**Course Description Form**

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| 1. Course Name: Respiratory | | | | | | |
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| 1. Course Code: MEDResp-41 | | | | | | |
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| 1. Semester / Year: 1st semester/ 4th year | | | | | | |
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| 1. Description Preparation Date: 1/3/2024 | | | | | | |
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| 1. Available Attendance Forms: Physical (mandatory) and Virtual(complementary) | | | | | | |
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| 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 Alqaraghuli  Email: 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 attendance  2. Problem-Based Learning (PBL): Via the Google Classroom  3. Small Group Discussions  4. Hands-on Workshops (selected students: optional)  5. Case-Based Learning (CBL): integrated within the lectures  6. Self-Directed Learning  7. Assessment Strategies  1. 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 mechanisms  Predict 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 complain  Recognize the causes of different physical signs  Plan 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 encounter  Analyze the results of spirometry  Construct a differential diagnosis based on parameters of lung function tests  Differentiate the types of respiratory diseases based on the results of arterial blood gas analysis  Analyze the result of exercise testing  Recognize the different radiological terms  Interpret the radiological signs  Appraise the benefits of flexible | | Pulmonary function tests  Arterial Blood Gas analysis  Exercise testing  Radiology of the chest  Flexible bronchoscopy | Lecture+case discussion | MCQ+  Formative |
| 3 | 2 | Recognize the different types of rhinitis  Differentiate the treatment options for each type  Classify sleep – related breathing disorders  Distinguish obstructive sleep apnea from simple snoring  Interpret the results of sleep study | | Diseases of the upper airways:  Allergic rhinitis  Sleep – related disorders | Lecture+classroom activity | MCQ+  Formative |
| 4 | 2 | Differentiate the different types of upper respiratory tract infections  Assess the need for antibiotic therapy in patients with URTi  Define bronchitis  Define pneumonia  Differentiate between pneumonia and bronchitis  List the different causes of pneumonia  Describe the clinical features of pneumonia  Demonstrate knowledge in the differences between clinical features with regard to microbiologic etiology  Formulate plan for management of pneumonia  Assess severity of pneumonia  Appraise pneumonia complications  Choose the appropriate management plan  Evaluate readiness for discharge  Define hospital acquired pneumonia  Recognize the clinical features of hospital acquired pneumonia  Choose the appropriate treatment of hospital acquired pneumonia  Distinguish the clinical features of ventilator associated pneumonia  Choose the appropriate investigations for ventilator associated pneumonia  Elect the best treatment strategy for ventilator associated pneumonia  Recognize the clinical features of aspiration pneumonia  Elect the best treatment for aspiration pneumonia  Define lung abscess  Assemble a differential diagnosis for lung abscess  Distinguish between treatment options for lung abscess  List clinically relevant fungal infections of the lung  Classify the types of aspergillosis  Demonstrate knowledge in the management of aspergillosis subtypes6 | | **Infections of the respiratory system** | lecture | MCQ+  Formative |
| 5 | 2 | Define tuberculosis  Recognize the epidemiology of tuberculosis  Analyze the resurgence of tuberculosis  List the sites of tuberculous infections  Compare the different presentations of tuberculosis  Formulate differential diagnosis based on clinical presentations  Construct a diagnostic plan for tuberculosis  List the diagnostic tests for tuberculosis  Analyze the results of diagnostic tests  Formulate management plan for patients with tuberculosis  Recall the side effects of antituberculous drugs  Arrange follow-up plan after treatment  Recognize complications of tuberculosis | | **Tuberculous lung infections** | lecture | MCQ+  Formative |
| 6 | 1 | Define hydatid cyst  Recognize clinical features of hydatid cyst  Differentiate hydatid cyst from other cystic lung diseases  Describe the diagnostic tests for hydatid cyst  Manage 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 HIV  Differentiate between the different etiologies  Formulate diagnostic plan  Recall 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 sarcoma  Recognize the clinical features of Kaposi sarcoma | | Lung involvement in immunosuppressed individuals | lecture | MCQ |
