

अखिल भारतीय आयुर्विज्ञान संस्थान, नागपुर

ALL INDIA INSTITUTE OF MEDICAL SCIENCES NAGPUR



Department of General Medicine

Curriculum for MD Medicine

Passion for Excellence

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MD General Medicine

AIIMS, Nagpur

GOAL:

The main goal of the training program is to produce physicians with the necessary knowledge, skill and attitude to diagnose and manage in a cost effective manner, a wide range of clinical problems in General Medicine as seen in the community or in secondary/tertiary care setting.

Possession of clinical skills required for making a diagnosis is given utmost importance. As a result of training in General Medicine, the physician should become competent in the use of the various diagnostic tests, and interpret their results intelligently, keeping in mind their cost effectiveness. Special emphasis is placed on the relatively common and treatable disorders. In order to be considered a competent internist, a resident in medicine must possess humanistic qualities, attitudes and behavior necessary for the development of appropriate patient-doctor relationship. The resident should come out of the institute as a complete, knowledgeable, able, kind and caring Internal Medicine Specialist of highest order.

Program Outcomes

Specific Aims and Objectives of the Junior Resident Training Program in General Medicine

As a result of the training under this program, at the end of 3 years of postgraduate training, a resident must acquire the following knowledge, skills and competencies:

2.1 Cognitive:

1. A thorough knowledge of epidemiology, natural history, pathological abnormalities, clinical manifestations, and principles of management of a large variety of systemic medical disorders of adults and elderly, affecting any organ system.
2. Thorough knowledge, skill and competence to diagnose correctly and manage rationally a wide range of clinical problems of General Medicine, using traditional methods of recording an accurate and thorough history and performing a detailed physical examination.
3. Knowledge to administer intensive care to seriously ill patients in collaboration with specialists from other areas.
4. Knowledge to advice on the preventive, restorative and rehabilitative aspects of medicine, including those in the elderly.
5. A thorough knowledge of the practical aspects and methods of prevention and protection against nosocomial infections from (i) patient-to-patient (ii) patient-to-health care worker HCW) (iii) HCW-to-patient; in any health care setting.
6. Knowledge to understand research methodology in clinical medicine and to undertake a critical appraisal of the literature published in various medical journals and be able to apply the same in the setting in which the resident is working.

2.2 Psychomotor:

1. Skill and competence to choose and interpret correctly the results of the various routine investigations necessary for proper management of the patient. While ordering these investigations, a resident must be able to understand the sensitivity, specificity and the

predictive value of the proposed investigation, as well as its cost-effectiveness in the management of the patient.

2. Skills and competence to perform commonly used diagnostic procedures namely lumbar puncture, Pleural/ Pericardial tapping, Ascitic tapping, Aspiration of synovial fluid from major joints, Bone marrow aspiration, Biopsy from liver and kidney and obtain an electrocardiogram tracing and interpreting the findings obtained.
3. Should have acquired adequate skills in cardiopulmonary resuscitation, endotracheal intubation, setting up a central venous line, using a defibrillator, and providing basic ventilator support. The resident in medicine must become familiar with the basic monitoring equipments in the critical-care area of the medicine ward, and should be able to interpret the information provided by the correctly.
4. Skill and competence to function effectively in varied clinical settings, namely, ambulatory care, out-patient clinic, in-patient wards, or emergency/critical care.
5. Skill and competence to administer intensive care to seriously ill patients in collaboration with specialists from other areas.
6. Skill and competence to take sound decisions regarding hospitalization, or timely referral to other consultants of various medical sub-specialties recognizing his limitations in knowledge and skills in these areas.
7. Proficiency in selecting correct drug combinations for different clinical problems with thorough knowledge of their pharmacological effects, side-effects, interactions with the other drugs, alteration of their metabolism in different clinical situations, including that in the elderly.

2.3 Affective:

1. Skills and competence to conduct himself/herself ethically during the process of collecting the relevant data base and be able to establish a healthy doctor-patient relationship by maintaining a sympathetic attitude and upholding the dignity of the patient. He/she must have learnt the skills of promoting verbal communication with the patient and winning his/her confidence.

