

MD Pulmonary Medicine Curriculum and Syllabus

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M.D. PULMONARY MEDICINE

GOALS AND OBJECTIVES:

At the end of the postgraduate training in the discipline concerned the student shall be able to:

1. Recognize the importance of the Pulmonary Medicine & Tuberculosis in the context of the health needs of the community and the national priorities sector
2. Practice the field of pulmonary medicine & tuberculosis ethically and in step with the principles of primary health care
3. Demonstrate sufficient understanding of the basic sciences relevant to the Pulmonary Medicine
4. Obtain relevant skills required for the medical or surgical management of the patient required in Pulmonary Medicine & Tuberculosis
5. Obtain adequate knowledge in the subjects closely acquainted with the subjects of his post graduation in Pulmonary medicine
6. Identify social, economic, environmental, biological and emotional determinants of health in a given case, and taken them into account while planning therapeutic, rehabilitative, preventive and promotive measures/ strategies.
7. Diagnose and manage majority of the conditions in the field of chest medicine concerned on the basis of clinical assessment and appropriately select and conduct investigations
8. Plan and advice measures for the prevention and rehabilitation of patients suffering from disease and disability in the field of Pulmonary Medicine
9. Demonstrate skills in documentation of individual case details as well as morbidity and data relevant to the assigned situation
10. Demonstrate empathy and human approach towards patients and their families and exhibit interpersonal behavior in accordance with societal norms and expectations
11. Demonstrate competence in basic concepts of research methodology and epidemiology, and be able to critically analyze relevant published research literature.
12. Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians and paramedical health workers.
13. Function as an effective leader of a health team engaged in health care research or training².

COURSE OVERVIEW

DURATION OF THE COURSE:

Six years

Two years in internal medicine followed by intermediate module

Three years in pulmonology

One year rotations

- Thoracic surgery 3months
- ICU 3months
- Cardiology 2months
- Radiology 2months
- Pediatrics /onco-radiotherapy 2months

ATTENDANCE :

All students joining the postgraduate training programme shall work as full time residents during the period of training, attending not less than 80% (eighty percent) of the training during each calendar year, and will be given full time responsibility, assignments and participation in all facets of the educational process. The period of training for obtaining the degrees shall be three completed years including the period of examination.

SYLLABUS FOR THE PG DEGREE COURSE IN M.D., PULMONARY MEDICINE:

Pulmonary Medicine is one of the specialties of medical science which has witnessed several new developments in the fields of diagnosis and treatment in the past two decades. This syllabus has been formatted with the objective to provide uniform high standard medical training and impart adequate skills and capabilities to the students undergoing PG degree course in the specialty in the pulmonary medicine.

1. Development of respiratory tract
2. Structure & functions of respiratory tract
3. Control of ventilation

4. Sleep physiology
5. Ventilation and perfusion
6. Transport of blood gases Diffusion, Diffusion capacity.
7. Non – respiratory functions of lung
8. Immunology as applied to lung
- 9 Acid – Base balance
10. Diagnostic procedures :
 - Sputum cytology/examination
 - Bronchoscopy
 - Pleural biopsy/ lung biopsy
 - Thoracoscopy
 - Radiology and lung imaging
 - CT scan, MRI,USG, interventional radiology
11. Assessment of lung function
 - Pulmonary function test ☒
 - Cardio pulmonary exercise testing
 - Pulmonary disability assessment
 - Preoperative lung function assessment
- 12.Symptomatology and physical examination
- 13.Interstitial lung disease including: drug induced/ Radiation induced lung disease
14. Occupational lung disease
15. Environmental lung disease including indoor/outdoor air pollution, high attitude/ diving injuries.
16. Pulmonary vascular disorders including pulmonary emboli, vasculitis syndromes, pulmonary hypertension, cor pulmonale..
- 17.Obstruction airway disease
 - Asthma
 - COPD
 - Cystic fibrosis

Bronchiolitis

Bronchiectasis

18. Infectious disease:

Pneumonias

Nosocomial pneumonia

CAP

Viral

Fungal

Protozoal

19. Mycobacterial diseases

Epidemiology

Rapid methods of diagnosis

Assessment of drug resistance

Pulmonary/extra pulmonary disease

Chemotherapy

Atypical mycobacterium

20. Pleural diseases

21. Sleep related disorders

22. Surgical aspects of pulmonary medicine including lung transplantation

23. Neoplasm of lung

Cancer Biology

Clinical features

Classification and staging

Medical, surgical and radiation management of lung cancer

Benign Neoplasm of lung

24. Diseases of the mediastinum

25. Diseases of the chest wall, spine, diaphragm

26. Acute respiratory failure including ARDS, SEPSIS/management

27. Chronic respiratory failure

28. Mechanical ventilation, oxygen therapy, hemodynamic and respiratory monitoring
29. Ethics in ICU
30. Respiratory diseases in children
31. Upper Airway diseases.

Skills to be acquired by the PG students at the end of the Course:

1. Adequate skills in the clinical examination of the patient including approach to the patient, history taking, knowledge about the basic pulmonary lesions, proper respiratory and systemic examination and familiarity with elicitation of important clinical signs.
2. Basic skills in laboratory investigations related to the diseases of the lung like: a. Gram staining b. Ziehl – Neelson’s staining c. Pulmonary Function Test
3. Knowledge in clinical respiratory and applied basic sciences such as anatomy, physiology, biochemistry, immunology, molecular microbiology and pharmacology including therapeutic in relation to pulmonary medicine syllabus
4. Awareness of current treatment modalities of various pulmonary diseases
5. Knowledge about the preventive aspects, education, counseling, service to the patient National program of HIV & TB and Revised National Tuberculosis Control Program in India.
6. Adequate skills in procedures such as:
 - Pleurodesis
 - Bronchoscopy (diagnostic and therapeutic)
 - FNAC
 - Tru-cut Biopsy
 - Thoracocentesis
 - ICD insertion
 - Pleural biopsy,
 - Endotracheal intubation
 - central line insertion
 - arterial line insertion
 - ABG sampling.
7. knowledge regarding management of critically ill patients including
 - Mechanical ventilator management

Oxygen therapy

Fluid therapy

Infection control

Thromboprophylaxis.

