Revised Ordinance Governing
Regulations and Curriculum
of
Post Graduate Degree
M. D. General Medicine
2005

Rajiv Gandhi University of Health Sciences, Karnataka
4th 'T' Block, Jayanagar, Bangalore - 560 041

(Annexure to University Notification No. UA/SYN/ORD/PG-SSC/71/2005-06 dated 28.06.2005)

Regulations and Curriculum of Post Graduate Degree

MD General Medicine
2005

Contents

Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore.

Regulations for Post Graduate Degree and Diploma Courses in Medical Sciences

Chapter I

1. Branches of Study

1.1 Postgraduate Degree Courses

The following courses of studies may be pursued.

A. *M.D. (Doctor of Medicine)*

1. Anaesthesiology
2. Aviation Medicine
3. Anatomy
4. Biochemistry
5. Community Medicine
6. Dermatology, Venereology and Leprosy
7. Forensic Medicine
8. General Medicine
9. Microbiology
10. Pathology
11. Paediatrics
12. Pharmacology
13. Physiology
14. Psychiatry
15. Radio-diagnosis
16. Radio-threapy
17. Tuberculosis & Respiratory Medicine

and such other subjects as might have been introduced by the Universities in Karnataka prior to commencement of Health University i.e., 1.6.1996, or recognised by Medical Council of India.

B. M.S. (Master of Surgery)

1. General Surgery
2. Obstetrics and Gynecology
3. Ophthalmology
4. Orthopedics
5. Oto-Rhino-Laryngology

and such other subjects as might have been introduced by the Universities in Karnataka prior to commencement of Health University i.e., 1.6.1996, or recognised by Medical Council of India.

C. D.M. (Doctor of Medicine)

1. Cardiology and such subjects recognised by Medical Council of India.

D. M.Ch (Master of Chirurgie)

In the subjects recognised by Medical Council of India.

1.2 Postgraduate Diploma Courses

Post graduate diploma course may be pursued in the following subjects:

Child Health (D.C.H.), Obstetrics and Gynaecology (D.G.O.), Otorhinolaryngology (D.L.O.), Ophthalmology (D.O.), Orthopaedics (D.Ortho), Anaesthesiology (D.A.), Clinical Pathology (D.C.P.), Microbiology (D. Micro), Public Health (D.P.H), Forensic Medicine (D.F.M.), Dermatology, Venerology and Leprosy (D.D.V.L.), Psychiatry (D.P.M.), Radio-Diagnosis (DMRD), Radio-therapy (DMRT), Tuberculosis and Chest Diseases (D.T.C.D.) and such other subjects as might have been introduced by the Universities in Karnataka prior to commencement of Health University i.e., 1-6-1996, and recognised by Medical Council of India.

2. Eligibility for Admission

2.1 MD / MS Degree and Diploma Courses: A candidate affiliated to this university and who has passed final year M.B.B.S. examination after pursuing a study in a medical college recognised by the Medical Council of India, from a recognised Medical College affiliated to any other University recognised as equivalent thereto, and has completed one year compulsory rotating internship in a teaching Institution or other Institution recognised by the Medical Council of India, and has obtained permanent registration of any State Medical Council shall be eligible for admission.

2.2 D.M and M.Ch Courses:

D.M.: Candidate seeking admission for D.M courses in any subject must posses recognised degree of MD (or its equivalent recognised degree) in the subject specified in the regulations of the Medical Council of India from time to time.

M.Ch : Candidate seeking admission for M.Ch course in any subject must posses recognised degree of MS (or its equivalent recognised degree) in the subject specified in the regulations of the Medical Council of India from time to time.

3. Obtaining Eligibility Certificate by the University before making Admission

No candidate shall be admitted for any postgraduate degree/diploma course unless the candidate has obtained and produced the eligibility certificate issued by the University. The candidate has to make an application to the University with the following documents along with the prescribed fee :

1. MBBS pass / degree certificate issued by the University.
2. Marks cards of all the university examinations passed MBBS course.
3. Attempt Certificate issued by the Principal.
4. Certificate regarding the recognition of the medical college by the Medical Council of India.
5. Completion of internship certificate.
6. In case internship was done in a non-teaching hospital, a certificate from the Medical Council of India that the hospital has been recognised for internship.

7. Registration by any State Medical Council and
8. Proof of SC/ ST or Category I, as the case may be.

Candidates should obtain the Eligibility Certificate before the last date for admission as notified by the University.

A candidate who has been admitted to postgraduate course should register his / her name in the University within a month of admission after paying the registration fee.

4. Intake of Students

The intake of students to each course shall be in accordance with the ordinance in this behalf.

5. Duration of Study

a) M.D /M.S Degree Courses

The course of study shall be for a period of 3 years consisting of 6 terms.

b) D.M /M.Ch

The courses of study shall be for a period of 3 years consisting of 6 terms.

c) Diploma courses:

The course of study shall be for a period of 2 years consisting of 4 terms.

5.2 Requirement to complete the course -- **deleted ***

* deleted vide university notification No. UA/ORD-6/1999-2000 dated 9.4.2001

6. Method of training

The training of postgraduate for degree/diploma shall be residency pattern with graded responsibilities in the management and treatment of patients entrusted to his/her care. The participation of the students in all facets of educational process is essential. Every candidate should take part in seminars, group discussions, grand rounds, case demonstration, clinics, journal review meetings, CPC and clinical meetings. Every candidate should be required to participate in the teaching and training programme of undergraduate students. Training should include involvement in laboratory and experimental work, and research studies. Basic medical sciences students should be posted to allied and relevant clinical departments or institutions. Similarly, clinical subjects' students should be posted to basic medical sciences and allied speciality departments or institutions.

7. Attendance, Progress and Conduct

7.1 A candidate pursuing degree/diploma course should work in the concerned department of the institution for the full period as a full time student. No candidate is permitted to run or work in clinic/laboratory/nursing home while studying postgraduate course. No candidate shall join any other course of study or appear for any other examination conducted by this university or any other university in India or abroad during the period of study.

7.2 Each year shall be taken as a unit for the purpose of calculating attendance.

7.3 Every student shall attend symposia, seminars, conferences, journal review meetings,
grand rounds, CPC, case presentation, clinics and lectures during each year as prescribed by the department and not absent himself / herself from work without valid reasons.

7.4 Every candidate is required to attend a minimum of 80% of the training during each academic year of the post graduate course. Provided further, leave of any kind shall not be counted as part of academic term without prejudice to minimum 80% attendance of training period every year.

7.5 Any student who fails to complete the course in the manner stated above shall not be permitted to appear for the University Examinations.

8. Monitoring Progress of Studies

8.1 Work diary / Log Book - Every candidate shall maintain a work diary and record of his/her participation in the training programmes conducted by the department such as journal reviews, seminars, etc. (please see Chapter IV for model checklists and logbook specimen copy). Special mention may be made of the presentations by the candidate as well as details of clinical or laboratory procedures, if any conducted by the candidate. The work diary shall be scrutinised and certified by the Head of the Department and Head of the Institution, and presented in the university practical/clinical examination.

8.2 Periodic tests:

Incase of degree courses of three years duration (MD/MS, DM, MCh.), the concerned departments may conduct three tests, two of them be annual tests, one at the end of first year and the other in the second year. The third test may be held three months before the final examination. The tests may include written papers, practicals / clinicals and viva voce. Records and marks obtained in such tests will be maintained by the Head of the Department and sent to the University, when called for.

In case of diploma courses of two years duration, the concerned departments may conduct two tests, one of them be at the end of first year and the other in the second year three months before the final examination. The tests may include written papers, practicals / clinicals and viva voce.

8.3 Records: Records and marks obtained in tests will be maintained by the Head of the Department and will be made available to the University or MCI.

9. Dissertation

9.1 Every candidate pursuing MD/MS degree course is required to carry out work on a selected research project under the guidance of a recognised post graduate teacher. The results of such a work shall be submitted in the form of a dissertation.

9.2 The dissertation is aimed to train a post graduate student in research methods and techniques. It includes identification of a problem, formulation of a hypothesis, search and review of literature, getting acquainted with recent advances, designing of a research study, collection of data, critical analysis, comparison of results and drawing conclusions.

9.3 Every candidate shall submit to the Registrar (Academic) of the University in the prescribed proforma, a synopsis containing particulars of proposed dissertation work within six months from the date of commencement of the course on or before the dates notified by the University. The synopsis shall be sent through the proper channel.

9.4 Such synopsis will be reviewed and the dissertation topic will be registered by the University. No change in the dissertation topic or guide shall be made without prior approval of the University.

9.5 The dissertation should be written under the following headings:

i. Introduction
ii. Aims or Objectives of study
iii. Review of Literature
iv Material and Methods
v. Results
vi. Discussion
vii. Conclusion
viii. Summary

ix References
x. Tables
xi. Annexures

9.6 The written text of dissertation shall be not less than 50 pages and shall not exceed 150 pages excluding references, tables, questionnaires and other annexures. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound properly. Spiral binding should not be done. A declaration by the candidate that the work was done by him/her shall be included. The guide, head of the department and head of the institution shall certify the dissertation.

9.7 Four copies of dissertation along with a soft copy on a CD shall be submitted to the Registrar (Evaluation), six months before final examination on or before the dates notified by the University.

9.8 The dissertation shall be valued by examiners appointed by the University. Approval of dissertation work is an essential precondition for a candidate to appear in the University examination.

9.9 **Guide:** The academic qualification and teaching experience required for recognition by this University as a guide for dissertation work is as per Medical Council of India Minimum Qualifications for Teachers in Medical Institutions Regulations, 1998. Teachers in a medical college/institution having a total of eight years teaching experience out of which at least five years teaching experience as Lecturer or Assistant Professor gained after obtaining post graduate degree shall be recognised as post graduate teachers.