2. Skill and competence to provide consultation to other medical and surgical specialties and sub-specialties, whenever needed and to have good interpersonal relationships.
3. Skill and competence to work cohesively in a team of medical and paramedical personnel and maintain discipline and healthy interaction with the colleagues.
4. Skill and competence to communicate clearly and consciously, and teach other junior residents, medical students, nurses and other paramedical staff, the theory as well as the practical clinical skills required for the practice of medicine.

3 Syllabus

By the end of the course, the student should have acquired knowledge (cognitive domain), professionalism (affective domain) and skills (psychomotor domain) as specified in the syllabus.

Course contents

3.1 Theory

Basic Sciences

1. Basics of human anatomy as relevant to clinical practice
 - surface anatomy of various viscera
 - Neuro-anatomy
 - Important structures/organs location in different anatomical locations in the body
 - Common congenital anomalies
2. Basic functioning of various organ-system, control of vital functions, pathophysiological alteration in diseased states, interpretation of symptoms and signs in relation to patho-physiology.
3. Common pathological changes in various organs associated with diseases and their correlation with clinical signs; understanding various pathogenic processes and possible therapeutic interventions possible at various levels to reverse or arrest the progress of disease
4. Knowledge about various microorganisms, their special characteristics important for their pathogenetic potential or of diagnostic help; important organisms associated with tropical diseases, their growth pattern/life-cycles, levels of therapeutic interventions possible in preventing and/or eradicating the organisms.
5. Knowledge about pharmacokinetics and pharmaco-dynamics of the drugs used for the management of common problems in a normal person and in patients with diseases kidneys/liver etc. which may need alteration in metabolism/excretion of the drugs; rational use of available drugs.

6. Knowledge about various poisons with specific reference to different geographical and clinical settings, diagnosis and management.

7. Research Methodology and Studies, epidemiology and basic Biostatistics.

8. National Health Programmes.

9. Biochemical basis of various diseases including fluid and electrolyte disorders; Acid base disorders etc.

10. Recent advances in relevant basic science subjects.

Systemic Medicine

11. Preventive and environmental issues, including principles of preventive health care, immunization and occupational, environmental medicine and bio-terrorism.

12. Aging and Geriatric Medicine:

- Biology
- Epidemiology
- Neuro-psychiatric aspects of aging

13. Clinical Pharmacology:

- Principles of drug therapy
- Biology of addiction
- Complementary and alternative medicine

14. Genetics:

- Overview of the paradigm of genetic contribution to health and disease
- Principles of Human Genetics
- Single gene and chromosomal disorders
- Gene therapy

15. Immunology:

- Innate and adaptive immune systems
- Mechanisms of immune mediated cell injury
- Transplantation immunology

16. Cardio-vascular diseases:

- Approach to the patient with possible cardio-vascular diseases
- Heart failure
- Arrhythmias
- Hypertension
- Coronary artery disease
- Valvular heart disease
- Infective endocarditis
- Diseases of the myocardium and pericardium
- Diseases of the aorta and peripheral vascular system

17. Respiratory system:

- Approach to the patient with respiratory disease
- Disorders of ventilation
- Bronchial asthma
- Chronic Obstructive Pulmonary Disease (COPD)
- Pneumonia
- Pulmonary embolism
- Cystic fibrosis
- Obstructive sleep apnoea syndrome and diseases of the chest wall, pleura and mediastinum

18. Nephrology:

- Approach to the patient with renal diseases
- Acid-base disorders
- Acute kidney injury
- Chronic kidney disease
- Tubulo-interstitial diseases
- Nephrolithiasis
- Diabetes and the kidney
- Obstructive uropathy and treatment of irreversible renal failure

19. Gastro-intestinal diseases:

- Approach to the patient with gastrointestinal diseases
- Gastrointestinal endoscopy
- Motility disorders
- Diseases of the oesophagus
- Acid peptic disease
- Functional gastrointestinal disorders
- Diarrhea
- Irritable bowel syndrome
- Pancreatitis and diseases of the rectum and anus

20. Diseases of the liver and gall bladder:

- Approach to the patient with liver disease
- Acute viral hepatitis
- Chronic hepatitis

- Alcoholic and non-alcoholic steatohepatitis
- Cirrhosis and its sequelae
- Hepatic failure and liver transplantation
- Diseases of the gall bladder and bile ducts

21. Haematologic diseases:

- Haematopoiesis
- Anaemias
- Leucopenia and leucocytosis
- Myelo-proliferative disorders
- Disorders of haemostasis and haemopoietic stem cell transplantation

22. Oncology:

- Epidemiology
- Biology and genetics of cancer
- Paraneoplastic syndromes and endocrine manifestations of tumours
- Leukemias and lymphomas
- Cancers of various organ systems and cancer chemotherapy

23. Metabolic diseases –

- Inborn errors of metabolism and disorders of metabolism.

