BLDE UNIVERSITY

PG CURRICULUM
2016-17
M.D General Medicine

Published by

BLDE UNIVERSITY

[Declared as Deemed to be University u/s 3 of UGC act, 1956, vide notification No.F.9-37/2007-U.3(A)]

The Constituent College

SHRI B. M. PATIL MEDICAL COLLEGE, HOSPITAL & RESEARCH CENTRE

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SHRI B. M. PATIL MEDICAL COLLEGE, HOSPITAL AND RESEARCH CENTRE

BLDEU/REG/PG/2016-17/ 505 June 18, 2016

NOTIFICATION

Subject: Revised Curriculum for the Post Graduate Degree and Diploma Course-2016

Reference:

1. Medical Council of India Regulation on Graduate Medical Education, 1997 and subsequent amendments of the same from time-to-time.
2. Minutes of the meeting of the Academic Council of the University held on April 29, 2016.
3. Minutes of the meeting of the BOM of the University held on June 18, 2016.

The Board of Management of University is pleased to approve the Curriculum for Post Graduate Degree and Diploma Course at its meeting held on June 18, 2016.

The revised curriculum shall be effective, from the Academic Session 2016-17 onwards, for Post Graduate Degree and Diploma Course in the Constituent College of the University viz. Shri B. M. Patil Medical College, Hospital and Research Centre, Vijayapura.

REGISTRAR

REGISTRAR
BLDE University, Vijayapura.

To,
The Dean, Faculty of Medicine and Prinicpal
Shri B. M. Patil Medical College,
Hospital and Research Centre,
Vijayapura.

Copy to:-

- The Secretary, UGC, New Delhi
- The Controller of Examinations
- Prof. & HODs of Pre, Para and Clinical Departments.
- PS to Hon'ble President
- PS to Hon'ble Vice-Chancellor

Vision & Mission

- Excellence in all our endeavours.

- Committed to provide globally competitive quality medical education.

- Provide the best health care facilities in this backward region, in particular, to socially disadvantaged sections of the society.

- Constantly striving to become a Reputed research University with world-class infrastructure, latest tech-tools for teaching/research and adopting global best practices.

Section - I

Goals and General Objectives of Postgraduate Medical Education Program

Goal

The goal of postgraduate medical education shall be to produce a competent specialist and / or a medical teacher as stated in the Post Graduate Medical Education Regulations 2000 and its amendments thereof [May2013]

(i) Who shall recognize 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) Recognize the importance of the concerned specialty in the context of the health need of the community and the national priorities in the health sector.
(ii) Practice the specialty concerned ethically and in step with the principles of primary health care.
(iii) Demonstrate sufficient understanding of the basic sciences relevant to the concerned specialty.
(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 specialty concerned on the basis of clinical assessment, and appropriately selected and conducted investigations.
(vi) Plan and advice 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 empathy and humane approach towards patients and their families and exhibit interpersonal behavior in accordance with the societal norms and expectations.
(ix) Play the assigned role in the implementation of national health programs, effectively and responsibly.
(x) Organize 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; recognize continuing educational needs; select and use appropriate learning resources.
(xii) Demonstrate competence in basic concept 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 team engaged in health care, research or training.

Statement of the Competencies

Keeping in view the general objectives of postgraduate training, each discipline 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 program 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 writing thesis/research articles
- Attitudes, including communication.
- Training in research methodology, medical ethics & medicolegal aspects
- Teaching skills to the undergraduates, juniors and support teams

Source: Medical Council of India, Regulations on Postgraduate Medical Education, 2000. [amended upto May2013]

Eligibility for Admission:

Eligibility requirements for Post Graduate Diploma and Degree Courses are:

1. The candidates seeking admission to these courses should have passed MBBS from the college recognized by Medical Council of India.

Eligibilty requirements for Post graduate degree in superspeciality courses,M.Ch./D.M are:

The candidate seeking admission to these courses should have passed MS/MD from the college recognized by Medical Council of India.

2. As per the requisitions of statutory bodies, as laid out in post graduate regulations 2000 of Medical Council of India and its amendments thereof, the minimum percentage of marks in the entrance test conducted by the University for eligibility for admission to Post Graduate courses in broad specialties and super specialties shall be 50 percent for candidates belonging to General category and 40 percent for the candidates belonging to Scheduled Caste, Scheduled Tribes and Other Backward Classes. Eligibility for persons with locomotor disability of lower limbs category ranging from 30-70% will be 45 percent.

Eligibility for Foreign / PIO / NRI students will be based on qualifying examination marks.

The MCI norms to qualify for Admissions

Candidates seeking admission to these Post Graduate Degree courses should have passed M.B.B.S. recognised by Medical Council of India or equivalent qualification and should have obtained permanent Registration from the Medical Council of India or any of the State/ Medical council or candidate should register the same within one month from the date of admission, failing which the admission of the candidate shall be cancelled. Provided that in the case of a foreign national, the MCI may on the payment of prescribed fee for the registration, grant temporary registration for the duration of post graduate training restricted to the medical college/ institute to which the applicant is admitted for the time being exclusively for post graduate studies; provided further, that temporary registration to such foreign national shall be subjected to the condition that such person is duly registered with appropriate registering authority in his /her country wherefrom he has obtained his basic medical qualification ,and is duly recognized by the corresponding Medical Council or concerned authority..

If the candidate fails to fulfill the relevant eligibility requirements as mentioned above he/she will not be considered eligible for admission for Medical Postgraduate Degree and Diploma Courses even if he/she is placed in the merit list of BLDEU-PGET/BLDEU-SUPERSPECIALTY ET.

Obtaining Eligibility Certificate by the University before making Admission

Candidate shall not be admitted for any postgraduate degree/diploma course unless he/she has obtained and produced the eligibility certificate used 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 recognized for internship.
7. Registration by any State Medical council and
8. Proof of SC/ST or OBC or physically handicapped status, as the case may be.