A **Co-guide** may be included provided the work requires substantial contribution from a sister department or from another medical institution recognised for teaching/training by Rajiv Gandhi University of Health Sciences/Medical Council of India. The co-guide shall be a recognised post graduate teacher of Rajiv Gandhi University of Health Sciences.

9.10 **Change of guide**: In the event of a registered guide leaving the college for any reason or in the event of death of guide, guide may be changed with prior permission from the university.

10. Schedule of Examination

The examination for M.D / M.S courses shall be held at the end of three academic years (six academic terms). The examination for D.M and M.Ch courses shall be held at the end of three years. The examination for the diploma courses shall be held at the end of two academic years (four academic terms). The university shall conduct two examinations in a year at an interval of four to six months between the two examination. Not more than two examinations shall be conducted in an academic year.

11. Scheme of Examination

11.1 M.D. / M.S. Degree

M.D. / M.S. Degree examinations in any subject shall consist of dissertation, written paper (Theory), Practical/Clinical and Viva voce.

11.1.1 Dissertation: Every candidate shall carryout work and submit a dissertation as indicated in Sl.NO.9. Acceptance of dissertation shall be a precondition for the candidate to appear for the final examination.

11.1.2 Written Examination (Theory): A written examination shall consist of **four** question papers, each of **three** hours duration. Each paper shall carry 100 marks. Out of the **four** papers, the 1st paper in clinical subjects will be on applied aspects of basic medical sciences. Recent advances may be asked in any or all the papers.

11.1.3 Practical / Clinical Examination:

In case of practical examination, it should be aimed at assessing competence and skills of techniques and procedures as well as testing students ability to make relevant and valid observations, interpretations and inference of laboratory or experimental work relating to his/her subject.

In case of clinical examination, it should aim at examining clinical skills and competence of candidates for undertaking independent work as a specialist.

The total marks for practical / clinical examination shall be 200.

11.1.4 Viva Voce: Viva Voce Examination shall aim at assessing depth of knowledge, logical reasoning, confidence and oral communication skills. The total marks shall be 100 and the distribution of marks shall be as under:

(i) For examination of all components of syllabus 80 Marks
(ii) For Pedagogy 20 Marks

11.1.5 Examiners: There shall be at least four examiners in each subject. Out of them two shall be external examiners and two shall be internal examiners. The qualification and teaching experience for appointment as an examiner shall be as laid down by the Medical Council of India.

11.1.6 Criteria for declaring as pass in University Examination: A candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory, (2) Practical including clinical and viva voce examination.

A candidate securing less than 50% of marks as described above shall be declared to have failed in the examination. Failed candidate may appear in any subsequent examination upon payment of fresh fee to the Registrar (Evaluation).

11.1.7 Declaration of distinction: A successful candidate passing the University examination in first attempt will be declared to have passed the examination with distinction, if the grand total aggregate marks is 75 percent and above. Distinction will not be awarded for candidates passing the examination in more than one attempt.

11.2 D.M / M.Ch:

The examination shall consist of theory, clinical/practical and viva voce examination.

11.2.1 (Theory) (Written Examination): The theory examination shall consist of **four** question papers, each of **three** hours duration. Each paper shall carry 100 marks. Out of the **four** papers, the first paper will be on basic medical sciences. Recent advances may be asked in any or all the papers.

11.2.2 Practical / Clinical Examination:

In case of practical examination it should be aimed at assessing competence, skills of techniques and procedures as well as testing students ability to make relevant and valid observations, interpretence and experimental work relevant to his / her subject.

In case of clinical examination it should aim at examining clinical skills and competence of candidates for undertaking independent work as a specialist. Each candidate should examine at least one long case and two short cases.

The maximum marks for Practical / Clinical shall be 200.

11.2.3 Viva Voce: Viva Voce examination shall aim at assessing thoroughly depth of knowledge, logical reasoning, confidence and oral communication skills. The maximum marks shall be 100.

11.2.4 Examiners: There shall be at least four examiners in each subject. Out of them, two shall be external examiners and two shall be internal examiners. The qualification and teaching experience for appointment as an examiner shall be as laid down by the Medical Council of India.

11.2.5 Criteria for declaring as pass in University Examination: A candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory, (2) Practical including clinical and viva voce examination.

A candidate securing less than 50% of marks as described above shall be declared to have failed in the examination. Failed candidate may appear in any subsequent examination upon payment of fresh fee to the Registrar (Evaluation).

11.3 Diploma Examination:

Diploma examination in any subject shall consist of theory (written papers), Practical / Clinical and Viva - Voce.

11.3.1 Theory: There shall be **three** written question papers each carrying 100 marks. Each paper will be of **three** hours duration. In clinical subjects one paper out of this shall be on basic medical sciences. In basic medical subjects and para clinical subjects, questions on applied clinical aspects should also be asked.

11.3.2 Practical / Clinical Examination:

In case of practical examination it should be aimed at assessing competence, skills related to laboratory procedures as well as testing students ability to make relevant and valid observations, interpretation of laboratory or experimental work relevant to his/her subject.

In case of clinical examination, it should aim at examining clinical skills and competence of candidates for undertaking independent work as a specialist. Each candidate should examine atleast one long case and two short cases.

The maximum marks for practical / Clinical shall be 150.

11.3.3 Viva Voce Examination: Viva Voce examination should aim at assessing depth of knowledge, logical reasoning, confidence and oral communication skills. The total marks shall be 50.

11.3.4 Criteria for Pass: Criteria for declaring as pass in University Examination: A candidate shall secure not less than 50% marks in each head of passing which shall include (1) Theory, (2) Practical including clinical and viva voce examination.

A candidate securing less than 50% of marks as described above shall be declared to have failed in the examination. Failed candidate may appear in any subsequent examination upon payment of fresh fee to the Registrar (Evaluation).

11. 3.5 Declaration of distinction: A successful candidate passing the University examination in first attempt will be declared to have passed the examination with distinction, if the grand total aggregate marks is 75 percent and above. Distinction will not be awarded for candidates passing the examination in more than one attempt.

11.3.6 Examiners: There shall be at least four examiners in each subject. Out of them, two shall be external examiners and two shall be internal examiners. The qualification and teaching experience for appointment as an examiner shall be as laid down by the Medical Council of India.

12. Number of Candidates per day. The maximum number of candidates for practical/clinical and viva-voce examination shall be as under:

MD / MS Course: Maximum of 6 per day
Diploma Course: Maximum of 8 per day
DM / M.Ch Course: Maximum of 3 per day

CHAPTER II

GOALS AND GENERAL OBJECTIVES OF POSTGRADUATE MEDICAL EDUCATION PROGRAM

GOAL

The goal of postgraduate medical education shall be to produce competent specialist
and /or Medical teacher:

(i) who shall recognise the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy;

(ii) who shall have mastered most of the competencies, pertaining to the specialty, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system:

(iii) who shall be aware of the contemporary advances and developments in the discipline concerned;

(iv) who shall have acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology; and

(v) who shall have acquired the basic skills in teaching of the medical and paramedical professionals.

GENERAL OBJECTIVES

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

i) Recognise the importance of the concerned speciality in the context of the health need of the community and the national priorities in the health sector.

ii) Practice the speciality concerned ethically and in step with the principles of primary health care.

iii) Demonstrate sufficient understanding of the basic sciences relevant to the concerned speciality.

iv) Identify social, economic, environmental, biological and emotional determinants of health in a given case, and take them into account while planning therapeutic, rehabilitative, preventive and promotive measures/strategies.

v) Diagnose and manage majority of the conditions in the speciality concerned on the basis of clinical assessment, and appropriately selected and conducted investigations.

vi) Plan and advise measures for the prevention and rehabilitation of patients suffering from disease and disability related to the specialty.

vii) Demonstrate skills in documentation of individual case details as well as morbidity and mortality data relevant to the assigned situation.

viii) Demonstrate empty and humane approach towards patients and their families and exhibit interpersonal behaviour in accordance with the societal norms and expectations.

ix) Play the assigned role in the implementation of national health programmes, effectively and responsibly.

x) Organise and supervise the chosen/assigned health care services demonstrating adequate managerial skills in the clinic/hospital or the field situation.

xi) Develop skills as a self-directed learner, recognise continuing educational needs; select and use appropriate learning resources.

xii) Demonstrate competence in basic concepts of research methodology and epidemiology, and be able to critically analyse relevant published research literature.

xiii) Develop skills in using educational methods and techniques as applicable to the teaching of medical/nursing students, general physicians and paramedical health workers.

xiv) Function as an effective leader of a health team engaged in health care, research or training.

STATEMENT OF THE COMPETENCIES

Keeping in view the general objectives of postgraduate training, each disciplines shall aim at development of specific competencies, which shall be defined and spelt out in clear terms. Each department shall produce a statement and bring it to the notice of the trainees in the beginning of the programme so that he or she can direct the efforts towards the attainment of these competencies.

COMPONENTS OF THE PG CURRICULUM

The major components of the PG curriculum shall be:

- Theoretical knowledge

- Practical/clinical Skills

- Training in Thesis.

- Attitudes, including communication.

- Training in research methodology.

Source: Medical Council of India, Regulations on postgraduate medical education, 1997.

(Annexure to University Notification No. UA/SYN/ORD/PG-SSC/71/2005-06 dated 28.06.2005)

Chapter III

M. D. General Medicine

(Annexure to University Notification No. UA/SYN/ORD/PG-SSC/71/2005-06 dated 28.06.2005)

Course Description

M.D. – General Medicine

GOAL

The goal of post graduate course in M.D. General Medicine training is to train a MBBS graduate into a competent, caring and astute Physician who:

Has acquired the competencies pertaining to medicine, that are required to be practiced in the community, backed by scientific knowledge and skill base. Has acquired the skills to effectively communicate with the patient, family and the community.