24. Nutritional diseases –

- Nutritional assessment,
- Enteral and parenteral nutrition,
- Obesity and eating disorders.

25. Endocrine –

- Principles of endocrinology,
- Diseases of various endocrine organs including diabetes mellitus.

26. Rheumatic diseases:

- Approach to the patient with rheumatic diseases
- Osteoarthritis
- Rheumatoid arthritis
- Spondyloarthropathies
- Systemic lupus erythematosus (SLE)
- Polymyalgia
- Rheumatic fibromyalgia and amyloidosis

27. Infectious diseases:

- Basic consideration in Infectious Diseases
- Clinical syndromes
- Community acquired clinical syndromes
- Nosocomial infections
- Bacterial diseases - General consideration, diseases caused by gram – positive
- Bacteria, diseases caused by gram - negative bacteria o miscellaneous bacterial infections o Mycobacterial diseases o Spirochetal diseases o Rickettsia o Mycoplasma and Chlamydia
- Viral diseases -DNA viruses, DNA and RNA respiratory viruses , RNA viruses
- Fungal infections, protozoal and helminthic infections .

28. Neurology

- Approach to the patient with neurologic disease,
- Headache

- Seizure disorders and epilepsy
- Coma
- Disorders of sleep
- Cerebrovascular diseases
- Parkinson's disease and other movement disorders,
- Motor neuron disease,
- Meningitis and encephalitis
- Peripheral neuropathies
- Muscle disease and diseases of neuromuscular transmission
- Autonomic disorders and their management.

29. Psychiatry

- Approach to Psychiatric Diagnosis and Classification
- Etiology and Clinical Profile of Dementias
- Organic Delusional, Mood and Personality Disorders
- Schizophrenia
- Brief and Reactive Psychosis
- Depressive Disorders and their Clinical Relevance
- Anxiety Disorders
- Mood Disorders
- Personality Disorders
- Substance Abuse

30. Dermatology:

- Structure and functions of skin
- infections of skin
- papulo-squamous and inflammatory skin rashes
- photo-dermatology
- Erythroderma
- cutaneous manifestations of systematic diseases
- bullous diseases
- drug induced rashes
- disorders of hair and nails
- principles of topical therapy

3.2 Practical

1. Case work up in ward -

- **History:** Detailed history taking in proper format including relevant positive and negative history, past history and treatment, personal and psychosocial history. Student should be able to analyze the history, list the differential diagnosis and arrive at logical conclusions.
- **Examination :** Examination should include a systematic general examination with correct methodology and systemic examination in details in proper sequence. Should be able to demonstrate and interpret all the clinical signs. Should be able to correlate the history and findings on clinical examination and arrive at the provisional diagnosis.
- **Investigations :** Should be able to plan investigations to confirm the diagnosis, decide disease severity and appropriate investigations for comorbidities. Should know the method of sampling and all the prerequisites for better results.
- **Bedside procedures :** Should be able to do bedside procedures like venous blood sampling, preparing peripheral smear, collection of urine for culture, blood sugar by glucostrips insertion of Central lines relevant for management of the case.
- **Investigative skills:** Lumbar puncture, bone marrow aspiration and biopsy, pleural, peritoneal, pericardial tap, ascitic fluid therapeutic and diagnostic tapping, biopsy of liver and kidney, urethral catheterization, suprapubic aspiration.
- **Monitoring skills:** Temperature recording, capillary blood sampling, arterial blood sampling, basic life support skills, advanced life support skills and ventilator settings and monitoring.
- **Therapeutic skills:** Nasogastric feeding, endotracheal intubation, cardiopulmonary resuscitation, administration of oxygen, venepuncture and establishment of vascular access, administration of fluids, blood, blood components, parenteral nutrition, common dressings, abscess drainage and basic principles of rehabilitation. Discharging the patients at appropriate times with highest satisfaction levels and writing discharge notes and filling up discharge cards.

