+Formative |
| 5 | 2 | Define tuberculosisRecognize the epidemiology of tuberculosisAnalyze the resurgence of tuberculosisList the sites of tuberculous infectionsCompare the different presentations of tuberculosisFormulate differential diagnosis based on clinical presentationsConstruct a diagnostic plan for tuberculosis List the diagnostic tests for tuberculosisAnalyze the results of diagnostic testsFormulate management plan for patients with tuberculosisRecall the side effects of antituberculous drugsArrange follow-up plan after treatment Recognize complications of tuberculosis | **Tuberculous lung infections** | lecture | MCQ+Formative |
| 6 | 1 | Define hydatid cystRecognize clinical features of hydatid cystDifferentiate hydatid cyst from other cystic lung diseases Describe the diagnostic tests for hydatid cystManage hydatid cyst patient Demonstrate knowledge in the indications for surgical removal | **Parasitic Lung disease**  | lecture | MCQ |
| 6 | 1 | Recognize the importance of immune suppression on lung diseases. List the infectious diseases associated with HIVDifferentiate between the different etiologiesFormulate diagnostic planRecall the diagnostic tests for pneumocystis jirovecci Manage patients with pneumocystis jirovecii Recognize the differences in presentation of tuberculosis patient between immunocompetent and immunosuppressed individuals Define Kaposi sarcomaRecognize the clinical features of Kaposi sarcoma | Lung involvement in immunosuppressed individuals | lecture | MCQ |
| MID TERM EXAMS |
|  |
| 7 | 2 | Recall the immunological basis of asthma Illustrate the effect of extrinsic and intrinsic factors in the pathogenesis of asthmaAppraise the epidemiology of asthma  Compare the differentDemonstrate ability to recognize clinical features of asthmaArrange acceptable diagnostic tests Organize management plan for patient with chronic asthmaEvaluate patient response to asthma medicationsCommunicate treatment options to patients and address their concernsDiscriminate patient with acute severe asthma and life threatening asthma List treatment steps in the management of acute severe asthma  | Asthma | lecture | MCQ+Formative |
| 8 | 2 | Define COPDRecall the causes of COPDIllustrate the relation between environmental factors and the development of COPDCompare the different phenotypes of COPDDemonstrate ability to recognize the clinical features of COPDArrange acceptable diagnostic testOrganize management plan for patient with COPDEvaluate patient response to COPD medicationsCommunicate treatment options to patients and address their concernsDiscriminate patient with acute exacerbation of COPD List treatment steps in the management of acute exacerbation of COPD  | COPD | lecture | MCQ+Formative |
| 9 | 1 | List the causes of bronchiectasis Classify bronchiectasis according to etiology Formulate differential diagnosis based on patient history and examination findingsChoose diagnostic studies to confirm the diagnosis Construct management plan for non-cystic fibrosis bronchiectasis Manage patient with cystic fibrosis | **Bronchiectasis**  | lecture | MCQ |
| 9 | 2 | Define diffuse parenchymal lung diseasesRecall the pathogenesis of DPLDList the causes of DPLDClassify DPLDDifferentiate IPF from other causes of dyspnea Formulate diagnostic plan for suspected IPFManage patient concern regarding IPFList treatment options for IPFIdentify patients at risk of HP Plan diagnostic approach for HPDiscuss management principles of HPRecognize patient concerns regarding HP treatmentList treatment options for HPDefine sarcoidosis Identify sarcoidosis syndromesRecall extrapulmonary involvement in sarcoidosis Differentiate pulmonary sarcoidosis from pulmonary tuberculosis and lymphoma | **Diffuse Parenchymal Lung Diseases** | lecture | MCQ |
| 10 | 1 | List the causes of pleural effusion Demonstrate knowledge of the mechanisms of fluid accumulation Recognize the clinical features of pleural effusion and its underlying causeArrange diagnostic plan to confirm and identify the cause of pleural effusion Analyze the results of pleural fluid aspirate and formulate a differential diagnosis accordingly Organize treatment strategy for pleural effusion  | Pleural Effusion | lecture |