Is aware of the contemporary advances and developments in medical sciences related to Medicine and evidences keen interest in continuing medical education.

Is oriented to principles of research methodology.

Recognises the health needs of the population and carries out professional obligations in keeping with the principles of National Health Policy and professional ethics and

Be a motivated 'teacher' - defined as a doctor keen to share his knowledge & skills with his medical & paramedical professionals.

OBJECTIVES

The following objectives are laid out to fulfil the goals of the course. These are to be achieved by the time the candidate completes the course.

At the end of the training period the candidate must be able to :

Practice the speciality of medicine maintaining high professional standards. Identify social, economic, environmental, biological determinants of an adult and institute diagnostic, therapeutic, rehabilitative, preventive and promotive measures to provide holistic care.

Collect detailed history, perform full physical examination and make proper clinical diagnosis. Perform relevant investigative and therapeutic procedures for the care of the

patients and interpret important imaging and laboratory results.

Diagnose illness based on the analysis of history, physical examination and confirm on further investigative work up. Plan and deliver comprehensive treatment using the principles of rational drug therapy.

Manage emergencies efficiently by providing BLS and ALS in emergency situations.

Demonstrate skills in documentation of case details including epidemiological data.

Knowledge of basic sciences relevant to medicine appropriately. Recognise conditions that may be outside the area of the speciality / competence and to refer them to an appropriate specialist.

Respect patients rights and previleges including patients rights to information and right to seek a second opinion. Demonstrate empathy and humane approach towards patients and their families and respect their sensibilities.Demonstrate communication skills in explaining management and prognosis, providing counseling and giving health education messages to patients families and communities.

Develop skills of a self directed learner, recognise continuing medical educational needs, use appropriate learning resources, and critically analyse relevant published literature in order to practice evidence based medicine.

Demonstrate competence in basic concepts of research methodology and epidemiology.

Facilitate learning of medical / nursing students, practicing physicians, paramedical health workers and other providers as a teacher – trainer.

Under take audit, use information technology tools and carry out research – both basic and clinical, with the aim of publishing the work and presenting the work at various scientific forum.

Professional honesty and integrity are to be maintained.

Be humble and accept the limitation in the knowledge and skill and to seek help from colleagues when needed.

Duration of the course

The course of the study shall be for 3 years consisting of six terms and each year consisting of two terms.

Course content

Knowledge

1. BASIC SCIENCES :

Applied aspects of Anatomy, Physiology, Biochemistry, Pathology, Haematology and Microbiology and Pharmacology

2. GENERAL MEDICAL TOPICS

History of medicine

Clinical History and examination –Collecting history in detail, carryout clinical examination of various systems & diagnose the condition on clinical grounds.

Rational of diagnostic tests – ordering diagnostic tests with prioritising the needs, based on the clinical, hospital and the socio-economic condition of the patient.

Concept of Essential Drugs and Rational use of drugs.

Communication skills with patients – Learning effective communication skills including compassionate explanation and giving emotional support to the suffering patient and his family.

Statistics – Descriptive statistics, analytical statistics, qualitative research methodology, research design and critical review of statistical procedures.

Principles of Evidence based medicine – Understanding journal based literature study; the value of text book, reference book articles; the value of review articles; original articles and their assessment. Understanding the value of retrospective, prospective, randomised controlled and blinded studies – the principles including meanings of various bio-statistical tests applied in these studies.

Medical Ethics & Social responsibilities of physicians

Use of computers in medicine

3. GENERAL MEDICINE TOPICS

Genetics: - Basic principles of genetics, molecular basis of genetics, genetic engineering, human genome mapping, chromosomal disorders, genetic basis of cancer, genetic & gene therapy.

Immunology: - Basics in immunology, Auto immune disorders, immuno deficiency diseases, hypersensitivity reactions – anaphylaxis, angioedema, adverse drug reactions, Complement, HLA system. Transplantation immunology.

Fluid and electrolyte balance / Acid - Base metabolism – The body fluid compartments, metabolism of water and electrolytes, factors maintaining homeostasis, diagnosis and management of acidosis and alkalosis & Electrolyte imbalance.

Blood transfusion: – Blood grouping, cross matching, component therapy, complications of blood transfusion, blood substitutes.

Shock and Multi-organ Failure:- Types of shock, diagnosis, resuscitation pharmacological support, ARDS, ventilator support and its prevention.

Nutrition : – RDA of nutritional substances, nutritional assessment, nutritional recall, metabolic response to stress, malnutrition, PCM, nutritional deficiency states, nutritional response in stress, enteral and parenteral nutrition, dietary advice in obesity, DM, renal, hepatic failure, hyperlipidaemia, IHD.

Poisoning: - OP compound, sedatives, alcohol, corrosives, anti-convulsants, general principles of management & specific management of poisons including snakes bites, scorpion stings.

Toxicology – Heavy metal posoning, Flurosis, Lathyrism

Pre anaesthetic and post operative medical problems

Geriatric Medicine

Pregnancy Medicine

Adolescent Medicine

4. INFECTIOUS DISEASES

Basic considerations: - Host- parasite interactions, Immunisation principles, Lab.diagnosis of infectious diseases, Vaccination (BCG, Typhoid, Tetanus, Hepatitis A & B), Antimicrobial agents, Mol. Mechanism of microbial pathogenesis. Clinical Syndromes (Community setting): - Septic shock, Infective endocarditis, PUO, Infectious diarrhoea, Bacterial Food Poisoning, Common STD Syndromes, Inf. Complications of Bites and stings, Infections of skin, muscle and soft tissue, Osteomyelitis, Intra-abdominal infections and abscess, P.I.D. Nosocomial Infections: Hospital Acquired infections, Infections in Transplant pts, Infection control in hospital.

Bacterial Infections: Pneumococcal, Staphylococcal, Streptococcal & Enterococcal, Tetanus, Diphtheria, Anthrax, Listeria, Gas gangrene, Botulism, Other clostridial infections.

Meningococcal, H.pylori, Salmonella, Shigella, Cholera, Legionella, Moraxella Brucella, Pseudomonas, Mixed anaerobic infections, H. influenza, Gonococcal, Pertussis, Plague, Campylobacter, Donovanosis, Actinomycosis.

Anaerobic infections

Microbacterial diseases: Tuberculosis, Leprosy, Non-tubercular mycobacterium.

Spirochaetal: Syphilis, Leptospirosis, Endemic trepanomatosis.

Rickettsiae: R.M. Spotted fevers

Mycoplasma: M. pneumoniae

Chlamydia: Psittacosis

Fungal Infections: Candidiasis, P.carinii, Aspergillosis, Mucormycosis,

Coccidiodomycosis, Cryptococcosis, Histoplasmosis.

Viral Infections: Antiviral chemotherapy
DNA viruses: Herpes simplex, CMV, Chicken pox vaccinia, other pox viruses.
Varicella zoster, Parvovirus

Ebstein Barr, HPV

DNA & RNA respiratory viruses: Influenza

RNA Viruses: Rabies, ARBO viruses (dengue, KFD, Japanese encephalitis), Human retrovirus, Entero, Mumps, Rubella
HIV & AIDS: - Epidemiology, clinical stages, complications, opportunistic infections(OI), laboratory investigations, HAAR T, PEP & counselling.

Protozoal and Helminthic infections : Life History, Clinical Manifestations, lab. diagnosis and therapy, Amoebiasis, Malaria, Giardiasis, Taeniasis, Echinococcosis, E.vermicularis, T. trichiura, Ascariasis, Hookworm infections, Filariasis, Leishmaniasis, Other free living amoeba, Toxoplasmosis, Trichinella, Trypanosomiasis, Trichomoniasis, H.nana, D.latum, Schistosomiasis, Larva migrans syndrome.

5. CARDIO VASCULAR DISEASES:

Rheumatic Fever & heart diseases Congenital
heart diseases
Atherosclerosis, coronary artery disease
Primary and Secondary hypertension
Cardiac failure

Cardiac arrhythmias – tachy & brady arrhythmias, heart blocks

Infective endocarditis

Myocardial & Pericardial diseases

Pregnancy and heart diseases
Diseases of aorta
DVT and pulmonary embolism
Peripheral arterial and venous diseases
Acute and Chronic cor pulmonale
Disease of Lumphatic system
Noncardiac surgery in cardiac patients - assessment for anaesthesia and surgery
Cardiac drugs and drug interaction
Guidelines published by standard cardiology journals.

Apart from pathophysiology, clinical features and management, the importance of primary and secondary prevention must be stressed.

Clinical cardiology.

* Adequate exposure to cardiac OPD work, cardiology ward work and coronary care unit:

* One month in cardiac OPD / ward, and one month in CCU

* During the posting, the student should accompany his cases for stress-ECG (TMT), echocardiography and cath lab.

6. RESPIRATORY MEDICINE

Applied aspects of Respiratory system & Respiratory Physiology.

Mycobacteriology: Diagnostic methods, pathogenesis of Mycobacterial diseases, their clinical manifestations. Pulmonary and extra pulmonary, as well as disseminated tuberculosis, its pathogenesis, clinical features, diagnosis and management, National programme on Tuberculosis including DOTS.

Non tuberculous Respiratory infection:
Community and hospital acquired pneumonias, infections of tracheo- bronchial tree including cystic fibrosis, parasitic and fungal diseases of lungs, HIV infections and lungs.

Allergic diseases of respiratory system including bronchial asthma.

Interstitial, industrial, occupational lung diseases including Interstitial Pulmonary Fibrosis.
Suppurative lung diseases
Granulomatous diseases of lungs including sarcoidosis.
Pulmonary manifestations of systemic diseases and drug induced lung diseases.
Tropical pulmonary eosinphilia
Diseases of pluera, mediastinum and diaphragm.