In addition to the above mentioned documents, candidate applying for admission to superspeciality courses has to produce degree/pass certificate of MD/MS degree with prescribed fee.

Intake of Students

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

Course Duration

a. M.D. / M.S. Degree Courses:
The course of study shall be for a period of 3 years consisting of 6 terms including examinations. For Candidates possessing recognized two year Postgraduate Diploma in the same subject the duration of the course shall be two years including examinations. (MCI PG REG 2000 10:1)

b. D.M/M Ch Degree Courses; (MCI PG REG 2000, 10:2)
The duration of these courses shall be for a period of 3 years including examinations.

c. Diploma Courses:
The course of study shall be for a period of 2 years consisting of 4 terms including examinations (MCI PG REG 2000, 10.3).

Training Method

The postgraduate training for degree/diploma shall be of residency pattern. The post graduate shall be trained 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 program 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. Exposure to applied aspects of their learning should be addressed Similarly, clinical subjects' students should be posted to basic medical sciences and allied specialty departments or institutions.
Training of superspecialty should follow similar pattern. In addition, they have to be trained in advanced techniques of diagnosis and treatment pertaining to their specialty, participate actively in surgical operations [M.Ch] as well.

Attendance, Progress and Conduct

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 a clinic/laboratory/nursing home while studying postgraduate course.

Each year shall be taken as a unit for the purpose of calculating attendance. 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. Every Candidate is required to attend a minimum of 80% of the training during each academic year of the post graduate course. This shall include assignments, assessment of full time responsibilities and participation in all facets of educational process. 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. Leave benefits shall be as per university rules.

A post graduate student pursuing degree course in broad specialities, MD, MS and superspeciality courses DM, M.Ch would be required to present one poster presentation, read one paper in national/state conference and to present one research paper which should be published/accepted for publication/sent for publication during the period of his postgraduate studies so as to make him/her to be eligible to appear at the university degree examinations. (MCI, PG 2000, 13.9).

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

Monitoring Progress of Studies

The learning process of students should be monitored through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring is done by the staff of the department based on participation of students in various teaching / learning activities. It may be structured and assessment done by using checklists that assess various aspects.

The learning out comes to be assessed include:

- Personal Attitudes,
- Acquisition of Knowledge,
- Clinical and operative skills, skills of performing necessary tests/experiments
- Teaching skills.

Personal Attitudes:

The essential items are:

- Caring attitude, empathy
- Initiative in work and accepting responsibilities
- Organizational ability
- Potential to cope with stressful situations and undertake graded 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. Any appropriate methods can be used to assess these. It is appreciated that these items require a degree of subjective assessment by the guide, supervisors and peers. However every attempt should be made to minimize subjectivity.

Acquisition of Knowledge:

Lectures: Lectures/theory classes as necessary may be conducted. It is preferable to have one class per week if possible. They may, be employed for teaching certain topics. Lectures may be didactic or integrated.

a) Didactic Lectures: Recommended for selected common topics for post graduate students of all specialties. Few topics are suggested here.

- Bio-statistics
- Use of library,
- Journal review
- Use of computers,
- Appropriate use of AV aids
- Research Methods,
- Search of literature,
- Rational drug therapy
- Medical code of Conduct and Medical Ethics
- National Health and Disease Control Programmes
- Communication skills etc.
- Bio medical waste

These topics may preferably taken up in the first few weeks of the 1st year commonly for all new postgraduates. The specialty wise topics can be planned and conducted at departmental level.

b) Integrated teaching: These are recommended to be taken by multidisciplinary teams for selected topics, eg. Jaundice,Diabetes mellitus,thyroid diseases etc. They should be planned well in advance and conducted.

Journal Review Meeting (Journal Club):

The ability to do literature search, in depth study, presentation skills, use of audio – visual aids, understanding and applying evidence based medicine are to be focused and assessed. The assessment is made by faculty members and peers attending the meeting using a checklist

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.

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.

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

Clinical Meetings: Candidates should periodically present cases to his peers and faculty members. This should be assessed using a check list.

Group Discussions: Group discussions are one of the means to train and assess the student's ability to analyse the given problem or situation, apply the knowledge and make appropriate decisions. This method can be adopted to train and assess the competency of students in analyzing and applying knowledge.

Death review meetings/Mortality meetings: Death review meetings are important method for reflective learning. A well conducted morbidity and mortality meetings bring about significant reduction in complications, improve patient care and hospital services. They also address system related issues. Monthly meetings should be conducted with active participation of faculty and students. Combined death review meetings may be required wherever necessary.

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.

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

Work Diary / Log Book:

Every candidate shall maintain a Work Diary/Log Book and record his/her participation in the training programs 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, conducted by the candidate. A well written and validated Log Book reflects the competencies attained by the learner and points to the gaps which needs address. This Log Book shall be scrutinized by concerned teachers periodically and certified, by the Head of Department and Head of the Institution, and presented during University Practical / Clinical examination.

Periodic Tests:

In case of degree courses of three years duration (MD/MS, DM, M.Ch), 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, practical / clinical and viva voce.
One of these practical/clinical tests should be conducted by OSPE (objective structured practical examination or OSCE (objective structured clinical examination) method.

Records and marks obtained in such tests will be maintained by the Head of 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, practical /clinical and viva voce.

One of these practical/clinical tests should be conducted by OSPE or OSCE method.

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

Procedure for defaulter:

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.

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

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

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.

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.

The dissertation shall be written under the following headings:

1. Introduction
2. Aims or Objectives of study
3. Review of Literature
4. Material and Methods
5. Results
6. Discussion
7. Conclusion
8. Summary
9. References
10. Tables
11. Annexure

The written text of dissertation shall be not less than 50 pages and shall not exceed 150 pages excluding references, tables, questionnaires and other annexure. 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 be avoided. The dissertation shall be certified by the guide, head of the department and head of the Institution.

