



**Dr. D. Y. PATIL VIDYAPEETH, PUNE**  
(Deemed to be University)

**Syllabus for  
PG Medical Specialties**

**2014 - 15**  
(Amended / Revised upto July 2019)



**Dr. D.Y. PATIL VIDYAPEETH, PUNE**  
(Deemed to be University)

(Re-accredited by NAAC with a CGPA of 3.62 on a four point scale at 'A' Grade)  
(An ISO 9001 : 2015 Certified University)

**Dr. A. N. Suryakar**  
Registrar

Ref. No. : DPU/875-vii/2019  
Date : 11/09/2019

#### NOTIFICATION

Whereas in pursuance of the following decisions taken by the Board of Management, it is hereby notified to all concerned that the "Syllabus for PG Medical and Surgical Specialties – 2014-15" is revised upto July 2019 and hereby published.

- Changes in syllabus for UG and PG in General Medicine, Pulmonary Medicine and General Surgery vide Resolution No. BM-07-(iii)-4 dated 28<sup>th</sup> January, 2014.
- Updation in UG and PG syllabus of General Medicine, Obstetrics & Gynecology, Orthopedics, Anaesthesiology, ENT and Ophthalmology vide Resolution No. BM-04(i)-15, dated 31<sup>st</sup> March, 2015.
- Modifications in pattern of PG practical examinations for MD (General Medicine), MD (Pediatrics), MS (General Surgery), and MS (OBGY) vide Resolution No. BM-26(iv)-15, dated 29<sup>th</sup> December, 2015.
- Updation in PG syllabus in Radio-Diagnosis subject vide Resolution No. BM-26(vii)-15, dated 29<sup>th</sup> December, 2015.
- Introduction of Bioethical aspects in various chapters of all subjects vide Resolution No. BM-26(xi)-15, dated 29<sup>th</sup> December, 2015
- Partial Modifications in Pattern of PG Practical Examinations for MD (General Medicine) and MS (General Surgery) vide Resolution No. BM-17(vii)-16, dated 22<sup>nd</sup> September, 2016.
- Modifications in the syllabus of MD (Emergency Medicine) vide Resolution No. BM-35(iv)-18, dated 12<sup>th</sup> October, 2018.
- Changes in teaching and assessment of MS (Ophthalmology), vide Resolution No. BM-35(v)-18, dated 12<sup>th</sup> October, 2018.
- Changes in the practical examination pattern of M.S. (Orthopedics) vide Resolution No. BM-35(vi)-18, dated 12<sup>th</sup> October, 2018.
- Change in practical examination pattern of MD (Dermatology) vide Resolution No. BM-35(vii)-18, dated 12<sup>th</sup> October, 2018.
- Graduate Attributes, Programme Outcomes (POs), Course Outcomes (Cos) and gap analysis for all courses of UG and PG Programmes for Para-Clinical and Surgical Subjects vide Resolution No. BM-10(vii)-19 dated, 12<sup>th</sup> April, 2019.
- Interdisciplinary subjects (for Surgical Subjects) of M.B.B.S, M.D./M.S. and Super-specialty (D.M./M.Ch.) Programs under the Faculty of Medicine vide Resolution No. BM-10(viii) dated 12<sup>th</sup> April, 2019.
- Changes in syllabus of MD (General Medicine) and MD (Psychiatry) vide Resolution No. BM-27(iv)-19 dated 30<sup>th</sup> July, 2019.
- Modifications in MD (Respiratory Medicine) Practical examination pattern vide Resolution No. BM-27(vii)-19 dated 30<sup>th</sup> July, 2019.