- **Cardiopulmonary resuscitation and End of life decisions** : Should be able to give CPR and take decisions about withdrawing life support. Should also learn to motivate relatives for organ donation whenever possible/
- **Communication skills:** Should be able to counsel and communicate with the patient and relatives. Should be able to take Informed consent for procedures and interventions. Should be able to explain high risk and poor prognosis to the patient.
- **Handling Death and post death procedures:** Student should be able to declare death of the patient to the relatives. Should be able to certify death giving proper diagnosis. Should be able to write a proper death summary. Should understand the medicolegal implications and procedures. Should be able to refer for post mortem examination and autopsy, as and when indicated. Should be able to make notifications related to death to appropriate authorities.

On similar guidelines a postgraduate student will gain practical experience and knowledge related to & perform

2. Case work up in OPD

3. Case work up of rare medical disorders

4. Case work up and management of critically ill patients in MICU

5. Handling patients as a first point of contact in Casualty

6. Emergency management of patients in Casualty

7. Management and monitoring of patients in speciality clinics

8. Basic work up of cases in subspecialities like Cardiology, Neurology, Gastroenterology, Nephrology

9. Interpretation of Investigations

- Haematological – CBC, Peripheral Smear, Blood investigations for systemic diseases
- Biochemical – Blood sugar, HbA1c, KFT, LFT, Lipid Profile, Thyroid Profile, Special tests for endocrinological functions
- Serological – Sr Antigens and Antibodies for infections like Malaria, Dengue, Scrub

Typhus, Hepatitis, Covid 19, Rheumatological investigations like RA factor, Sr ANA, Special serological assays

- Microbiological - Culture and susceptibility, CBNAAT
- Radiological
 - Routine Xrays – Xray chest, Xray – KUB, Xray – Abdomen, Xray – bones and joints, X ray – skull, Xray – spine (Cervical, Thoracic and Lumbar)
 - Ultrasonography Abdomen, Thorax
 - Barium studies
 - CT scan – Brain, Thorax, Abdomen, Spine
 - MRI – Brain, Venography, Contrast MRI
 - PET scan
- Special Investigations
 - Invasive – Arterial Blood Gas analysis, Gastroscopy, Colonoscopy, ERCP, Electrophysiology, Coronary Angiography, IVP, IVU
 - Non-Invasive – ECG, Treadmill stress test, 2 D Echocardiography, Doppler studies, EEG, EMG and nerve conduction studies, Autonomic function tests, spirometry, Somnography

10. Therapeutic Modalities & Management Skills

- Drug treatment of all common disorders including dosage, route of administration, monitoring for adverse reactions, Reporting ADR and treatment.
- Specific syndromic management
- Treatment of all Medical Emergencies including ACLS
- Haemodialysis
- Management according to recent guidelines

4. PG Activity Programme

Department of Medicine

1. Clinical

S N	Place	Training Activity	Frequency
1	OPD	Teaching and discussion of short cases Guidance on OPD work up and follow up of cases	Once or twice a week
2	IPD	Clinical rounds and Bedside Teaching	3 times a week
		Clinical Grand rounds presentation by student	Once a week
		Emergency Case discussions	Once a week
		ECG/Radiology/Special Investigations short discussions	Once a week
3	Conference/ Lecture hall	Clinical Meeting – Intradepartmental Clinical Meeting - Interdepartmental	Once a week Once a month
4	Conference/ Lecture hall	Mortality and Morbidity meeting Faculty Lecture Teaching	Once a month
5	Conference/ Lecture hall	Clinico-pathological meet Clinico-radiological meet	Once in 2 months

2. Post Graduate Activity - Clinical

S.N.	Activity	Frequency
1	Long Case presentation (History, Examination, Diagnosis, Investigations, Treatment and Follow up)	Twice a week
2	Short Case presentation (Examination, Investigations and Treatment)	Twice a week
3	ECG and Xrays discussion	Once a week
4	Interpretation of Investigations Eg ABG and Recent therapeutic advances	Once a week