Adequate number of copies as per norms and a soft copy of dissertation thus prepared shall be submitted to the Controller of Examinations six months before final examination on or before the dates notified by the University.

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

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 and its amendments thereof. 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 recognized 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 recognized for teaching/training by this University / Medical Council of India. The co-guide shall be a recognized post graduate teacher of BLDE University

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.

Schedule of Examination:

The examination for M.D. /M.S and DM/M.Ch courses shall be held at the end of three academic years (six academic terms). 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 examinations. Not more than two examinations shall be conducted in an academic year.

Scheme of Examination

M.D. /M.S. Degree

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

Dissertation:

Every candidate shall carryout work and submit a Dissertation as indicated above. Acceptance of dissertation shall be a precondition for the candidate to appear for the final examination.

Written Examination (Theory):

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. In basic medical subjects and para-clinical -subjects, questions on applied clinical aspects should also be asked.

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. Each candidate should examine at least one long case and two short cases minimum. However additional assessment methods can be adopted which will test the necessary competencies reasonably well.

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

Viva Voce:

Examination shall aim at assessing depth of knowledge, logical reasoning, confidence and oral communication skills.

The total marks shall be 100:

- 80 Marks, for examination of all components of syllabus
- 20 Marks for Pedagogy

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.

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/clinical and (3) viva voce examination. The candidate should pass independently in practical/clinical examination and Viva Voce vide MCI pg 2000 reg no 14(4) (Ciii)

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 Controller of Examinations.

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 of marks is 75 percent and above.

Distinction will not be awarded for candidates passing the examination in more than one attempt.

D.M/M.Ch Degree

DM/M.Ch Degree examinations in any subject shall consist of written theory papers (theory), practical/clinical and Viva voce.

Written Examination (Theory):

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. In basic medical subjects and para-clinical -subjects, questions on applied clinical aspects should also be asked.

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, competence of candidates for undertaking independent work as a specialist. Each candidate should examine at least one long case and two short cases.

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

Viva Voce:

Examination shall aim at assessing depth of knowledge, logical reasoning, confidence and oral communication skills.

The total marks shall be 100:

- 80 Marks, for examination of all components of syllabus
- 20 Marks for Pedagogy

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.

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(3)viva voce examination. The candidate should pass independently in practical/clinical examination vide MCI pg 2000 reg no 144-c (iii).

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 of marks is 75 percent and above.

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 Controller of Examinations.

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 of marks is 75 percent and above.

Distinction will not be awarded for candidates passing the examination in more than one attempt.

Diploma Examination:

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

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.

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 at least one long case and two short cases.

The maximum marks for Practical/Clinical shall be 150.

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.

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 / 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 Controller of Examinations.

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 of marks is 75% and above. Distinction will not be awarded for candidates passing the examination in more than one attempt.

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.

Number of Candidates per day:

The maximum number of candidates for practical / clinical and viva-voce examination shall be as under:

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

SECTION - II

M.D General Medicine

Goal:

The postgraduate course M.D. (General Medicine) should enable a medical graduate to become a competent specialist, acquire knowledge and skills in educational technology for teaching medical, dental and health sciences and conduct research in bio-medical science.

Objectives:

- Who shall recognize the health needs of the community, and carry out professional obligations ethically and in keeping with the objectives of the national health policy;
- Who shall have mastered most of the competencies, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system;
- Who shall be aware of the contemporary advances and developments in General Medicine;
- Who shall have acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology; and
- Who shall have acquired the basic skills in teaching of the medical and paramedical professionals.
- Continue to evince keen interest in continuing General Medicine education irrespective of whether he is in a teaching institution or is a practicing physician.

Specific Learning Objectives:

The specific learning objectives of postgraduate training course in General Medicine would be to train a MBBS doctor who will:

- Practice General Medicine efficiently and effectively, backed by scientific knowledge and skill base.
- Exercise empathy and a caring attitude and maintain high ethical standards.
- Be a motivated 'teacher' – defined as a physician keen to share his knowledge and skills with a colleague or a junior or any learner.

The postgraduate education is intended to produce a well informed, well trained doctor in medicine who is able to take care of patients, understand the essence of modern medicine, srutinise the published literature while maintaining acceptable standards in discipline. It is

expected that during the tenure of the course he develops optimum communication skills. The postgraduate education exposes the student to not only to Internal medicine, but also to other well established departments and sub specialties and allied subjects. The staff of all these departments will be involved in the postgraduate programme. A well-motivated and monitored student is the key to the success of this programme.

The medical post graduate after completion of MD (Gen. Med.) should be able to manage patient independently as a specialist. He should be able to plan and carry out research activity in the field of General Medicine. He should be able to teach under graduate medical student of General Medicine.

The following objectives are laid out to achieve the goals of the course. These objectives are to be achieved by the time the candidate completes the course. The objectives may be considered under the subheadings.

- Knowledge (Cognitive domain)
- Skills (Psycho motor domain)
- Human values, Ethical practice and Communication abilities.

Knowledge:

- Describe etiology, pathophysiology, principles of diagnosis and management of common problems including emergencies, in adults and children.
- Describe indications and methods for fluid and electrolyte replacement therapy including blood transfusion.
- Describe common malignancies in the country and their management including prevention.
- Demonstrate understanding of basic sciences relevant to this specialty.
- Identify social, economic, environmental and emotional determinants in a given case, and take them into account for planning therapeutic measures.
- Recognize conditions that may be outside the area of his specialty/competence and to refer them to the proper specialist.
- Advice regarding the operative or non-operative management of the case and to carry out this management effectively.

- Update oneself by self-study and by attending courses, conferences and seminars relevant to the specialty.
- Teach and guide his team, colleagues and other students.
- Undertake audit, use information technology tools and carry out research, both basic and clinical, with the aim of publishing his work and presenting his work at various scientific fora.