Intra-thoracic malignancies including etiology, diagnosis, staging and management of lung cancer.
Sarcoidosis

7. CENTRAL NERVOUS SYSTEM

Applied aspects of anatomy -Brain and Spinal cord

Evaluation of CNS diseases
Clinical approach to: - Coma, Headache, Seizure, Dementia, Aphasia,
Sleep disorders

Brain death

Cerebrovascular diseases
Cranial Nerve disorders
CNS infections, Bacterial, Viral, Fungal, Neurotuberculosis, parasitic.
Motor system diseases
Tumors of Brain and Spinal cord
Extra pyramidal disorders Cerebellar
disorders Demyelinating diseases
Neuro-degenerative disorders Nutritional
disorders affecting nervous system, Cerebrovascular anomalies
Peripheral Neurites, polynurites & Guillain Barre Syndrome
Cervical Spondylosis
Disorders of muscle-Dystrophy, Myopathies & Myasthenic syndrome

8. GASTRO INTESTINAL & HEPATOBILIARY SYSTEM

Disease of Oesphagus

Peptic ulcer disease and its management

Upper Gastrointestinal bleed

Lower Gastrointestinal bleed

Approach to Mal-absorption and Mal-digestion

Inflammatory bowel diseases

Irritable Bowel Syndrome (I.B.S.), Gastrointestinal motility disorders
Chronic Diarrhoea Disorders
of Peritoneum G.I function
tests

Liver

Bilirubin metabolism
Cirrhosis of Liver, Biliary Cirrhosis & N.C.P.F& Budd Chiari syndrome

Acute & Chronic Hepatitis - Viral, Toxic
Alcoholic Liver Disease
Amoebic Liver Abscess
Obstructive Jaundice

Acute & Chronic Hepatic insufficiency

Cong. Hyperbilirubinemias

Tumours of the liver

Drugs and Liver

Diseases of Gall bladder

AC & Chronic cholecystitis

Gall Stone

Diseases and disorders of Pancreas :- Acute & Chronic Pancreatitis

9. ENDOCRINOLOGY & METABOLISM

Principles of Endocrinology : Mechanism of action of hormones & receptors
Assessment of endocrine function

Hypothalamus & Pituitary : Approach to pituitary disease, diseases of anterior & posterior-pituitary tumors, Acromegaly, short stature, prolactinoma, diabetes insipidus, SIADH, Cushing's disease, Panhypopituitarism, Sheehan's syndrome, Non secretary adenoma.

Pancreas : Hypoglycemia, Insulinomia

Diabetes Mellitus : Prevalence, Etiopathogenesis, ADA criteria for diagnosis, ADA classification, Clinical features, investigations, Complications-micro & macro-vascular, Management-Diet, Exercise, oral hypoglycemics, Insulin therapy in Type 1 & type 2, Gestational diabetes, Diabetic keto-acidosis, HONK, Hypoglycemia

Thyroid : Iodine metabolism, Iodine deficiency disorder, Synthesis and secretion of

thyroid hormone, hypothyroidism, hyperthyroidism, Cretinism, Sick euthyroid syndrome, thyroiditis, evaluations of nodule, ca. thyroid.

Parathyroid : Primary hyperparathyroidism, Hypoparathyroidism, Tetany, Pseudohypoparathyroidism.

Adrenal :– Steroid biochemistry, Addison's disease, Cushing's syndrome, Congenital adrenal hyperplasia, Pheochromocytoma, primary aldosteronism. Gonads: – testes – Men- Hypogonadism – PGAS, hypogonadotropic (Kallman's syndrome), Hypergonadotropic (Klinefelter's syndrome), delayed puberty, precocious puberty, infertility.

Ovary : Delayed puberty – Turner's syndrome, polycystic ovarian disease, Hirsuitism, precocious puberty, approach to amenorrhea, postmenopausal syndrome, current concepts in management

10. SEXUAL MEDICINE:

Applied aspects of anatomy and physiology of Reproductive system – male & female. Human sexual response.

Etiology, Clinical features and management of common sexual problems – male & female. Effects of psychiatric illness and systemic diseases including commonly used drugs on reproductive system.
Infertility – male & female – etiology, clinical features, investigations and Physician's role in management.

11. METABOLIC BONE DISORDERS (MBD)

Bone mineral, metabolism, osteoporosis
-Osteomalacia & rickets
Carcinoid tumours, hyperlipidemia.

12. NEPHROLOGY

Evaluation of patient with renal diseases

Interpretation of laboratory tests

Acute renal failure
Chronic renal failure
pathogenesis, pathology, clinical features
conservative management
Diet in renal failure
Acute glomerulonephritis including idiopathic GN
Nephrotic syndrome
Urinary tract infection
Drugs and kidney
Nephrolithiasis and obstructive disorder
Renal involvement in systemic diseases
Diabetic nephropathy
Pregnancy and kidney
Basics of renal transplantation

Organ donation
Concept of brain death and cadaveric transplantation
Electrolyte disturbance and its management
Immuno- suppressive drugs
Slow continuos renal replacement therapy

13. HAEMATOLOGY:

Haemotopoiesis
Anaemias- causes, clinical features and laboratory approach and treatment. Iron deficiency, megaloblastic, haemolytic and aplastic anaemias.
Various thalasemic syndromes, Hb Electrophoresis.
Polycythaemias.
Problem of Iron over load
Autoimmune blood disorders
Transfusion medicine
Recognition and management of Transfusion disorders
Transfusion in patients with Hematological diseases (component therapy)
Coagulopathy
Hypercoagulable state
Leukaemias and its managements
Myelodysplastic syndromes and Mycloproliferative disorders
Platelet disorders-Purpuras - Primary & sec.
Therapeutic plasmapharesis and Cytapharesis. ABVP,
CHOPChemotherapy.

14. RHEUMATOLOGY AND CONNECTIVE TISSUE DISORDERS

Structure of connective tissue – collegen, elastin & proteoglycans
Immunological mechanisms & Immunogen in
Rheumatoid arthritis
SLE
Osteo arthritis
Vasculitis
Sero negative spondyloarthropathy
Crystal arthritis
Inflammatory /metabolic myopathies
Arthropathies associated with Endocrine
diseases
Haematologic diseases
Malignant diseases
Fibromyalgic syndromes
Low back pain
Systemic selerosis
Myositis
Mixed connective Tissue disorder (MCID)

15. EMERGENCY MEDICINE

Basic & Advanced Life Support
Shock Syndromes
Anaphylaxis
Acid base imbalance
Multi organ failure
Poisoning – OP compound, sedatives
Basics of mechanical ventilation
Transfusion reaction
Upper G.I hemorrhage Upper
airway obstruction Tension
Pneumothorax Acute asthma,
ARDS Cardiac arrest
Cardiac Temponade
Hypertensive emergencies & urgencies
Status epilepticus
Coma in Diabetes Endocrinal
emergencies Cerebral
Malaria Emergencies in
cancer Infections in ICU
Antibiotic usage in ICU
Enteral & Parental Nutrition
Brain death
List of Skills
Cardiopulmonary resuscitation / cardio-version / defibrillation
Emergent airway intubation
Central venous cannulation
Arterial cannulation
Mechanical ventilation
Temporary transvenous pacemaker
Percutaneous tracheostomy
Pericardiocentesis
Therapeutic bronchoscopy, Tube thoracotomy

16. MEDICAL ONCOLOGY

Basics of Oncology
Normal cell, Cancer cell- Cell cycle & its Regulation
Molecular Biology Techniques such as Southern blot, Northern blot, Western blot,
Karyotyping , FISH, PCR.
Metastatic cascade
Angiogenesis
Basic principles of Chemotherapy-
Drug classification
Drug action Side
ffects
Radiotherapy
Structure of Atom, radioactivity and its effect on cell, side effects
Clinical oncology
Hematologic Cancers
Hematopoiesis
Leukemias & Lymphomas – Classification, Diagnosis, management

Solid tumors - Br.Carcinoma, Hepatomas, MM- Principles of Management
Blood component therapy
Bone Marrow transplant
Newer Modalities in Therapy & Supportive Care
Biologic Response Modifiers
Gene therapy
Stem cell transplant
Newer antibiotics
Nutritional support
Growth factors

17. RADIO DIAGNOSIS

I General:-The importance and scope of different radiological examinations in the diagnosis, treatment and management of various diseases.