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- Graduate Attributes, Programme Outcomes (POs), Course Outcomes (Cos) outcome analysis of Pos and Cos and mapping with objectives for all courses of UG and PG Programmes of Pre-Clinical and **Medicine Subjects** under the Faculty of Medicine vide **Resolution No. BM-27(x)-19 dated 30<sup>th</sup> July, 2019.**
- Interdisciplinary subjects (**for Medicine Subjects**) of M.B.B.S, M.D./M.S. and Super-specialty (D.M./M.Ch.) Programs under the Faculty of Medicine vide **Resolution No. BM-27(xi) dated 30<sup>th</sup> July, 2019.**

The **Syllabus for PG Medical and Surgical Specialties – 2014-15** is Revised upto July 2019 will be useful to all the concerned. This will come into force with immediate effect.



(Dr. A. N. Suryakar)  
Registrar

**Copy to:**

1. PS to Chancellor for kind information of Hon'ble Chancellor, Dr. D. Y. Patil Vidyapeeth, Pune.
2. PS to Vice Chancellor for kind information of Hon'ble Vice Chancellor, Dr. D. Y. Patil Vidyapeeth, Pune.
3. The Dean, Dr. D. Y. Patil Medical College Hospital & Research Centre, Pimpri, Pune
4. The Controller of Examinations, Dr. D. Y. Patil Vidyapeeth, Pune.
5. Director (IQAC), Dr. D. Y. Patil Vidyapeeth, Pune.
6. Web Master for uploading on Website.

**MAPPING OF PROGRAMME OUTCOMES [POs] AND COURSE  
OUTCOMES [COs] OF PG PROGRAMMES**

<b>No.</b>	<b>By the end of the programme, the Postgraduate will have / be:</b>
PO 1	Knowledge and Skills
PO 2	Planning and problem solving abilities
PO 3	Communication
PO 4	Research Aptitude
PO 5	Professionalism and Ethics
PO 6	Leadership
PO 7	Societal Responsibilities
PO 8	Environment and Sustainability
PO 9	Lifelong Learner

### MD RESPIRATORY MEDICINE PROGRAMME

Course Code	Course Title
PGM04	MD Respiratory Medicine

#### Course 1 (Subject Code)

CO No.	At the end of the course, the learner should be able to:	Mapped Programme Outcomes
PGM04.1	Theoretical knowledge of different aspects of Pulmonary Medicine including the status in health and disease	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO9
PGM04.2	Acquire clinical skills	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8
PGM04.3	Acquire practical skills.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9
PGM04.4	Management of emergencies including intensive care.	PO1, PO2, PO3, PO4, PO5, PO6, PO7, PO8, PO9
PGM04.5	Preparation of thesis as per MCI guidelines.	PO1, PO2, PO4, PO5, PO6, PO7, PO8



# **RESPIRATORY MEDICINE**

## **DEPARTMENT OF RESPIRATORY MEDICINE**

### **1. GOAL**

The aim of teaching the postgraduate student in Tuberculosis and Respiratory Diseases is to impart such knowledge and skills that will enable him/her to diagnose and manage common as well as uncommon ailments affecting the chest with the special emphasis on management and prevention of Tuberculosis and specifically National tuberculosis control programme.

### **2.OBJECTIVE: -**

#### **2.1 Knowledge: -**

At the end of the course of Tuberculosis and Respiratory diseases, the student shall be able to:

- 2.1.1 Demonstrate sound knowledge of common chest diseases, their clinical manifestations, including emergent situations and of investigative procedures to confirm their diagnosis
- 2.1.2 Demonstrate comprehensive knowledge of various modes of therapy used in treatment of respiratory diseases; and be acquainted with the most current guidelines for expert management of the respiratory illnesses.
- 2.1.3 Demonstrate detailed knowledge of pulmonary as well as extra pulmonary tuberculosis and to offer a comprehensive plan of management (Including National TB control programme and DOTS)
- 2.1.4 Describe the mode of action of commonly used drugs, their doses, side-effect/toxicity, indications and contra-indications and interactions.
- 2.1.5 Describe commonly used modes of management including medical and surgical procedures available for treatment of various diseases and to offer a comprehensive plan of management.