Skills:

- Take a proper clinical history, examine the patient, perform essential diagnostic procedures and order relevant tests and interpret them to come to a reasonable diagnosis about the medical condition.
- Perform common procedures relevant to the specialty.
- Provide basic and advanced life saving support services (BLS) in emergency situations.
- Undertake complete monitoring of the patient.

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.Internlising 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 organiations, Community services.
- Non Governmental Organizations & General Public. List of clinical, procedural and practical skills.

Human values, Ethical practice and Communication abilities

- Adopt ethical principles in all aspects of his/her practice. Professional honesty and integrity are to be fostered. Care is to be delivered irrespective of the social status, caste, creed or religion of the patient.
- Develop communication skills, in particular the skill to explain various options available in management and to obtain a true informed consent from the patient.
- Provide leadership and get the best out of his team in a congenial working atmosphere.
- Apply high moral and ethical standards while carrying out human or animal research.
- Be humble and accept the limitations in his knowledge and skill and to ask for help from colleagues when needed.
- Respect patient's rights and privileges including patient's right to information and right to seek a second opinion.
- The goal is to provide learning opportunities for acquisition of knowledge, human values and skills that may enable to diagnose and treat relevant diseases and disorders as a specialist.

The clinical rotations are intended to provide opportunity to post graduate student to the patient care and hands on experience. He/She is expected to acquire skills to be competent clinician in General Medicine. Most importantly, learn to formulate diagnosis, plan diagnostic procedures / investigations and plan rational therapy. Meticulous documentation of patient's medical record by postgraduate is encouraged. During this time postgraduate is encouraged to learn the art of lengthy as well as brief presentations.

The postgraduate is rotated through the subspecialty departments during second year of the three years course. This roster is provided to postgraduates at the entry to the course. One postgraduate guide should be selected by the department and he/she should act as friend, guide, counselor and philosopher for postgraduate throughout the training course.

COURSE CONTENTS

Theory:

INTRODUCTION TO CLINICAL MEDICINE:

The practice of medicine – ethical; issues in clinical medicine – quantitative aspects of clinical reasoning – host and disease: influence of demographic and socioeconomic factors – influence of environmental and occupational hazards on disease – women's health – medical disorders during pregnancy – adolescent health problems – geriatric medicine – principles of disease prevention – cost awareness in medicine.

* CARDINAL MANIFESTATIONS AND PRESENTATIONS OF DISEASES:

* PAIN – Path physiology and Management – chest discomfort and palpitation – abdominal pain – headache- back and neck pain* ALTERATIONS IN BODY TEMPERATURE : fever and hyperthermia – fever and rash – hypothermia * NERVOUS SYSTEM DYSFUNCTION : faintness, syncope, dizziness, and vertigo – weakness, abnormal movements, and imbalance – episodic muscle spasms, cramps and weakness –numbness, tingling and sensory loss – acute confusional states and coma – aphasia and other focal cerebral disorders – memory loss and dementia disorders of sleep and circadian rhythms.

DISORDERS OF THE EYES, EARS, NOSE AND THROAT – disorders of the eye disorders of smell, taste and hearing – infections of the upper respiratory tract – oral manifestations of disease.

ALTERATIONS IN CIRCULATORY AND RESPIRATORY FUNCTIONS – dyspnea and pulmonary edema – cough and hemoptysis – approach to the patient with a heart murmur – approach to the patient with hypertension – hypoxia, polycythemia and cyanosis – edema – shock – cardiovascular collapse, cardiac arrest, and sudden cardiac death.

ALTERATIONS IN GASTROINTESTINAL FUNCTION – dysphagia, nausea, vomiting and indigestion – diarrhea and constipation – gain and loss in weight – gastrointestinal bleeding – jaundice – abdominal swelling,ascites.

ALTERATIONS IN URINARY FUNCTION AND ELECTROLYTES – cardinal manifestations of renal disease – voiding dysfunction, incontinence, and bladder pain – fluid and electrolyte disturbances – acidosis and alkalosis.

ALTERATIONS IN THE UROGENITAL TRACT – impotence – disturbances of menstruation and other common gyneocologic complaints in women – hirsutism and virilization.

ALTERATION IN THE SKIN - approach to the patient with skin disorders –eczema, psoriasis, cutaneous infections, acne, and other common skin disorders – cutaneous drug reactions – skin manifestations of internal disease – photosensitivity and other reactions to light.

Hematological alterations – anemia – bleeding and thrombosis – enlargement of lymph nodes and spleen – disorders of granulocytes and monocytes.

MANIFESTATIONS OF CANCER - presentations of the patient with cancer : solid tumours in adults – evaluation of breast masses in men and women.

GENETICS AND DISEASE – genetics and disease – cytogenetic aspects of human disease – treatment and prevention of genetic disease.

CLINICAL PHARMACOLOGY - principles of drug therapy – adverse reactions to drugs – physiology and pharmacology of the autonomic nervous system – nitric oxide biologic and medical implications.

NUTRITION – nutrition and nutritional requirements - assessment of nutritional status – protein and energy malnutrition – obesity – anorexia nervosa and bulimia nervosa – diet therapy – enteral and parenteral nutrition therapy – vitamin deficiency and excess- disturbances in trace elements.

ONCOLOGY AND HEMATOLOGY NEOPLASTIC DISORDER – approach to the patient with cancer – prevention and early detection of cancer – cell biology of cancer – cancer genetics – invasion and metastasis – principles of cancer therapy – infections in patients with cancer –

melanoma and other skin cancers – head and neck cancer – neoplasms of the lung – breast cancer – gastrointestinal tract cancer- tumours of the liver and biliary tract – pancreatic cancer – endocrine tumours of the gastrointestinal tract and pancreas – bladder and renal cell cancer – hyperplasia and carcinoma of the prostate – testicular cancer – gyneocological malignancies -= sarcomas of soft tissue and bone – metastatic cancer of unknown primary site – paraneoplastic syndromes – paraneoplastic neurologic syndromes – oncologic emergencies.