II. Newer imaging modalities: Different imaging modalities including the newer imaging techniques - ultrasonography, colour doppler imaging, colour flow mapping, Computed Tomography, MRI, Nuclear imaging, PET and SPECT- basic principles

III. Protocols to be followed while referring for various routine investigations

Barium studies

Ultrasonography

Computed tomography

MRI imaging

Nuclear medicine investigations

IV. Various contrast investigations and contrast materials used in imaging techniques and adverse reactions.

V. Interpretation of plain, contrast X-rays, Ultrasonography, CT,MRI & NM

18. PSYCHIATRY

Objectives

Students are required to identify and understand:

Delirium and dementia	- -	Common causes Principles of management of each syndrome
Misuse of and dependence on alcohol and drugs	- - - -	Diverse presentations Complications Outcomes of the conditions Principles of prevention and treatment
Schizophrenia and related (including acute and chronic delusional disorders)-	- - -	Recognition of disorders disorders Treatment of an acute episode Principles of long term management
Depressive and manic disorders sorders of all degrees of severity	- - -	Recognition of mania and depressive Co-morbidity of depressive and other disorders Treatment of uncompleted cases
Acute reactions to stress, PTSD, and adjustment disorders (including reactions to terminal illness and normal and abnormal grief)	- -	Recognition of these conditions Management of uncompleted cases
Anxiety, phobic and obsessional disorders	- -	Recognition of disorders Treatment of uncomplicated anxiety and obsessional disorders
Somatoform disorders	- - - - -	How physical symptoms arise without physical pathology Concepts of conversion disorders Hypochondriasis Somatoform disorders Principles of management

Disorders of eating sleeping, functions	- Clinical presentations psychosexual - Principles of management of uncomplicated cases
Personality disorders	- Concepts of personality and personality disorders - Influence on physical and mental illnesses
Mental retardation	- Principles of prevention - Recognition of the most common syndromes - Principles of management
Childhood psychiatric disorders	- Common psychiatric disorders of childhood and adolescence - Principles of management
Old age psychiatric disorders	- Impact of aging on health and psychiatric illness - Recognition and principles of management of psychiatric disorders in the elderly
Suicide	- Assessment of risk - Management of potentially suicidal patients and of those recovering from self – harm
Other syndromes	- Dangerousness and the management of potentially violent people - Physical abuse of children and adults

19. DERMATOLOGY / STD

The skin manifestations of various diseases:-
Leprosy
STD
HIV
Systemic infections and infestations
Internal malignancy
Drug reactions
Systemic diseases with skin manifestation
Psoriasis
Vitiligo
Fungal infections
Lichen planus
Viral , bacterial infections
Cutaneous metastasis
Panniculitis

20. OCCUPATIONAL DISEASES

Note : The list of topics given are general guidelines. They are neither comprehensive nor all inclusive.

SKILLS TO BE ACQUIRED

List of essential competencies.

Clinical Assessment skills.
Laboratory diagnostic abilities.
Interpretation abilities.
Communication Abilities, and
Therapeutic skills.

Skill of history taking

Active and positive listening .
Empathy.

Non-verbal communication.
Art of history taking in handicapped individuals like deaf , elderly, aphasics.
Ascertaining life history and life style.

Tactful elicitation of personal and confidential History.

Carry out meticulous general & systemic examination. Specific areas of examination based on clues in the history. Make a personality assessment.

Information, evaluation skills, (interpretation).

Diagnostic formulation and differential diagnosis.
Evaluate, role of personal and social factors contributing to the patient's behavior pattern.
Formulate plan of management which includes referral to a specialist, whenever appropriate.

Information-giving skills.

Pass information to promote health.
Explain the implication of diagnosis to patient as well as the family. Inform the patient about beneficial aspects and also potential adverse effects of treatment.

Philosophical approach to life and death.

Reporting skills.

Report verbally or in writing or any other media of communication
To medical colleagues. To
lay people.
To Non-medical agencies involved in patient care.
Promote public education.

Promote skills in case reporting and publication of data.

Treatment skills.

Promote compliance with prescribed treatment.

Basic prescribing skills for medical disorders commonly encountered

(rational drug prescribing skills.)
Recognise earliest adverse effects of treatment and distinguish them from those of symptoms of illness.

Learning skills.

Sustained self directed independent learning. Keeping abreast with advances in medical practice. Internalising the concept of life long learning.

Access to computer usage, including internet browsing.
Critical appraisal of latest and best information and data analysis.
Skills of using library facilities (including electronic media).

Team work skills

Co-operate with: Medical colleagues, Non medical health care workers, Patient and his family organizations, Community services.

Non Governmental Organisations & General Public. List of clinical, procedural and practical skills

Competency list

Note: Figures shown against the items indicate minimum number.
Key PI = Performs independently, PA = Performs under assistance

Description of competencies	Number
Clinical Assessment Skills (All PI)	
Elicit a detailed clinical history including - Dietary recall, calorie and protein estimation	50
Perform a thorough physical examination including	
Anthropometry	10
Optic fundi examination	20
Per rectal examination	05
Procedural skills (All PI)	
Test dose	05
Sampling for fluid cultures	10
IV- Infusions	20
Intravenous cannulation	10
Venesection	05
ECG recording	50
Pleural tap	10
Peritoneal tap	10
Pericardio-centesis	05
Lumbar puncture	15
Resuscitation	
BLS	30

Description of competencies	Number
ALS	10
Central line, CVP - 05	
Blood and blood component (platelet, FFP, etc.,) transfusions	10
Arterial puncture for ABG	20
Liver biopsy	10
Liver abscess aspiration	05
Bone marrow aspiration and biopsy	10
Peritoneal /Pleural	2 each
Glucometer usage	30
Urine analysis	20
Urinary Catheterization	15
Ryle's , Stomach tube use	20
Sputum- Gram's / AFB staining	10 each
Respiratory management (All PI)	
Nebulization	30
Inhaler therapy	30
Oxygen delivery	30
List of PA skills:	
Peritoneal dialysis	05
Haemodialysis	05
Critically ill person (All PI skills)	
Monitoring a sick person	50
Endotracheal intubations	20
CPR	10
Using a defibrillator	10
Pulse oximetry	50
Feeding tube use	10
Intercostal tube placement with underwater seal	10
Sedation	10
Analgesia	20
Venesection	
CUP monitoring	
List of PA skills*:*	
Assessment of brain death	10
Laboratory – Diagnostic Abilities (All PI) Urine protein, sugar, microscopy	10
Peripheral blood smear	10

Description of competencies	Number
Malarial smear	10
Ziehl Neelsen method smear – sputum, gastric aspirate	10
Gram's stain smear – CSF, pus	10
Stool pH, occult blood, microscopy	10
KOH smear	2
Cell count –CSF, pleural, peritoneal, any serous fluid	20

Interpretation Skills (All PI)

Clinical data (history and examination findings), formulating a differential diagnosis in order of priority, using principles of clinical decision – making, plan investigative work-up, keeping in mind the cost – effective approach i.e., problem solving and clinical decision making.

Blood, urine, CSF and fluid investigations – hematology, biochemistry. X-ray chest, abdomen, bone and joints

ECG

Treadmill testing

ABG analysis

CT scan chest and abdomen CT scan head and spine Barium studies

IVP, VUR studies Ultrasound abdomen Pulmonary function tests

Immunological investigations

Echocardiographic studies

Interpretation under supervision (PA)

Description of competencies	Number
Hemodynamic monitoring	10
Handling Ventilators	10
Cardiac pacing	05
GI Endoscopy – Upper	20
Lower	05
Bronchoscopy	05
Tracheostomy	05
U /S abdomen	20
U / S guided aspiration	10
ECHO	20
TMT	20
Nuclear isotope scanning	10
MRI scanning of head / chest	10

To be familiar with

Radio frequency ablation
PTCA & Stent
Peripheral & Carotid doppler
Peripheral Angioplasty
PFT
Nerve Conduction Studies

Interpretation Skills

All Haematological & Biochemical investigations
X-ray of chest, abdomen, bones & joints
Barium studies
ECG
Echo
TMT
Ultra-sound abdoman
Doppler Studies
CT / MRI of head, chest & abdoman
Immunological studies & Polymerase chain reaction
PFT
EEG / ENMG

Nutritional advice in DM

Obesity / Malnutrition
Cirrhosis of liver
Renal failure
Hypertension / Ischemic Heart Disease
Diarrhoea

Principles of Rehabilitation in

Strokes & Neuro degenerative diseases
Muscular dystrophies
COPD / Suppurative lung diseases
IHD
Epilepsy & Others

Demonstrating professionalism ethical behaviour (humane and professional care patients) , Self directed learning

Utilization of information technology, Medline search, Internet access, computer usage, identifying key information sources, literature search, information management

Research methodology -interpretation and presentation of scientific data

Therapeutic decision-making

Managing multiple problems simultaneously

Assessing risks, benefits and costs of treatment options
Involving patients in decision-making
Selecting specific drugs with in classes
Rational use of drugs

Training Programme:

To attain proficiency in the subject and to practice the post-graduate student has to be trained in an organised and structured manner. Graded responsibility is to begiven to the post-graduate student on a progressive scale in an integrated manner in the three year course with the trainee being able to attain his / her identity as a physician capable of holistic approach to the patient care.

Independent self - directed problem based learning.
Skill acquisition oriented learning.
Ambulatory and Emergency care.

I year

- Ability to obtain a clear and thorough history, physical examination and follow up notes. Capability to manage routine & on call duties of the wards. Supervising and follow up of investigations. Ability to develop a rational treatment plan. Initiate and carry out treatment. Identify emergency problems, seek help from seniors & initiate treatment so as to develop decision making and judgment skills.
- Supervise house- surgeon's work.
- To prepare synopsis for dissertation.

II year

- Develop basic knowledge of the speciality subject in the care of the patient.
- Witness / perform procedures in the specialty.
- Learn the indications and contraindications of the procedures.
- To learn when to refer a case to the sub-specialist.
- To know when to intervene and when not to intervene in a case.
- To carry out data collection for the dissertation.

III year

- Able to handle case independently- diagnose and manage the cases in the unit/ ward.
- Diagnose and treat cases in emergency & ICU set up.
- Problem identification of referral cases & advice suitably. Supervise I yr post-graduate students
- Teach interns
- Teach undergraduates
- Help junior residents in his responsibilities at all levels and to intervene at appropriate time when the occasions demand
- In problem cases, to seek help from senior staff members.
- Successfully complete data collection, analysis and writing up & submission of dissertation.