## **2.2 Skill**

The Student shall be able to:

- 2.2.1 Interview the patients, elicit relevant and correct information and describe the history in chronological order
- 2.2.2 Conduct clinical examination, elicit and interpret clinical findings and diagnose common respiratory disorders and emergencies;
- 2.2.3 Perform simple, routine investigative and office procedures required for making the bed side diagnosis, especially sputum collection and examination for etiologic organisms especially Acid Fast Bacilli (AFB), Interpretation of the chest x-ray respiratory function tests; CT scan & MRI scan of thorax.
- 2.2.4 Interpret and manage various blood gases and PH abnormalities in various respiratory diseases;
- 2.2.5 Manage common recognizing need for referral for specialized care, of inappropriateness of therapeutic response;
- 2.2.6 Perform common procedure, like laryngoscopic examination, pleural aspiration, respiratory physiotherapy, laryngeal intubations and thoracic drainage/aspiration.
- 2.2.7 Perform special diagnosis/ therapeutic procedures such bronchoscopy, lung biopsy, pleural biopsy, thoracoscopy etc.
- 2.2.8 Deliver the intensive respiratory care effectively by means of expertise in mechanical ventilation and related procedures, respiratory & metabolized functional assessment.

## **2.3 Integration of teaching**

The broad goal of effective teaching can be obtained through integration with department of Medicine, Surgery, Microbiology, Pathology, Radiology, Pharmacology and PSM. This shall enable the student to be acquainted with diagnosis and management of common/uncommon systemic diseases that may affect the lung or may affect the management of various chest diseases.



### **3. Training Schedule:-**

- 3.1. – 1<sup>st</sup> & 2<sup>nd</sup> post (of 6 month each)  
In Dept of Pulmonary Medicine
- 3.2. – 3<sup>rd</sup> & 4<sup>th</sup> Post – Allied posts in Department of General Medicine (3 months), Paediatrics (1 month), Radiology (1 month) and ICU (1 month)
- 3.3. - 5<sup>th</sup>, 6<sup>th</sup> post  
In Department of Pulmonary Medicine

### **4. SPECIAL ACTIVITIES (COMPULSORY)**

- 4.1 Journal club – Once a week
- 4.2 PG Discussions – on management protocol for common diseases at least once a week + as required.
- 4.3 Active participation in at least one research activity of the department, other than the dissertation.
- 4.4 Case presentation & Discussion – at least once a week in addition to routine ward activities.
- 4.5 Integrated teaching: - Participation in case discussions.
- 4.6 Multimedia presentations: at least once a week

### **5. DETAILED SYLLABUS**

#### **5.1 RESPIRATORY INFECTIONS:**

- 5.1.1 Pneumonia- bacterial
- 5.1.2 Pneumonia- viral
- 5.1.3 Pneumonia- fungal
- 5.1.4 Pneumonia- parasitic
- 5.1.5 HIV & lung diseases

#### **5.2 TUBERCULOSIS**

- 5.2.1 Etio-pathogenesis
- 5.2.2 Pathology
- 5.2.3 Diagnosis
- 5.2.4 Clinical Features
- 5.2.5 Treatment
- 5.2.6 Programme: NTCP, RNTCP
- 5.2.7 BCG Vaccination
- 5.2.7 Extra Pulmonary TB
- 5.2.8 Special Emphasis

- a) Newer Diagnostic Tests
- b) MDR – TB
- c) HIV & TB
- d) Tuberculin Test
- e) Special Situations: - Pregnancy, Liver & Renal Diseases & Other special situations

### **5.3 SUPPURATIVE LUNG DISEASES**

- 5.3.1. Lung Abscess
- 5.3.2. Bronchiectasis
- 5.3.3. Empyema
- 5.3.4. Special Emphasis: - Postural Drainage.