DISORDERS OF HEMATOPOIESIS – hematopoiesis – iron deficiency and other hypoproliferative anemias disorders of hemoglobin – megaloblastic anemias – hemolytic anemias and acute blood loss – aplastic anemia and myelodyplasia- polycythehmia vera and other myloproliferative disease – acute and chronic myeloid leukemias – malignancies of lymphoid cells – plasma cell disorders transfusion biology and therapy – bone marrow transplantation

DISORDERS OF HEMOSTASIS- disorders of the platelet and vessel wall – disorders of coagulation and thrombosis – anticoagulant, fibrinolytic, and antiplatelet therapy.

INFECTIOUS DISEASES –

BASIC CONSIDERATIONS IN INFECTIOUS DISEASES –

Introduction to infectious diseases : host parasite interaction – laboratory diagnosis of infectious diseases – immunization principles and vaccine use – health risks to travelers *CLINICAL SYNDROMES – COMMUNITY ACQUIRED – sepsis and septic shock – fever of unknown origin – infective endo carditis – intraabdominal infections and abscesses – acute infectious diarrhoeal diseases and bacterial food poisoning – sexually transmitted diseases : overview and clinical approach – pelvic inflammatory disease – urinary tract infections and pyelonephritis – osteomyelitis – infections of the skin, muscle, and soft tissues – infections(excluding AIDS) in injection drug users – infections from bites scratches and burns * CLINICAL SYNDROMES – NOSOCOMIAL INFECTIONS infections in transplant recipients – hospital – acquired and intravascular device- related infections – infection control in the hospital.*BACTERIAL DISEASES : general considerations – molecular – mechanisms of bacterial pathogenesis – treatment and prophylaxis of bacterial infections * DISEASES CAUSED BY GRAM-POSITIVE BACTERIA – pneumococcal infections – staphylococcal infections – streptococcal and

enterococcal infections – diphtheria, other corynebacterial infections, and anthrax – infections caused by listeria monocytogenes – tetanus – botulism - gas gangrene, antibiotic – associated colitis, and other clostridial infections * DISEASES CAUSED BY GRAM – NEGATIVE BACTERIA – meningococcal infections – gonococcal infections – moraxella (branchamella) catarrhalis other moraxella species and kinglla – infections due to haemophilus influenzae, other haemophilus species, the hacek group, and other gram – negative bacilli – leionella infection – pertusis diseases caused by gram – negative enteric bacilli – helicobacter infections – infections due to pseudomonas species and related organisms – salmonellosis – shigellosis – infections due to campylobacter and related species – cholera and other vibrios – brucellosis – tularemia – plague and other yersinia infections – bartonella infections, including cat – scratch disease – Donovanosis (ganuloma inguinale)

*MISCELLANEOUS BACTERIAL INFECTIONS– nocardiosis – actinomycosis – infections due to mixed anaerobic organisms*MYCOBACTERIAL DISEASES antimycobacterial agents – tuberculosis – leprosy (hansen's disease) – infections due to nontuberculous myco bacteria * SPIROCHAETAL DISEASES syphilis –endemic – treponematoses – leptospirosis – relapsing fever – lyme borreliosis *RICKETTSIA, MYCOPLASMA AND CHLAMYDIA – rickettsial diseases- mycoplasma infections – chlamydial infections *VIRAL DISEASES – medical virology – antiviral chemotherapy

* DNA VIRUSES – herpes simplex viruses – varicella – zoster virus infections – epsteinbarr virus infections, including infectious mononucleosis – cytomegalovirus and human herpesvirus types 6, 7 and 8 – smallpox, vaccinia and other poxviruses – parvovirus – human papillomavirus infections * DNA AND RNA RESPIRATORY VIRUSES – common viral respiratory infections * RNA VIRUSES – the human retroviuses – influenza – viral gastroenteritis – enteroviruses and reoviruses – measles (rubeola) – rubella (german measles) – mumps – rabies virus and other rhabdoviruses- infections caused by arthopod and rodent – borne viruses – marburg and ebola viruses (filoviridae) *FUNGAL INFECTIONS – diagnosis and treatment of fungal infection – histoplasmosis – coccidioidomycosis – blastomycosis – cryptococcosis candidiasis – aspergillosis – mucormycosis – miscellaneous mycoses and prothotheca infection – pneumocystitis carini infection *PROTOZOAL AND HELMINTHIC INFECTIONS: general considerations – approach to the patient with parasitic infections – laboratory diagnosis of

parasitic infections – therapy for parasitic infection *PROTOZOAL INFECTIONS – amoebiasis and infection with free – living amoebas – malaria and other diseases caused by red blood cell parasites leishmaniasis – trypanosomiasis – toxoplasma infection – protozoal intestinal infections and trichomoniasis *HELMINTHIC INFECTIONS – trichinosios and infections with other tissue nematodes – intestinal nematodes – filariasis and related infections (loiasis, onchocericiasis, and dracunculaiasis) – schistosomiasis and other trematode infections – cestodes. Dengue Fever and Chikungunya fever.

DISORDERS OF THE CARDIOVASCULAR SYSTEM – DIAGNOSIS – approach to the patient with heart disease – physical examination of the cardio vascular system-electrocardiography – diagnostic cardiac catheterization and angiography DISORDERS OF RHYTHM – the bradyarrhythmias: disorders of sinus node function and AV conduction disturbances – the tachyarrhythmias *DISORDERS OF THE HEART – normal and abnormal myocardial function – heart failure – cardiac transplantation congenital heart disease in the adult – rheumatic fever – valvular heart disease – corpulmonale – the cardiomypathies and myocarditis – pericardial disease – cardiac tumors, cardiac manifestations of systemic diseases, and traumatic cardiac injury *VASCULAR DISEASE – atherosclerosis – acute myocardial infarction – ischemic heart disease – coronary angioplasty and other therapeutic applications of cardiac catheterization – hypertensive vascular disease – diseases of the aorta – vascular diseases of the extremities.