3. Schedule of Academic activities

S. N.	Activity	Frequency
1	Journal Club	Once a week
2	Seminar	Once a week
3	Thesis Review	Once a week/fortnightly
4	Continuing Medical Education	Once a month
5	Departmental Research presentation	Once a month
6	Group Discussion/Quiz	Once in 3 months
7	Research Methodology workshop Good Clinical Practice Guidelines	Once in 6 months or Annually

5 Rotational Posting Training Program : Schedule

The Junior Residents in General Medicine will undergo the following rotation-training during their 3 years' course towards M D (General Medicine):

Plan for posting of students year wise

Academic Year	Posting	Duration
First Year	Medicine unit	6 months
	Medicine unit	3 months
	Medical Intensive Care unit	2 months
	Casualty	1 month
Second Year	Nephrology	2 months
	Cardiology	2 months
	Chest & TB/respiratory Medicine	2 months
	Gastroentology	1 month
	Neurology	1 month
	Endocrinology	1 month
	Psychiatry	15 days
	Dermatology	15 days
	Medical Intensive Care Unit	2 months
Third Year	Medicine unit	6 months
	Medicine unit	6 months
TOTAL		36 months

Posting in Specialty clinics

Sr.no.	Name of clinic
1	Infectious Disease Clinic
2	Rheumatology clinic
3	Diabetes clinic
4	Geriatric Clinic
5	Hematology and sickle cell clinic

6. Dissertation

Requirement of Dissertation

Postgraduate students at the All India Institute of Medical Sciences are required to submit a dissertation based on a research protocol developed by them with the help of one or more members of the faculty of the Department of Medicine or allied subspecialties.

Introduction to research methodology is considered desirable for the residents so that they can understand the concepts of validity and generalizability of the observed findings. All competent internists must keep themselves in touch with current medical literature. Moreover, they should be able to judge whether the observations reported in the literature would be applicable to their setting or not. Junior Residents who join the department are given the name of faculty member by the office of the department who will guide him/her in the research work leading to the thesis. The allotment of the Junior Residents to different faculty members for guiding the thesis work is done by the department on the basis of a well-designed rotation format. Dissertation reviews will be conducted on regular basis to monitor the progress of project and give valuable suggestions to the student.

The progress of the student for his dissertation is evaluated on a regular basis. Although these grades are not added to the theory or clinical assessment, acceptance of dissertation as being satisfactory is a pre-requisite for a resident to be able to take the M.D. Examination.

Timeline for Dissertation

Synopsis submission and approval: Process to be completed within six months of admission to MS / MD program:

Activity	July admission	January admission
Selection of topic in consultation with PG Guide	September / October	March / April
Approval by Department PG Committee		
Institute Scientific Committee approval	November / December	May / June
Institute Ethics Committee approval		
Final approval letter by Academics Section	31 st December	30 th June
Final submission to Academic Section		

7. ASSESSMENT PLAN

Evaluation of residents for their knowledge and acquisition of attitudes, skills and competencies is a continuous process throughout their 3-year period of training. Evaluation of certain attributes such as interpersonal relationships, professional responsibility, sensitivity to patient's need for comfort, ethical behavior etc. is closely observed by the teaching faculty during the day-to-day clinical work of the resident.

At the end of each clinical posting in each of the medicine units and the subspecialties mentioned above, the residents are assessed in a formal format given in the logbook by the faculty staff of the concerned unit/department. This formative assessment of the candidates is taken into account at the time of the final M.D. examination held at the end of the three year term.

Continuous Assessment

The performance of the Postgraduate student during the training period would be monitored throughout the course and duly recorded in the log books as evidence of the ability and daily work of the student.

After every Clinical Posting Assessment would be done by the faculty of the unit and endorsed by the head of the unit. It would include following points

1. Regularity of attendance
2. Punctuality
3. Interaction with colleagues and supportive staff
4. Maintenance of case records
5. Presentation of cases during rounds
6. Investigations work up
7. Bedside manners
8. Rapport with patients
9. Counseling patient's relatives for blood donation or Postmortem or organ donation and Case follow up
10. Overall quality of ward work

Students would be graded on a Likert scale for the same.