8. Knowledge about sleep pathophysiology and sleep related disorders.

PG Training (Weekly Programme)

Monday X ray Theory class Differential Diagnosis (RADIOLOGY DEPARTMENT)

Tuesday Case Discussion by Post Graduates Alternating with theory (topic discussion)

Wednesday Medical Grand Rounds

Thursday Journal Club / Recent Advances alternating Mortality morbidity

Friday

Saturday Guidelines

Daily ward round OPD ER visit procedures supervised/independent

MAINTENANCE OF LOGBOOK

Every Post Graduate student shall maintain a record of skills He/She has acquired during the training period certified by the various Head of departments where He/She has undergone training including outside the institution as follows

1) Posting 2) Interesting case 3) Journal club 4) Seminars 5) Case demonstration 6) Clinical procedures / operations performed 7) Lectures 8) Group discussion a.Radiology , b.Biopsy, c.Death review 9) Emergencies 10) Conferences /CME Programmes attended 11) Papers presentations & publications

The Head of the Department should scrutinize the logbook every three months and certify the work done.

At the end of the course the student should summarise the contents and get the logbook certified by the Head of the Department and submit the logbook at the time of the University Practical Examination for the scrutiny of the board of examiners.

It is preferable that a post graduate student during the course to present one poster presentation and /or to read one paper at a national /state conference and /or to present one research paper which can be published/accepted for publication/sent for publication during the period of his/her postgraduate studies.

THESIS

Every student registered as post graduate shall carry out work on an assigned research project under the guidance of a recognized post graduate teacher, the result of which shall be written up and submitted in the form of a thesis. Work for writing the Thesis is aimed at contributing to the development of a spirit of enquiry, besides exposing the student to the techniques of research, critical analysis, acquaintance with the latest advances in medical science and the manner of identifying and consulting available literature.

Thesis shall be submitted at least six months before the theoretical and clinical / practical examination. The thesis shall be a bound volume of a minimum of 50 pages and not exceeding 75 pages of typed matter (Double line spacing and on one side only) excluding certification, acknowledgements, annexure and bibliography.

Thesis should consist of (a) Introduction (b) Review of literature (c) Aims and objectives (d) Material and methods (e) Result (f) Discussion (g) Summary and conclusion (h) Tables (i) Annexure (j) Bibliography

Four copies of thesis shall be submitted six months prior to the commencement of the theory examinations on the date prescribed by the Controller of Examinations of this University. The thesis should be approved by the Professor of that branch and the same has to be forwarded to the Controller of Examinations, by the head of the department through the Dean of the college.

Two copies in addition are to be submitted as an electronic version of the entire thesis in a standard C.D. format by mentioning the details and technicalities used in the C.D. format.

The thesis shall be examined by a minimum of three examiners; one internal and two external examiners, who shall not be the examiners for Theory and clinical; and on the acceptance of the thesis by two examiners, the student shall be allowed to appear for the final examination.

EVALUATION OF THESIS :

ACCEPTED / NOT ACCEPTED

Intermediate module and Final Examination: According to the format laid down by the SZAMBU

9.RECOMMENDED LIST OF BOOKS & JOURNALS

Latest Editions:

1. AP Fish man Pulmonary Diseases and Disorders
2. Fraser & Pare's Diagnosis of the Diseases of the Chest
- 3.Murray and Nadel – Textbook of respiratory medicine
- . 4. George and Light – Essentials of Pulmonary and Critical Care Medicine
5. Gibson –Textbook of Respiratory Medicine
- . 6. Egan's Fundamentals of Respiratory Care..
7. Principles of Chest X-ray Diagnosis –
8. Respiratory Physiology JB west –
9. Paul Marino – The ICU book
10. Sleep Medicine – Kryger.
11. Thoracic imaging – Webb & Higgins
12. Diagnostic thoracic imaging – Miller
13. Crofton & Douglas –Respiratory Diseases –
- . 14. Macleods – Clinical Examination-.
15. Harrisons –Principles of Internal Medicine.Davidson –Principles and Practice of Medicine. - Principles of critical care – 2nd Edition Oxford, 2007.
16. Chang – Clinical Applications of Mechanical Ventilation
- . 17. Clinical respiratory Medicine – Albert & Spiro-
18. Synopsis of Diseases of the Chest –Fraser & Spiro.
19. Tuberculosis – Case finding by Toman WHO Publication
20. Pleural Diseases by Light.

Recommended List of Journals

1. Journal of Pakistan Chest society
2. Journal of Pakistan Medical Association
3. Journal of Pakistan Institute of Medical sciences
4. Thorax
5. International Journal of TB and Lung Diseases
6. Chest
7. American Journal of Respiratory and Critical care medicine
8. European Respiratory journal
9. European Respiratory review
10. The Lancet
11. New England Journal of Medicine
13. Clinics in chest medicine
14. American journal of roentgenology
6. Cancer
17. Cancer research
18. Journal of thoracic and cardiovascular surgery
19. Respiration
20. Current opinion in pulmonary medicine