DISORDERS OF THE RESPIRATORY SYSTEM - *DIAGNOSIS – approach to the patient with disease of the respiratory system – disturbances of respiratory system – disturbances of respiratory function – diagnostic procedures in respiratory disease *DISEASE OF THE RESPIRATORY SYSTEM – asthma – hypersensivity pneumonitis and eosinophilic pneumonias – environmental lung diseases – pneumonia, including nercotizing pulmonary infections (lung abscess bronchiectasis – cystic fibrosis – chronic bronchitis, emphysema, and airway obstruction – interstitial lung disease – primary pulmonary hypertension pulmonary thromboembolism – disorders of the pleura, mediastinum and diaphragm – disorders of ventilation – sleep apnea – acute respiratory distress syndrome – mechanical ventilatory support Lung transplantation.

DISORDERS OF THE KIDNEY AND URINARY TRACT- approach to the patient with diseases of the kidneys and urinary tract – disturbances of renal function – acute renal failure chronic renal failure – dialysis and transplantation in the treatment of renal failure – pathogenetic mechanisms of glomerular injury – the major glomerulopathies – glomerulopathies associated with multisystem diseases. Tubulointerstitial diseases of the kidney – vascular injury to the kidney – hereditary tubular disorders – nephrolithiasis – urinary tract obstruction.

DISORDERS OF THE GASTROINTESTINAL SYSTEM – DISORDERS OF THE ALIMENTARY TRACT - approach to the patient with gastrointestinal disease – gastrointestinal endoscopy – diseases of the esophagus – peptic ulcer and related disorders – disorders of absorption – inflammatory bowel disease: ulcerative colitis and crohn's disease – irritable bowel syndrome –diverticular, vascular, and other disorders of the intestine and peritoneum – acute intestinal obstruction – acute appendicitis *LIVER AND BILIARY TRACT DISEASE – approach to the patient with liver disease – evaluation of liver function – derangements of hepatic metabolism – bilirubin metabolism and hyperbilirubinemia – acute viral hepatitis – toxic and drug – induced complications of cirrhosis – infiltrative and metabolic diseases affecting the liver – liver transplantation diseases of the gallbladder and bile ducts *DISORDERS OF THE PANCREAS – approach to the patient with pancreatic disease – acute and chronic pancreatitis. DISORDERS OF THE IMMUNE SYSTEM, CONNECTIVE TISSUE, AND JOINTS *DISORDERS OF THE IMMUNE SYSTEM – introduction to the immune system – the major histocompatibility gene complex – primary immune deficiency disease – human immunodeficiency virus (HIV) disease: AIDS and related disorders – amyloidosis *DISORDERS OF IMMUNE – MEDIATED INJURY – diseases of immediate type hypersensitivity – immunologically mediated skin diseases – systemic lupus erythematosus – rheumatoid arthritis – systemic sclerosis (seleroderma) dermatomyositis and poly myositis – Sjogren's syndrome – ankylosing spondylitis, reactive arthritis and undifferentiated spondyloarthropathy – Behcet's syndrome – the vasculitis syndromes – sarcoidosis. *DISORDERS OF THE JOINTS – approach to articular and musculoskeletal disorders – osteoarthritis – arthritis due to deposition of calcium crystals – infectious arthritis – psoriatic arthritis and arthritis associated with gastrointestinal disease – relapsing polychondritis and other arthritides.

ENCOCRINOLOGY AND METABOLISM - *ENDOCRINOLOGY – approach to the patient with endocrine and metabolic disorders – neuroendocrine regulation and diseases of the anterior pituitary and hypothalamus – disorders o growth – disorders of the neurohypophysis – diseases of the thyroid – diseases of the adrenal cortex – pheochromocytoma – diabetes mellitus – hypoglycemia – disorders of the tests – disorder of the ovary and female reproductive tract – endocrine disorders of the breast - disorders of sexual differentiation – disorders affecting multiple endocrine systems *DISORDERS OF INTERMEDIARY METABOLISM – disorders of lipoprotein metabolism – hemochromatosis – the porphyrias – gout and other disorders of Purine metabolism – Wilson's disease – lysosomal storage diseases – glycogen storage diseases – inherited disorders of connective tissue – inherited disorders of amino acid metabolism and storage – inherited defects of membrane transport – galactosemia. galactokinase deficiency and other rare disorders of carbohydrate metabolism – the lipodystrophies and other rare disorders of adipose tissue *DISORDERS OF BONE AND MINERAL METABOLISM – calcium, phosphorism and bone metabolism: calcium – regulating hormones – diseases of the parathyroid glands and other hyper and hypolcalcemic disorders – metabolic bone disease – disorders of phosphorus metabolism – disorders of magnesium metabolism – Paget's disease of bone. Hyperostosis, fibrous dysplasia, and other dysplasia of bone and cartilage.

NEUROLOGIC DISORDERS - *DIAGNOSIS OF NEUROLOGIC DISORDERS – approach to the patient with neurologic disease – electrophysiologic studies of the central and peripheral nervous systems – neuroimaging in neurologic disorders - molecular diagnosis of neurologic disorders *DISEASES OF THE CENTRAL NERVOUS SYSTEM - migraine and the cluster headache syndrome – seizures and epilepsy – Alzheimer's disease and other primary dementias – Parkinson's disease and other extraphyramidal disorders – ataxic disorders – the motor neuron diseases – disorders of the autonomic nervous system – disorders of the cranial nerves – diseases of the spinal cord. Traumatic injuries of the head and spine tumors of the nervous system – multiples sclerosis and other demyelinating diseases – bacterial meningitis, brain abscess, and other suppurative intracranial infections – chronic and recurrent meningitis – brain abscess, and other suppurative intracranial infections – chronic and recurrent meningitis – aseptic meningitis, viral encephalitis, and prion diseases – nutritional and metabolic diseases of the nervous system

*DISORDERS OF THE NERVE AND MUSCLE – diseases of the peripheral nervous system – myasthenia gravis and other diseases of the neuromuscular junction – diseases of muscle *CHRONIC FATIGUE SYNDROME – chronic fatigue syndrome *PSYCHIATRIC DISORDERS – mental disorders *ALCOHOLISM AND DRUG DEPENDENCY – alcohol and alcoholism – opioid drug abuse and dependence cocaine and other commonly abused drugs – nicotine addiction.