7.1 Six monthly Progress report

Every six months, the performance of the students will be assessed and they would be required to submit a six monthly report. It would also be entered in the Logbook.

Timing for six monthly evaluation

Report	July Session		January session	
	Period	To be submitted	Period	To be submitted
First	July to December	7 th January	January to June	7 th July
Second	January to June	7 th July	July to December	7 th January
Third	July to December	7 th January	January to June	7 th July
Fourth	January to June	7 th July	July to December	7 th January
Fifth	July to December	7 th January	January to June	7 th July
Sixth	January to June	10 th June	July to December	10 th December

Note: The first five reports will be taken into consideration to decide the eligibility of the student to appear for the Professional Examination.

7.2 LIST OF CERTIFIABLE SKILLS

First Year

- **Cognitive skills** – knowledge about common medical diseases and those prevalent in region.
- **Outpatient** – Assisting seniors and recognition and management of common disorders
- **Inpatient** – Recording histories, Maintaining case records, sampling, bedside procedures and administration of advised treatment. Monitoring of patients, supervised procedures, interpretation and reporting of basic laboratory and radiological investigations, BCLS, ACLS and CPR. Death certification and writing Death summary.
- **Communication skills** – With patients, relatives, nursing and ward staff

Second Year

- **Cognitive skills** – Intermediate Degree, Analysis of history, examination and investigations to achieve final diagnosis and plan treatment

- **Outpatient** – Independent patient examination and management
- **Inpatient** - Independent duties, all procedures, specialized procedural skills like Bone marrow aspiration, lumbar puncture, ICU procedures and novel therapies. Ventilatory management.
- **Communication skills** – Case presentations, communication with patient and relatives, death declaration and motivation for organ donation.
- **Additional** -Writing review of literature, observations for dissertation and UG teaching.

Third Year

Advanced procedural skills, Complete intensive care, Independent duties, Calls, Interdepartmental calls, Dissertation completion, publications, presentations at conferences.

7.3 Formative Assessment Of The Junior Residents In The Department Of Medicine

This assessment is held at regular intervals during the posting and at the end of posting of the Junior Resident in the medicine units as well as the subspecialties mentioned earlier.

Formative

7.3 .1 Theory:

Schedule	Marks
At end of First year	100 (1 Paper)
At end of Second year	100 (1 Paper)
Pre-professional	400 (4 Papers of 100 marks each)
Total	600 rks

7.3.2 Practical:

Schedule	Marks
At end of First year	100
At end of Second year	100
Pre-professional	400 (Practical 300 + Viva 100)
Total	600 Marks

Eligibility for professional assessment:

- **Candidate should secure a minimum of 40% marks in Theory and Practical separately in formative assessments, in order to be eligible to appear for professional Examination.**
- **At least four out of Six monthly progress report should be satisfactory**
- **Acceptance of Dissertation is mandatory**
- **Successful completion of Research Methodology programme at induction.**
- **The post graduate students would be require to present one poster presentation, to read one paper at a national/ state conference and to submit one research paper for publication/ during period of their postgraduate studies.**

Pre Professional Exam (Annexure 1)

Theory – 400 marks

Paper I – Basic sciences in relation to General Medicine

Paper II -General medicine including neurology, Genetics, Clinical Pharmacology, Haematology, Oncology, Poisonings and Environmental diseases, Infectious diseases and tropical medicine

Paper III- General Medicine including Cardicovascular, Respiratory, Gastoenterology, Hepatology, Critical Care, Geriatrics, Autoimmune disorders, Rheumatology

Paper IV- Recent advances in Medicine and Preventive Medicine

Pattern for Paper I, II and III

Total Marks - 100 marks

Section A

1 LAQ----- 20 marks

4 SAQ (out of 6) – 20 marks

Section B

2 LAQ – 15 marks each

4 SAQ (out of 5) – 20 marks

2 SAQ – Diagnostic/Therapeutic Dilemmas – 10 marks

Pattern for Paper IV

Total – 100 marks : 10 Semilog questions of 10 marks each.

(Minimum 40% marks in each paper and aggregate of 50% in order to be declared pass).