ROTATION POSTINGS

General Guidelines

(a) Where all departments of sub-specialties are available:

Department	Duration of posting	Year of posting
General Medicine	24 months	I/III YR Emergency
	2months	II
I.C.U.	1 month	II Cardiology
Including ICCU	2 months	II
Neurology	1 month	II
Gastroenterology	1 month	II
Respiratory Diseases	1 month	II
Nephrology	1 month	II
Endocrinology	15 days	II Skin 15
days		II Psychiatry
	15 days	II YEAR

(b) Where separate sub-specialties are NOT available:

Minimum 4 months in Emergency and 1 month in ICU. If any sub-specialty is available, the duration of posting in the department shall be as in item 1. The rest of the training will be in the department of Medicine but the specialist shall ensure:

i) Adequate exposure to cases of sub-specialties.

ii) A minimum exposure to the following procedures:

Department	*No. of Procedures*
Cardiology	5
Gastroenterology	5
Respiratory Medicine	10
Neurology	10
Nephrology-Haemo dialysis and Peritonial dialysis	5 each
TMT	5
Holter	5
Upper GI Endoscopy	10
Colonoscopy	3
Sigmoidoscopy	3
Bronchoscopy	2
Pleural biopsy	2
EMG	2
EEG	5
Muscle biopsy	2
Peritoneal dialysis	5
Haemo dialysis	5

iii) In addition, a minimum number of cases of the following sub- specialities must be seen and entered in the log book:

Psychiatry	-	10
Dermatology	-	10
Endocrinology	-	5

Scheme of Examination

M.D. Degree examination in General Medicine shall consist of dissertation, written papers (Theory), Practical/Clinical and Viva voce.

Dissertation: Every candidate shall submit a dissertation as indicated in Chapter I, Sl.NO.9. Acceptance of dissertation shall be a precondition for the candidate to appear for the final examination.

A. Written Papers (Theory)

There shall be four question papers, each of three hours duration. Each paper shall consist of two long essay questions, each question carrying 20 marks and 6 short essay questions each carrying 10 marks. Total marks for each paper will be 100. Questions on recent advances may be asked in any or all the papers. Details of distribution of topics for each paper will be as follows *****:

Paper - I – Basic Sciences – Applied aspects of Anatomy, Physiology, Biochemistry, Pathology, Microbiology, Pharmacology; General Medical Topics, Genetics, Immunology, Fluid & Electrolyte balance, Blood transfusion, Shock and Multiorgan failure, Nutrition, Poisoning, Geriatrics Medicine, Pregnancy Medicine, Adolescent medicine, Toxicology, Pre anaesthetic and post operative medical problems, Emergency Medicine, Radiodiagnosis

Paper - II - Infections diseases, HIV and AIDS, Cardiovascular diseases, Gastro Intestinal and Hepatobiliary system, Diseases and Disorders of Pancreas

Paper – III - Respiratory Medicine, Central Nervous system, Rheumatology and Connective Tissue Disorders, Sexual Medicine, Metabolic Bone Disorders

Paper – IV - Nephrology, Endocrinology and Metabolism, Hematology, Medical Oncology, Psychiatry, Dermatology, STD, Occupational Diseases

*******The topics assigned to the different papers are generally evaluated under those sections. However a strict division of the subject may not be possible and some overlapping of topics is inevitable. Students should be prepared to answer overlapping topics.*

B. Clinical Examination ***Total marks 200***

It should aim at examining skills and competence of candidate for undertaking independent work as a specialist. Each candidate should examine:

One Long Case = 65 marks (time – 45 minutes)
Three Short Cases = 45 marks for each case (time – 30 minutes for each case)

C. Viva Voice Examination Marks 100

1) Viva-voice Examination: (80 marks)
All examiners will conduct viva-voice conjointly on candidate's comprehension, analytical approach, expression and interpretation of data. It includes all components of course contents. In addition candidates may be also be given case reports, ECGs, charts, gross specimens, Histopathology slides, x-rays, ultrasound, CT scan images, etc., for interpretation. Questions on use of instruments will be asked. It includes discussion on dissertation.

2) Pedagogy Exercise (Teaching skills) : (20 marks)
A topic be given to each candidate in advance. He/she is asked to make a presentation on the topic for 8-10 minutes and assessed.

D) Maximum marks

Theory	Practical	Viva	Grand Total
400	200	100	700

RECOMMENDED BOOKS & JOURNALS :

TEXT BOOKS :

1. DAVIDSON'S Principles and practice of MEDICINE : Christopher Haslett, Edwin R. Chilvers, Nicholas A. Boon, Nicki R. Colledge ; 19th Edition ; 2002 CHURCHILL LIVINGSTONE.
2. Kumar and Clark Clinical MEDICINE : Parveen Kumar, Michael Clark ; 5th edition; 2002 : W.B. SAUNDERS.
3. OXFORD TEXTBOOK OF MEDICINE ; D.J. Weatherall, J.G.G. Ledingham, D.A. Warrell; 3rd Edition I, II, III volumes ; 1996 ; OXFORD MEDICAL PUBLICATIONS.
4. Manson's TROPICAL DISEASES ; Gordon cook ; 20th Edition 1996 : Indian Reprint 2001 ; Saunders / Harcourt India.
5. CECIL TEXTBOOK OF MEDICINE ; Lee Goldman, J. Claude Bennett : 21st Edition; volume 1 and volume 2 ; First Indian Print 2001 ; Harcourt Asia. Saunders.
6. HARRISON'S PRINCIPLES OF INTERNAL MEDICINE ; EUGENE BRAUNWALD, ANTHONYS. FAUCI, DENNIS L. KASPER, STEPHEN L. HAUSPER, DAN. L. LONGO, J. LARRY JAMESON ; 15th Edition ; Volume 1 and Volume 2 ; 2001 ; Mc. Graw Hill.
7. Manual of Practical Medicine ; R. Alagappan ; 2nd Edition ; 2002 ; JAYPEE.
8. API Text Book of MEDICINE ; SIDDARTH N. SHAH, M. Paul Anand ; 7th Edition; 2003 ; The Association of Physicians of India.
9. Physical Diagnosis. Rustom Jal Vakil : A Text Book of symptoms and physical signs 10th edition (2004)

REFERENCE : CARDIOLOGY :

1. HURST'S THE HEART ; VALENTIN FUSTER, R. WAYNE ALEXANDER, ROBERT A. O'ROURKE ; 10th Edition - 2001, Volume 1 and Volume 2 ; Mc Graw Hill.
2. PERLOFF THE CLINICAL RECOGNITION OF CONGENITAL HEART DISEASE; JOSEPH K. PERLOFF ; 4th Edition; 1994 ; HARCOURT BRACE'SAUNDERS.
3. CLINICAL ELECTRO CARDIOGRAPHY ; A simplified Approach ; Aryl L. Gold berger ; 6th Edition ; 1999 ; Mosby. Elsevier India.
4. Leo Schamroth : An introduction to Electrocardiography ; Colin Schamroth; 7th Editions 1990 ; Blackwell Science.
5. BRAUNWALD Heart disease ; A text book of Cardiovascular Medicine ; EUGENE BRAUNWALD 6th Edition ; 2001 ; HARCOURT BRACE ASIA - SAUNDERS.
6. MARRIOTT'S Practical Electrocardiography ; Galen S. Wagner ; 10th Edition; 2001 ; Lippincott williams and wilkins.

ENDOCRINOLOGY :

1. Degroot Jameson ENDOCRINOLOGY;Leslie J. De groot, J. Larry Jameson; 4th Edition; 2001 ; Volume 1, Volume 2 and Volume 3 ; SAUNDERS.
2. WILLIAM'S TEXT BOOK OF ENDOCRINOLOGY ; Jean D. Wilson, Daniel W. Faster & Henry M. Kronenberg, P. Reed Larsen ; 9th Edition ; 1998 ; Saunders.

GASTROENTEROLOGY

1. Sleisenger and Fordtran's Gastrointestinal and Liver Disease ; Pathophysiology / Diagnosis/ Management ; Mark Feldman, Bruce F. Schorschmidt, Marvin H. Slusenger; 6th Edition ; volume 1 and volume 2 ; 1998 ; SAUNDERS.
2. TEXTBOOK OF GASTROENTEROLOGY ; TADATAKA YAMADA, DAVID H. ALPERS, LORER LAINE, CHONG OWYANG, DON W. POWELL ; 3rd Edition 1999; Lipincott Williams and Wilkins.
3. Bockus GASTROENTEROLOGY ; J. EDWARD BERK ; Haubrich, Kalser, Roth, Schaffner ; 4th Edition ; Volume 1-7 ; 1985 ; Saunders.
4. Oxford Text Book of Clinical Hepatology ; Neil Mcintyre, Jean - Pierie Benhamou, Johannes Bircher, Mario Rizzetto, Juan Roder ; 1991 ; volume 1-2 ; Oxford Medical Publications.
5. Diseases of the Liver and Biliary System ; SHEILA SHERLOCK, JAMES DOOLEY; 11th Edition ; 2002 ; Blackwell Science.

HAEMATOLOGY :

1. Text book of HAEMATOLOGY : Shirlyn B. Mckenrie ; 2nd Edition ; 1996 : Williams and Wilkins.
2. Wintrobe's clinical haematology : G. Richard Lee, John Foerster, John Lukens, Frixon Paraskevas, John P. Greer, George M. Rodgers ; 10th Editions ; 1999 : Volume 1 and Volume 2 ; Lippincott, Williams and Wilkins.
3. Haematology ; William J. Williams, Ernest Bautler, Allan J. Erdev, Marihall A. Lechtman; 4th Edition ; 1991 ; Mc Graw Hill.
4. WILLIAMS HEMATOLOGY ; Ernest Beutler, Marshall A. Lichtman, Barry S. Coller, Thomas J. Kipps, Uri Seligsohn ; 6th Edition ; 2001 : Mc. Graw Hill.