|  |
| --- |
| MCQ |

 |
| 11 | 1 | Define pneumothoraxDemonstrate knowledge of mechanism of pneumothoraxRecognize the clinical features pf pneumothorax Differentiate life-threatening tension pneumothorax from simple pneumothoraxAssess the need for treatment of tension pneumothoraxArrange diagnostic tests to confirm the diagnosisManage patient with pneumothorax by chest tubeDemonstrate knowledge in the indications of chest tube insertionAnalyze the function of the chest tube | Pneumothorax | lecture | MCQ |
| 11 | 1 | Classify the primary lung tumorsRecognize the etiologic causes of lung tumorsApply knowledge in recognizing the clinical features of lung tumorsFormulate plan of investigation for the diagnosis of lung tumorsList the sites of primary tumors with frequent lung metastasis Arrange a plan for the care of patient with non operable lung tumorAppraise patient concerns dealing with lung tumor diagnosisArrange plan of investigations to determine the appropriate treatment option. List the contraindications for surgical treatment of lung tumorsRecognize the surgical options for treatment of lung tumorsPredict the postoperative complications after thoracotomy Demonstrate knowledge in the management of postoperative thoracotomy patient Recognize early and late complications of thoracotomy and illustrate the immediate management plan for them. List the non-surgical treatment options | Tumors of the Lung | Lecture | MCQ |
| 12 | 1 | Recognize the indications of surgery in benign lung diseases | **Surgical options for the management of benign lung lesions (Lung abscess, tuberculosis, empyema, bronchiectasis)** | Lecture | MCQ |
| 12 | 1 | Recognize diseases of the chest wall Evaluate patient with diseases of the chest wall List the surgical options for treatment of chest wall deformities | **Diseases of the chest wall** | Lecture | MCQ |
| 13 | 1 | Recognize diseases of the diaphragm Evaluate patient with diseases of the diaphragm List the surgical options for treatment of diaphragmatic hernia | **Diseases of the diaphragm** | Lecture | MCQ |
| 13 | 1 | Recognize the conditions that require lung transplant as part of management List the types of lung transplantationRecall the complications of lung transplantation | **Lung Transplant** | Lecture | MCQ |
| 14 | 2 | Define respiratory failureRecall the types of respiratory failure Compare the different types of respiratory failureList the causes of respiratory Describe the clinical features of respiratory failureArrange diagnostic plan to evaluate patient with respiratory failure Evaluate treatment options for the different types of respiratory failure Assess patient response to initial treatment Address patient concernsDefine ARDSRecognize the pathogenesis of ARDSList the causes of ARDSCompare ARDS to cardiac pulmonary edemaEvaluate the clinical features that occur with ARDSFormulate a diagnostic plan for ARDSPredict the outcome of ARDS Organize treatment plan for ARDSList the low flow oxygen delivery devicesDifferentiate the clinical conditions that need low flow delivery devicesList the high flow oxygen delivery devicesAnalyze the conditions that require high flow devices | **Critical Care in respiratory medicine** | Lecture | MCQ |
|  |  |  |  |  |  |
| 1. Course Evaluation
 |
| 1. Continuous Assessment2. Case Presentations3. Group Participation4. Skills Assessment5. Case Analysis6. Self-Assessment: Via Google Classroom7. Comprehensive Examinations (MCQs and Case Based Assays) |
| 1. Learning and Teaching Resources
 |
| Required textbooks (curricular books, if any) | 1. Davidson’s Principles and Practice of Medicine2. Bailey and Love’s textbook of surgery3. Harrison’s Principles of Internal Medicine |
| Main references (sources) |  |
| Recommended books and references (scientific journals, reports...) | UPTODATE |
| Electronic References, Websites | GINA GuidelinesGOLD Guidelines |