ENVIRONMENTAL AND OCCUPATIONAL HAZARDS – specific environmental and occupational hazards *ILLNESSES DUE TO POISONS, DRUG OVERDOSAGE AND ENVENOMATION – poisoning and drug overdosage – disorders caused by reptile bites and marine animal envenomations – ectorparasite infestations and arthropid bites and stings *SPECIFIC ENVIRONMENTAL AND OCCUPTIONAL HAZARDS- drowning and near. Drowning – electrical injuries – radiation injury – heavy metal poisoning.

- Nanomedicine
- Emergency Medicine
- Geriatric Medicine,
- Biomedical waste

Teaching and Learning Activities

A candidate pursuing the course should work in the institution as a full time student. No candidate should be permitted to run a clinic/laboratory/nursing home while studying postgraduate course. Each year should be taken as a unit for the purpose of calculating attendance.

Every student shall attend teaching and learning activities during each year as prescribed by the department and not absent himself /herself from work without valid reasons.

A list of teaching and learning activities designed to facilitate students acquired essential knowledge skills outlines is given below:

- Lectures: Lectures are to be kept to a minimum. They may, however, be employed for teaching certain topics. Lectures may be didactic or integrated.

- Didactic Lectures: Recommended for selected common topics for postgraduate students of all specialties. Few topics are suggested as examples:
  - Bio-statistics
  - Use of library,
  - Research methods
  - Medical code of Conduct and Medical Ethics
  - National Health and Disease Control Programme
  - Communication Skills etc.

  These topics may preferably taken up in the first few weeks of the 1st year.

- **Integrated Lectures**: These are recommended to be taken by multidisciplinary teams for selected topics, eg. Jaundice, Diabetes mellitus, Thyroid etc.

- **Journal Club:** Recommended to be held once a week. All the POSTGRADUATE students are expected to attend and actively participate in discussion and enter in the Log Book relevant details. Further, every candidate must make a presentation from the allotted journal(s), selected articles at least four times a year and a total of 12 seminars presentations in three years. The presentations would be evaluated using check lists and would carry weightage for internal assessment. A time table with names of the student and the moderator should be announced at the beginning of every year.

- **Subject Seminar**: Recommended to be held once a week. All the POSTGRADUATE students are expected to attend and actively participate in discussion and enter in the Log Book relevant details. Further, every candidate must present on selected topics at least four times a year and total of 12 seminar presentations in three years. The presentations would be evaluated using check lists and would carry weightage for internal assessment. A time table for the subjects with names of the student and the moderator should be scheduled at the beginning of every year.

- **Student symposium**: Recommended as an optional multi disciplinary programme. The evaluation may be similar to that described for subject seminar.

- **Ward Rounds**: Ward rounds may be service or teaching rounds.
    - Service Rounds: Postgraduate students and interns should do every day for the care patients. Newly admitted patients should be worked up by the POSTGRADUATEs and presented to the seniors the following day.
    - Teaching Rounds: Every unit should have 'grand rounds' for teaching purpose. A diary should be maintained for day to day activities by the students. Entries of (a) and (b) should be made in the Log Book.

- **Clinico –Pathological Conference**: Recommended once a month for all post graduate students. Presentation be done by rotation. If cases are not available due to lack of clinical postmortems, it could be supplemented by published CPCs.

- **Inter Departmental Meetings**: Strongly recommended particularly with departments of Pathology and Radio-Diagnosis at least once a week. These meetings should be attended by post graduate students and relevant entries must be made in the Log Book.

Pathology: A dozen interesting cases may be chosen and presented by the post graduate students and discusses by them as well as the senior staff of Medicine department. The staff of Pathology department would then show the slides and present final diagnosis. In these sessions the advance immuno-histo-chemical techniques, the burgeoning markers other recent developments can be discussed.

Radio-diagnosis: Interesting cases and the imaging should be discussed.

Teaching Skills: Post graduate students must teach under graduate students (Eg.medical, nursing) by taking demonstrations, bed side clinics, tutorials, lectures etc. Assessment is made using a checklist by surgery faculty as well students. Record of their participation is kept in Log Book. Training of post graduate students in Educational Science and Technology is recommended.

Continuing Medical Education Programmes (CME): Recommended that at least 2 state level CME programmes should be attended by each student in 3 years.

Conferences: Attending conferences is optional. However it is encouraged.

Demonstration classes: Demonstration of clinical signs to the postgraduates.

Orientation classes: Orientation of the programmes of postgraduate teaching

Method of Training:

Emphasis is on hospital training with candidates given graded responsibility in the management and treatment of patients entrusted to them, while rotating in General medicine units and of subspecialty units. Postgraduate also attend respective unit's outpatient and inpatient activities and consultations.

Didactic lecture and demonstrations by basic and clinical departments to orient all new post graduate house staff to various departmental services and introduce basic concept of acute care management of medical / surgical emergencies. Involving Laboratory, Radiology, Blood bank services Also orientation to medical records and library facility. Lectures are organized over a period of two months and serve as introduction to all new post graduates to promote the need for integrated approach between various disciplines. Preferably these should be organized between 8-9 AM /3-4 PM to minimize interferences with the working of parent departments.