RHEUMATOLOGY :

1. Pathological Basis of the Connective Tissue Disease ; Dugald Lindsay Gardner ; 1992; Edward Arnold.
2. OXFORD TEXT BOOK OF RHEUMATOLOGY : P.J. Maddison, David A. Isenberg, Patricia Wod, David N. Glass ; 1993 ; Volume 1-2 ; OXFORD MEDICAL PUBLICATIONS.
3. Manual of Rheumatology : P.K. PISPATI, NE, BORGES, M.Y. NADKAR ; 2nd Edition ;

NEUROLOGY :

1. Brain's disease of the Nervous System : Micheal Donaghy ; 11th Edition ; 2001; OXFORD.
2. Neurology in clinical practice ; Principles of Diagnosis and Management ; Walter G. Bradley, Robert B. Daroff, Gerald M. Fenichel, C. David Marsden ; 3rd Edition; 2000, Volume 1 and Volume 2 ; B/H Butterworth - Heinemann.
3. Principles of Neurology ; Raymond D. Adams, Maurice Victor, Allan H. Ropper: 7th Edition ; 20002: Mc Graw Hill.
4. Bickerstaff's Neurological Examination in clinical practice : John spillane ; 6th Edition ; 1996 ; Indian Reprint 2002 ; Blackwell science.
5. DEJONG'S THE NEUROLOGIC EXAMINATION ; A.F. Haerer ; 5th Edition ; Lippincott - Raven.
6. JOHN PATTEN Neurological Differential Diagnon ; John Patten ; 2nd edition ; 2001 ; Springer.
7. Merritt's Neurology 10th edition, Lewis P. Rowland.
8. TEXT BOOK OF NEUROLOGY ; Jagjit S. Chopra, G. Arjundas, S. Prabhakar ; 2001 ; 1st Edition : B.I. Churchill Livingstone.
9. John Patten
   Neurological differntial diagnosis 2nd edition

10. Bickerstaff's Neurological examination in clinical practice, 6th edition (2002)

NEPHROLOGY :

1. OXFORD TEXT BOOK OF CLINICAL NEPHROLOGY ; STEWART CAMERON, ALEX M. DAVISON, JEAN - PIERRE GRINFELD, DAVID KERR, EBERHARD RITZ ; 1992; VOLUME 1-3 ; OXFORD MEDICAL PUBLICATIONS.
2. THE KIDNEY ; BRENNER AND RECTOR ; 3rd Edition ; 1986 ; Volume 1-2 ; Saundors.

ONCOLOGY :

1. CANCER Principles and Practice of Oncology ; Vincent T. Devita, Jr. Samuel Hellman, Steven A. Rosenberg ; 5th Edition ; 1997 ; Lippincott - Raven.
2. OXFORD TEXTBOOK OF ONCOLOGY ; Micheal Peckham, Herbert M. Pinelo, Umbuto Veronesi ; 1995 ; Volume 1 - 2 ; OXFORD MEDICAL PUBLICATIONS.
3. Clinical Oncology ; Martin D. Abeloff, James O. Armitage, Allen S. Lichter, John E. Niederhuber ; 1995 ; Churchill Livingstone.

PULMONOLOGY :

1. CROFTON AND DOUGLAS'S RESPIRATORY DISEASES ; Anthony Seaton, Douglas Seaton, A. Gordon Leithch ; 5th Edition ; Volume 1 - 2 ; 2000 ; Blackwell Science.
2. TEXT BOOK OF CRITICAL CARE : Shoemaker, Ayres, Grenvik, Holbrook ;4th Edition; Book I & Book II ; 2000 ; HARCOURT ASIA. SAUNDERS.
3. CORE TEXT BOOK OF RESPIRATORY CARE PRACTICE : THOMAS A. BARNES ; 2nd Edition ; 1994 ; Mosby.
4. Clinical procedures in Emergency Medicine : James R. Roberts, Jerris B. Hedges ; 2nd Edition ; 1991 ; Saunders.
5. Emergency Medicine ; Howell ; Attieri, Jogoda, Prescott, Scott, Stair ; 1998 ; Volume 1-2 ; Saunders.
6. Text Book of Tuberculosis ; K.N. Rao ; 2nd Edition ; 1981 ; VIKAS PUBLISHING HOUSE PVT LTD.
7. TUBERCULOSIS : S.K. Sharma , A. Mohan ; 1st Edition ; 2001 ; JAYPEE.

CLINICAL METHODS :

1. Hutchisons Clinical Methods ; Micheal Swash ; 21st Edition ; 2002 ; Sounders/
2. MACHLEOD'S Clinical Examination : Joh F. Munro, Jan W. Campbell, 10th Editions : 2000 ; Churchill Livngstone.
3. CHAMBERLAIN'S Symptoms and Signs in clinical medicine ; An Introduction to medical diagnosis : Colin Ogilvie, Christopher C. Evans ; 12th Edition ; 1997 ; sounders.
4. Physical Diagnosis ; A text book of Symptoms and physical signs ; 9th Edition; 2001 ; Media Promoter and publishing Pvt. Ltd.

INFECTIOUS DISEASES :

1. Tropical Infectives diseases : Principles, Pathogenes & Practice : Richard L. Guerrant, David H. Waller, Peter F. Weller ; 1999 ; Volume 1 - 2 ; Churchill Livingstones.
2. HUNTER'S TROPICAL MEDICINE and Emerging Infectious diseases : G. Thomas Strickland ; 8th Electim ; 2000 ; Saunders.

DIABETOLOGY :

1. JOSLINE'S DIABETES MELLITUS : C. Ronald Kahn, Gordon C. Weri ; 1994 ; Reprint 1998 ; 13th Edition : Waverly.
2. TEXT BOOK OF DIABETES : John Pickup ; Gareth Williams ; 1st Edition ; 1991 : Volume 1-2 : Black well Scientific Publication.
3. Diabetes Mellites in Developing Countries ; J.S. Bajaj ; 1st Edition : 1984 ; Re-print.
4. RSSDI Textbook of diabetic mellitus 2002, MMS Ahuja, BB Tripathy, Sam GP Moses, H B Chandalia, A K Das, P V Rao, S V Madhu

JOURNALS

1. American Journal of Cardiology
2. Annals of National Academy of Medical Sciences
3. Heart (Formerly British Heart Journal)
4. Indian Journal of Tubercolosis Chest diseases.
5. Indian Heart Journal.
6. Indian Practitioner
7. Journal of Association of Physicians of Indians
8. New England Journal of Medicine
9. Post Graduate Medicine
10. American Journal of Medicine
11. Medicine Clinics of North America
12. British Medical Journal
13. American Journal of Respiratory Diseases
14. Diabetes care
15. Annals of Neurology
16. Indian Journal of Nephrology.

Chapter IV

Monitoring Learning Progress

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only also helps teachers to evaluate students, but also students to evaluate themselves. The monitoring be done by the staff of the department based on participation of students in various teaching / learning activities. It may be structured and assessment be done using checklists that assess various aspects. Model Checklists are given in this Chapter which may be copied and used.

The learning out comes to be assessed should included: (i) Personal Attitudes, (ii) Acquisition of Knowledge, (iii) Clinical and operative skills, and (iv) Teaching skills.

i) ***Personal Attitudes.*** The essential items are:

- Caring attitudes
- Initiative
- Organisational ability
- Potential to cope with stressful situations and undertake responsibility
- Trust worthiness and reliability
- To understand and communicate intelligibly with patients and others
- To behave in a manner which establishes professional relationships with patients and colleagues
- Ability to work in team
- A critical enquiring approach to the acquisition of knowledge

The methods used mainly consist of observation. It is appreciated that these items require a degree of subjective assessment by the guide, supervisors and peers.

ii) ***Acquisition of Knowledge*** : The methods used comprise of `Log Book' which records participation in various teaching / learning activities by the students. The number of activities attended and the number in which presentations are made are to be recorded. The log book should periodically be validated by the supervisors. Some of the activities are listed. The list is not complete. Institutions may include additional activities, if so, desired.

Journal Review Meeting (Journal Club): The ability to do literature search, in depth study, presentation skills, and use of audio- visual aids are to be assessed. The assessment is made by faculty members and peers attending the meeting using a checklist (see Model Checklist – I, Chapter IV)

Seminars / Symposia: The topics should be assigned to the student well in advance to facilitate in depth study. The ability to do literature search, in depth study, presentation skills and use of audio- visual aids are to be assessed using a checklist (see Model Checklist-II, Chapter IV)

Clinico-pathological conferences : This should be a multidisciplinary case study of an interesting case to train the candidate to solve diagnostic and therapeutic problems by using an analytical approach. The presenter(s) are to be assessed using a check list similar to that used for seminar.

Medical Audit: Periodic morbidity and mortality meeting be held. Attendance and participation in these must be insisted upon. This may not be included in assessment.

iii) ***Clinical skills***

Day to Day work : Skills in outpatient and ward work should be assessed periodically. The assessment should include the candidates' sincerity and punctuality, analytical ability and communication skills (see Model Checklist III, Chapter IV).

Clinical meetings : Candidates should periodically present cases to his peers and faculty members. This should be assessed using a check list (see Model checklist IV, Chapter IV).

Clinical and Procedural skills : The candidate should be given graded responsibility to enable learning by apprenticeship. The performance is assessed by the guide by direct observation. Particulars are recorded by the student in the log book. (Table No.3, Chapter IV)

iv) Teaching skills : Candidates should be encouraged to teach undergraduate medical students and paramedical students, if any. This performance should be based on assessment by the faculty members of the department and from feedback from the undergraduate students (See Model checklist V, Chapter IV)

vi) Periodic tests: Three tests may conducted, two of them be annual tests, one at the end of first year and the other in the second year. The third test may be held three months before the final examination. The tests may include written papers, practicals / clinicals and viva voce.

vii) Work diary / Log Book- Every candidate shall maintain a work diary and record his/her participation in the training programmes conducted by the department such as journal reviews, seminars, etc. Special mention may be made of the presentations by the candidate as well as details of clinical or laboratory procedures, if any conducted by the candidate.

viii) *Records:* Records, log books and marks obtained in tests will be maintained by the Head of the Department and will be made available to the University or MCI.