| MID TERM EXAMS | | | | | | |
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| 7 | 2 | Recall the immunological basis of asthma  Illustrate the effect of extrinsic and intrinsic factors in the pathogenesis of asthma  Appraise the epidemiology of asthma  Compare the different  Demonstrate ability to recognize clinical features of asthma  Arrange acceptable diagnostic tests  Organize management plan for patient with chronic asthma  Evaluate patient response to asthma medications  Communicate treatment options to patients and address their concerns  Discriminate 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 COPD  Recall the causes of COPD  Illustrate the relation between environmental factors and the development of COPD  Compare the different phenotypes of COPD  Demonstrate ability to recognize the clinical features of COPD  Arrange acceptable diagnostic test  Organize management plan for patient with COPD  Evaluate patient response to COPD medications  Communicate treatment options to patients and address their concerns  Discriminate 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 findings  Choose 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 diseases  Recall the pathogenesis of DPLD  List the causes of DPLD  Classify DPLD  Differentiate IPF from other causes of dyspnea  Formulate diagnostic plan for suspected IPF  Manage patient concern regarding IPF  List treatment options for IPF  Identify patients at risk of HP  Plan diagnostic approach for HP  Discuss management principles of HP  Recognize patient concerns regarding HP treatment  List treatment options for HP  Define sarcoidosis  Identify sarcoidosis syndromes  Recall 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 cause  Arrange 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 pneumothorax  Demonstrate knowledge of mechanism of pneumothorax  Recognize the clinical features pf pneumothorax  Differentiate life-threatening tension pneumothorax from simple pneumothorax  Assess the need for treatment of tension pneumothorax  Arrange diagnostic tests to confirm the diagnosis  Manage patient with pneumothorax by chest tube  Demonstrate knowledge in the indications of chest tube insertion  Analyze the function of the chest tube | | Pneumothorax | lecture | MCQ |
| 11 | 1 | Classify the primary lung tumors  Recognize the etiologic causes of lung tumors  Apply knowledge in recognizing the clinical features of lung tumors  Formulate plan of investigation for the diagnosis of lung tumors  List the sites of primary tumors with frequent lung metastasis  Arrange a plan for the care of patient with non operable lung tumor  Appraise patient concerns dealing with lung tumor diagnosis  Arrange plan of investigations to determine the appropriate treatment option.  List the contraindications for surgical treatment of lung tumors  Recognize the surgical options for treatment of lung tumors  Predict 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 transplantation  Recall the complications of lung transplantation | | **Lung Transplant** | Lecture | MCQ |
| 14 | 2 | Define respiratory failure  Recall the types of respiratory failure  Compare the different types of respiratory failure  List the causes of respiratory  Describe the clinical features of respiratory failure  Arrange 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 concerns  Define ARDS  Recognize the pathogenesis of ARDS  List the causes of ARDS  Compare ARDS to cardiac pulmonary edema  Evaluate the clinical features that occur with ARDS  Formulate a diagnostic plan for ARDS  Predict the outcome of ARDS  Organize treatment plan for ARDS  List the low flow oxygen delivery devices  Differentiate the clinical conditions that need low flow delivery devices  List the high flow oxygen delivery devices  Analyze the conditions that require high flow devices | | **Critical Care in respiratory medicine** | Lecture | MCQ |
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| 1. Course Evaluation | | | | | | |
| 1. Continuous Assessment  2. Case Presentations  3. Group Participation  4. Skills Assessment  5. Case Analysis  6. Self-Assessment: Via Google Classroom  7. 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 Medicine  2. Bailey and Love’s textbook of surgery  3. Harrison’s Principles of Internal Medicine | | |
| Main references (sources) | | | |  | | |
| Recommended books and references (scientific journals, reports...) | | | | UPTODATE | | |
| Electronic References, Websites | | | | GINA Guidelines  GOLD Guidelines | | |