### **5.4. OBSTRUCTIVE AIRWAY DISEASES**

- 5.4.1. Asthma
- 5.4.2. COPD
- 5.4.3. Acute Bronchitis
- 5.4.4. Special Emphasis
- 5.4.5. PFT
- 5.4.6. Occupational Asthma
- 5.4.7. Sleep Apnea Syndromes
- 5.4.8. Pharmacology

### **5.5. RESTRICTIVE LUNG DISEASES**

- 5.5.1. Interstitial Lung Diseases
- 5.5.2. Fibrosing Alveolitis
- 5.5.3. Sarcoidosis
- 5.5.4. Pneumoconiosis
- 5.5.5. Special Emphasis On: -
  - (a) Latest Diagnostic Classification
  - (b) Treatment & Monitoring

### **5.6. MALIGNANCIES – LUNG & PLEURAL**

- 5.6.1. Special Emphasis
  - Staging and Chemotherapy

### **5.7. PLEURAL DISORDERS**

- 5.7.1. Pleurisy
- 5.7.2. Pleural Effusions
- 5.7.3. Pneumothorax
- 5.7.4. Chylothorax
- 5.7.5. Haemothorax
- 5.7.6. Special Emphasis: ICD management

## **5.8. INTENSIVE RESPIRATORY CARE**

- 5.8.1. Ventilatory management
- 5.8.2. Airways care
- 5.8.3. Pulmonary Function Monitoring( Bed site)
- 5.8.4. Haemodynamic Monitoring
- 5.8.5. Special Emphasis: Non Invasive Ventilation  
Ventilation Related Procedures  
Ventilation Associated Pneumonia

## **5.9. LUNG INVOLVMENT IN SYSTEMIC DISEASES**

- 5.9.1. Collagen Disorders
- 5.9.2. Neurological Disorders
- 5.9.3. Renal & Cardiac Diseases
- 5.9.4. Auto-immune Disorders
- 5.9.5. Congenital Disorders

## **5.10 MEDIASTINAL DISORDERS**

- 5.10.1. Generalized & Localized Diseases involving mediastinum:  
Tumors, cysts, infections, diaphragm
- 5.10.2. Special Emphasis: Diagnostic Approach

## **5.11. APPLIED ANATOMY AND PHYSIOLOGY**

- 5.11.1. Lungs& Pleura
- 5.11.2. Ventilation, Perfusion of Lung
- 5.11.3. Gas Transfer
- 5.11.4. OxygenTransport
- 5.11.5. Respiratory Muscles
- 5.11.6. Special Emphasis: Exercise Testing, PFT

## **5.12. CARDIOLOGY**

- 5.12.1. Myocardial Disorders
- 5.12.2. Arrhythmia
- 5.12.3. IHD
- 5.12.4. Valvular Heart Diseases
- 5.12.5. Congenital Heart Diseases

## **5.13. DIAGNOSTIC& THERAPEUTIC PROCEDURES**

- 5.13.1. Sputum Examinations
- 5.13.2. Bronchoscopy& Related Procedures
- 5.13.3. Transcutaneous Biopsies
- 5.13.4. Pleural Procedures: -
  - (a) Pleurocentesis, Biopsy, Pleurodesis, ICD
  - (b) Thoracoscopy

- 5.13.5. Sleep Studies
- 5.13.6. PFT& Exercise Testing

#### **5.14. COUNSELING OF RESPIRATORY PATIENTS**

- 5.14.1. Asthma
- 5.14.2. COPD
- 5.14.3. TB
- 5.14.4. HIV
- 5.14.5. Chronic Respiratory Failure
- 5.14.6. Pulmonary Rehabilitation
- 5.14.7. ILD/Lung cancer

#### **5.15. RESEARCH METHODOLOGY**

- 5.15.1. Protocol Planning
- 5.15.2. Inclusion / Exclusion Criteria
- 5.15.3. Ethical Issues
- 5.15.4. Responsibilities of Investigation & Institute
- 5.15.5. Funding Agencies & Supervising Agencies
- 5.15.6. Good Clinical Practice & ICMR Guidelines
- 5.15.7. ICH/GCP guidelines
- 5.15.8. Statistical methods.