Log book

The log book is a record of the important activities of the candidates during his training, Internal assessment should be based on the evaluation of the log book. Collectively, log books are a tool for the evaluation of the training programme of the institution by external agencies. The record includes academic activities as well as the presentations and procedures carried out by the candidate.

Format for the log book for the different activities is given in Tables 1,2 and 3 of Chapter IV. Copies may be made and used by the institutions.

Procedure for defaulters: Every department should have a committee to review such situations. The defaulting candidate is counseled by the guide and head of the department. In extreme cases of default the departmental committee may recommend that defaulting candidate be withheld from appearing the examination, if she/he fails to fulfill the requirements in spite of being given adequate chances to set himself or herself right.

CHAPTER IV (Contd.)

Format of Model Check Lists

Check List -I. MODEL CHECK-LIST FOR EVALUATION OF JOURNAL REVIEW PRESENTATIONS

Name of the Student: Name of the Faculty/Observer: Date:

Sl. No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Article chosen was					
2.	Extent of understanding of scope & objectives of the paper by the candidate					
3.	Whether cross references have been consulted					
4.	Whether other relevant publications consulted					
5.	Ability to respond to questions on the paper / subject					
6.	Audio-Visual aids used					
7.	Ability to discuss the paper					
8.	Clarity of presentation					
9.	Any other observation					
	Total Score					

Check List - II. MODEL CHECK-LIST FOR EVALUATION OF SEMINAR PRESENTATIONS

Name of the Student: Name of the Faculty/Observer: Date:

Sl. No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Whether other relevant publications consulted					
2.	Whether cross references have been consulted					
3.	Completeness of Preparation					
4.	Clarity of Presentation					
5.	Understanding of subject					
6.	Ability to answer questions					
7.	Time scheduling					
8.	Appropriate use of Audio-Visual aids					
9.	Overall Performance					
10.	Any other observation					
	Total Score					

Check List - III

MODEL CHECK LIST FOR EVALUATION OF CLINICAL WORK IN WARD / OPD

(To be completed once a month by respective Unit Heads including posting in other departments)

Name of the Student: Name of the Unit Head: Date:

Sl. No.	Points to be considered:	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
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 and Case follow up.					
10.	Over all quality of Ward work					
	Total Score					

Check List - IV

EVALUATION FORM FOR CLINICAL PRESENTATION

Name of the Student: Name of the Faculty: Date:

Sl. No.	Points to be considered	Poor 0	Below Average 1	Average 2	Above Average 3	Very Good 4
1.	Completeness of history					
2.	Whether all relevant points elicited					
3.	Clarity of Presentation					
4.	Logical order					
5.	Mentioned all positive and negative points of importance					
6.	Accuracy of general physical examination					
7.	Whether all physical signs elicited correctly					
8.	Whether any major signs missed or misinterpreted					
9.	Diagnosis: Whether it follows logically from history and findings					
10	Investigations required ▪ Complete list					
	▪ Relevant order					
	▪ Interpretation of investigations					
11.	Ability to react to questioning Whether it follows logically from history and findings					
12.	Ability to defend diagnosis					
13.	Ability to justify differential diagnosis					
14.	Others					
	Grand Total					

Check List - V

MODEL CHECK LIST FOR EVALUATION OF TEACHING SKILL PRACTICE

Sl. No.		Strong Point	Weak Point
1.	Communication of the purpose of the talk		
2.	Evokes audience interest in the subject		
3.	The introduction		
4.	The sequence of ideas		
5.	The use of practical examples and/or illustrations		
6.	Speaking style (enjoyable, monotonous, etc., specify)		
7.	Attempts audience participation		
8.	Summary of the main points at the end		
9.	Asks questions		
10.	Answers questions asked by the audience		
11.	Rapport of speaker with his audience		
12.	Effectiveness of the talk		
13.	Uses AV aids appropriately		

Check list VI

MODEL CHECK LIST FOR DISSERTATION PRESENTATION

Name: Faculty/Observer: Date:

Sl. No.	Points to be considered divine	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Interest shown in selecting a topic					
2.	Appropriate review of literature					
3.	Discussion with guide & other faculty					
4.	Quality of protocol					
5.	Preparation of proforma					

Checklist-VII

CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE / CO-GUIDE

Name of the Student: Name of the Faculty/Observer: Date:

Sl. No.	Items for observation during presentation	Poor 0	Below Average 1	Average 2	Good 3	Very Good 4
1.	Periodic consultation with guide/co-guide					
2.	Regular collection of case material					
3.	Depth of analysis / discussion					
4.	Departmental presentation of findings					
5.	Quality of final output					
6.	Others					
	Total Score					

LOG BOOK

Table 1 : Academic activities attended

Name: Admission Year:

College:

Date	Type of Activity Specify Seminar, Journal Club, Presentation, UG teaching	Particulars

LOG BOOK

Table 2 : Academic presentations made by the student

Name: Admission Year:

College:

Date	Topic	Type of Presentation Specify Seminar, Journal Club, Presentation, UG teaching etc.

LOG BOOK

Table 3 : Diagnostic and Operative procedures performed

Name: Admission Year:

College:

Date	Name	ID No.	Procedure	Category O, A, PA, PI*

*** Key:** O - Washed up and observed
A - Assisted a more senior Surgeon
PA - Performed procedure under the direct supervision of a senior surgeon
PI - performed independently

Model Overall Assessment Sheet

Name of the College: **Academic Year:**

Sl. No	Particulars	Name of Student* and Mean Score				
		A*	B*	C*	D*	E*
1	Journal Review Presentations					
2	Seminars					
3	Clinical work in wards					
4	Clinical presentation					
5	Teaching skill practice					
Total Score						

Note: Use separate sheet for each year.

Signature of HOD ***Signature of Principal***

The above overall assessment sheet used along with the logbook should form the basis for certifying satisfactory completion of course of study, in addition to the attendance requirement.

KEY:
Mean score *:* Is the sum of all the scores of checklists 1 to 7.
A, B,.... : Name of the trainees.

Chapter V

Medical Ethics
Sensitisation and Practice

Introduction

There is now a shift from the traditional individual patient, doctor relationship, and medical care. With the advances in science and technology and the needs of patient, their families and the community, there is an increased concern with the health of society. There is a shift to greater accountability to the society. Doctors and health professionals are confronted with many ethical problems. It is, therefore necessary to be prepared to deal with these problems. To accomplish the Goal (i), General Objective (ii) stated in Chapter II, and develop human values, it is urged that ***ethical sensitisation*** be achieved by lectures or discussion on ethical issues, clinical case discussion of cases with an important ethical component and by including ethical aspects in discussion in all case presentation, bedside rounds and academic postgraduate programmes.

Course Contents

1. *Introduction to Medical Ethics*
   What is Ethics
   What are values and norms
   Relationship between being ethical and human fulfillment
   How to form a value system in one's personal and professional life
   Heteronomous Ethics and Autonomous Ethics
   Freedom and personal Responsibility
2. *Definition of Medical Ethics*
   Difference between medical ethics and bio-ethics
   Major Principles of Medical Ethics 0

Beneficence	=	fraternity
Justice	=	equality
Self determination (autonomy)	=	liberty

3. *Perspective of Medical Ethics*
   The Hippocratic oath, The Declaration of Helsinki, The WHO Declaration of Geneva
   International code of Medical Ethics (1993)
   Medical Council of India Code of Ethics

4. *Ethics of the Individual*
   The patient as a person, The Right to be respected, Truth and Confidentiality
   The autonomy of decision, The concept of disease, health and healing
   The Right to health
   Ethics of Behaviour modification
   The Physician – Patient relationship
   Organ donation

5. *The Ethics of Human life*
   What is human life
   Criteria for distinguishing the human and the non-human
   Reasons for respecting human life
   The beginning of human life

Conception, contraception, Abortion
Prenatal sex-determination
In vitro fertilization (IVF), Artificial Insemination by Husband (AIH)
Artificial Insemination by Donor (AID),
Surrogate motherhood, Semen Intrafallopian Transfer (SIFT),
Gamete Intrafallopian Transfer (GIFT), Zygote Intrafallopian Transfer (ZIFT),
Genetic Engineering

6. *The Family and Society in Medical Ethics*
The Ethics of human sexuality
Family Planning perspectives
Prolongation of life
Advanced life directives – The Living Will
Euthanasia
Cancer and Terminal Care

7. *Profession Ethics*
Code of conduct
Contract and confidentiality
Charging of fees, Fee-splitting
Prescription of drugs
Over-investigating the patient
Low – Cost drugs, vitamins and tonics
Allocation of resources in health cares
Malpractice and Negligence

8. *Research Ethics*
Animal and experimental research / humanness
Human experimentation
Human volunteer research – Informed Consent
Drug trials

9. *Ethical workshop of cases*
Gathering all scientific factors
Gathering all human factors
Gathering all value factors
Identifying areas of value – conflict, Setting of priorities,
Working out criteria towards decisions

10. Law & Medicine
- Medical Council Act
- Consumer Protection Act
- Statuatory Laws
  a). Article 21 of the Constitution – Right to life
  b). 304 IPC (Indian Penal Code)
  c). Drug Act

Recommended Reading

1. Francis C.M., Medical Ethics, 1I Ed, 2004, Jaypee Brothers, New Delhi, Rs. 150/-
2. Ethical Guidelines for Biomedical Research on Human Subjects, Indian Council of Medical Research (ICMR), New Delhi, 2000.
3. ICMR Guidelines on Animal Use, 2001, ICMR, New Delhi.