Practical – 400 marks

Long Cases -2	200 (100x2)
Short Cases -2	50 (25x2)
Spots	50 (10x5)
Viva	100
Total	400

Teaching Learning Methods (Annexure2)

1. Clinical training in patient care and management
2. Clinical Grand rounds and Bedside teaching
3. Clinical Case presentation and Discussion
4. Interdepartmental Clinical Meetings
5. Academic activities : Journal Club
 - Seminars
 - Mortality and Morbidity conference
 - Clinicopathological Case discussions
 - Dissertation Review
 - Clinical Quizzes/ Debates / Group Discussions
6. Research Activities : Dissertation
 - Research Methodology workshop
 - Research assistants in departmental research projects
 - Publication of Case reports and Original Articles
7. Self-grooming activities : Participation in Health camps & community outreach programs
 - Poster Presentation in conference
 - Paper presentation in conference
8. Undergraduate Teaching – Clinics, Demonstrations and Tutorials
 - Problem based learning

INTERNAL ASSESSMENT (ANNEXURE 3)

Theory –First year 100 + Second Year 100 + Pre prof 400 = 600

Practicals – First year 100 + Second Year 100 + Pre prof 400 =600

Candidate should secure a minimum of 40% marks in Theory and Practical separately, in order to be eligible to appear for Professional Examination.

Maintenance of Log book (Annexure 4)

- Every Post-graduate student shall maintain a record of skills he has acquired during the three year training period certified by the various Heads of Department in which he had undergone training.
- The students should also be required to participate in the teaching and training programme of undergraduate students and interns.
- The students should make entries of all their activities: Academic as well as extracurricular in the logbook.
- The Head of the Department shall scrutinize the Log Book once in every three months.
- At the end of the course, the student should summarize the contents and get the Log Book certified by the Head of the Department.
- The Log Book should be submitted at the time of practical examination for the scrutiny of the Board of Examiners.

Students should also participate in extracurricular activities and community outreach programs and will be given points in logbook for their Participation.

Recommended Books and Journals (Annexure 5)

Text Books (latest edition)

1. Harrison's Principles & Practice of Medicine
2. Davidson's Principles and Practice of Medicine
3. API Text book of Medicine
4. Oxford Text book of Medicine
5. Kumar & Clark : Book of Clinical Medicine
6. Cecil : Text Book of Medicine

Reference books (latest edition)

1. Hurst : The Heart
2. Braunwald - Heart Disease: A Textbook of Cardiovascular Medicine
3. Marriot's Practical Electrocardiography
4. Crofton and Douglas : Respiratory Diseases
5. Brain's Diseases of the Nervous system
6. Adam's Principles of Neurology
7. William's Text Book of Endocrinology
8. De Gruchi's Clinical Hematology in Medical Practice
9. Kelly's Text Book of Rheumatology
10. Slesenger & Fordtran : Gastrointestinal and Liver disease
11. Manson's Tropical Diseases
12. Infectious diseases – Christie
13. Critical care medicine – Cretta
14. Diabetes – Joslin Clinical Manual
15. MMT – Washington University

16. Wintrobe's Hematology.
17. Crofton and Douglas Respiratory Medicine.
18. Hepatology by Sheila Sherlock.
19. Electrocardiography by Shamroth.
20. Goodman – Gillman – Pharmacology.

Clinical Methods

1. Hutchinson's Clinical Methods
2. Macleod's Clinical examination
3. John Patten : Neurological Differential Diagnosis
4. Neurological examination in Clinical Practice by Bickerstaff
5. Localization in Neurology by De Jong

Journals

1. Lancet.
2. British Medical Journal.
3. Chest.
4. ICMR Bulletin.
5. WHO Bulletin.
6. New England Journal of medicine(NEJM).
7. Journal of Association of Physicians of India
8. Journal of Postgraduate Medicine.
9. Annals of Internal Medicine.
10. APICON Medicine Update.
11. Medical Clinics of North America.
12. Journal of Applied Medicine.

13. Journal of General Medicine.
14. American Journal of Tropical Medicine
15. Diabetes Care
16. American journal of tropical Medicine and hygiene
17. Transaction of the Royal society of Tropical Medicine and Hygiene
18. JAMA (The Journal of American Medical Association)
19. Nature