#### **5.16. GENERAL MEDICINE**

- 5.16.1. Hypertension
- 5.16.2. Diabetes
- 5.16.3. Electrolyte& Fluid Balance
- 5.16.4. Approach to Various Systems
- 5.16.5. Common Infections
- 5.16.6. ENT Disorders (Allergic Rhinitis / Polyps)
- 5.16.7. Liver Diseases
- 5.16.8. CNS Disorders
- 5.16.9. Poisoning

#### **5.17. DIAPHRAGM: -**

(Palsy, eventration, congenital defects, herniation)

#### **5.18. CONGENITAL LUNG DISEASES**

- 5.18.1. Airway disorders:-
  - (a) Young Syndrome
  - (b) Kartagenenos Syndrome
  - (c) Immotile cilia Syndrome
- 5.18.2. Parenchyma:-
  - (a) Bronchogenic cyst
  - (b) Sequestration

**6. *THEORY PAPERS (Pattern changed in October 2019)*** applied march

Theory papers will be of 100 marks each.

All papers will be for 3 hours each

All papers will consist of following pattern as approved by the University:

Section A: 2 LAQs of 25 marks each

Section B: 5 SAQs of 10 marks each

6.1 1st Paper – General Pulmonary Medicine and Basic Science

6.2 2<sup>nd</sup> Paper –Tuberculosis, Pulmonary Infection and Medical Emergencies

6.3 3rd Paper - Pulmonary Medicine (other than infection) and Critical Care Medicine

6.4 4<sup>th</sup> Paper – Recent Advance and Research Methodology.

**7. *PRACTICALS (Pattern changed in October 2019)*** Applied march

The practical examination will be of total 400 marks with distribution as follows based on University guidelines and by OSCE pattern:

7.1. 1 Long Case for 100 marks

7.2. 2 Short Cases for 50 marks each

7.3. Case on Ventilator for 50 marks

7.4. Pulmonary intervention for 50 marks

7.5. Table 1: Grand viva for 25 marks

7.6. Table 2: X-ray, CT Scan, MRI: for 25 marks

7.7. Table 3: ECG, PFT, ABG Reports: for 25 marks

7.8. Table 4: Drugs, Instruments, specimens: for 25 marks

**8. DISSERTATION**

**8.1. Aim: -**

To actively involve the PG student in the research field for the better understanding and new advances in the respiratory medicine.

**8.2. Objectives: -**

By doing a dissertation, the PG student shall develop/acquire

8.2.1. Active interest in the research field

- 8.2.2. Through knowledge of the research methodology including protocol preparation, setting aims, ethical considerations & statistical analysis.
- 8.2.3. Acquaintance with ICMR & GCP guideline on Scientific research

**8.3. Guidelines: -**

- 8.3.1. The dissertation topic should preferably be an attempt to approval disprove clinical concept, which are important for the management of common illness of National important.
- 8.3.2. The ICMR / GCP guidelines should be followed during the dissertation study.
- 8.3.3. The study should be prospective study as far as possible.
- 8.3.4. The study should be carried out in the institute with utilization of the available research.
- 8.3.5. An epidemiological/ lab study will have a second preference over a clinical study.
- 8.3.6. Prior approval of the study by the PG Guide is necessary.

**9. METHOD OF EVALUATION.**

Common scheme of evaluation of student, as approved by the Board of Studies. The internal assessment of the PG students will be done based upon following points:

- a. Participation in teaching activities such as seminar, case presentations etc.
  - b. Clinical acumen shown during the ward work
  - c. Attendance record
  - d. Internal assessment examination: theory and practicals.
- A 6 monthly report based on these points would be generated.