Special orientation to bio statistics, research methodology, and legal medicine and computer skills should be organized through lectures for all first year post graduate during first six months.

Clinical seminar once a week involving participation of all staff of the department of Medicine to ensure combined staff moderated teaching.

Bedside clinics once a week involving one individual senior Professor or Associate Professor or Specialist.

Hospital clinics once a in fortnight involving multidisciplinary approach. Case selection to be done by senior faculty members to emphasize current diagnostic- therapeutic advances.

Journal club once a week 3-4 Journals by P.G's and Junior faculty under supervision of Senior faculty.

Subject seminar once a week Topics to be selected carefully and should not be repeated unnecessarily within 2 years (Total period of postgraduate training is 3 years).

Mortality – CPC once a month (instead of Journal Club). Two to three case will be discussed and moderated by senior faculty. Other consultants invited based on the need.

Besides traditional OHP and 35 mm slide presentations, use of other forms of audio-visual aids may be encouraged.

Dissertation Work: Refer SECTION-I for details.

Rotation

Details of rotation including ancillary postings year wise as follows:

PG I Year:

General Medicine – First four months in parent medical unit and next eight months in two or three other units. (Postgraduate will return to parent unit during III year of rotation for six months)

PG II Year:

Cardiology, Neurology – Two months each = 4 months

One months each in Pulmonary medicine, Immunology, Pharmacology Oncology, Hematology, Endocrinology, Nephrology, Gastroenterology, Dermatology & Psychiatry = 6 months

Special Elective rotation: 2 months

Special elective rotation should be encouraged like Cancer Institutes, Cardiology Institute, Neurology Institute and Multi-specialty centers of national & international repute. Candidate should make arrangement much in advance with approval of H.O.D. of medicine.

Medical departments with less number of specialties may rotate post graduates in general medicine department with postings in Medical intensive care unit. Coronary care unit and Emergency departments.

PG III Year:

General Medicine – Parent Medical Unit: 6 months

Two or three medical units: 6 months

During 3rd year rotation postgraduate student works six months in parent unit and three months each in other two medical units. Postgraduate in III year training is expected to assume more responsibilities in managing patients and assist in first year residents and interns in wards, critical care unit and emergency rooms. Also should participate actively in teaching undergraduate medical students and prepare himself or herself for the role of General Medical Specialist.

The students are encouraged to attend local, state and national level conferences of API, CSI etc. as part of CME programme.

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. Checklists that assess various aspects.

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

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

- Caring attitudes
- Initiative
- Organizational 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.

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.

Clinico-pathological conferences: This should be a multidisciplinary case study 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.

Clinical meetings: Candidates should periodically present cases to his peers and faculty members. This should be assessed using a check list.

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.

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 fundus 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

Description of competencies	**Number**
ECG recording	50
Pleural tap	10
Peritoneal tap	10
Pericardiocentesis	05
Lumbar puncture	15
Resuscitation	
BLS	
ALS	30
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	02-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

Description of competencies	**Number**
Critically ill person (All PI skills)	
Monitoring a sick person	50
Endotracheal intubations	20
CPR	10
Using defibrillator	10
Pulse oximetry	50
Feeding tube use	10
Intercostal tube placement with underwater seal	10
Sedation	10
Analgesia	20
Venesection	
CVP monitoring	
List of PA skills:	
Assessment of brain death	10
Laboratory – Diagnostic Abilities (All PI) Urine protein, sugar, microscopy	10
Peripheral blood smear	10
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	02
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**
Haemodynamic 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

iv) **Teaching skills:** Candidate 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.

v) Dissertation in the Department: Periodic presentations are to be made in the department. Initially the topic selected is to be presented before submission to the University for registration,

again before finalization for critical evaluation and another before final submission of the completed work.

vi) Periodic tests: The 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.

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 preparations and procedures carried out by the candidate.

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

Every student must maintain a record book (diary/log book) and the work carried out by him and the training programme undergone by him during the training, including details of rotation, night calls, procedure and consultations done as M.D. candidates. Thesis records books should be checked and assessed by faculty members imparting the training and certified by the head of the department.

Postgraduate student diary should include following activities.

Format for POSTGRADUATE Diary (Log Book)

- cases seen on rounds – description of interesting cases and other miscellaneous topics discussed
- Outpatient cases seen and details of interesting cases with follow up.
- Procedures done on inpatients and outpatients and consultation done.
- Undergraduate teaching done during the day with details.
- POSTGRADUATE training programmes attended – details of bedside clinics, basic sciences, subject and clinical seminars, Journal clubs, mortality meet and hospital conference.
- Night duties – details of patients managed and emergencies, consultation. Ward calls attended.
- Details of study with topics covered during off hours in library / home. Periodicals and Journals reviewed with notes on interesting articles.
- Medical meetings, Seminars, Local API / CSI meetings or other interesting CME, seminars attended.
- Diary should be reviewed on weekly basis by unit faculty and certified on monthly basis for postgraduate's benefit at the end of each Medical / specialty rotation. Faculty should comment regarding absences and irregularities (Late arrivals early departure) and make appropriate comments and suggest remedial measures for problematic prodigies.

  Satisfactory progress and 80% attendance mandatory before student allowed to appear for University examination.
- Size of note book: 15 cm x 21 cm with 200 pages. All note books should have seal of college and H.O.D.s approval: Extra note books utilized as and when necessary. Diaries should be presented at the time of University clinical exam for review by examiners as per University regulations.

Internal evaluation of P.G. Students performance during three years

I year of M.D. Students

Assessment of students with multiple choice questions multiple short note covering wide range of topics and practical examination attention to history taking symptomtology, clinical skills, relevant diagnostics and therapeutic plans ascertained

Suggested time of evaluation after first six months and at the end of first year rotation.

II Year of M.D. Students

Students should be evaluated at the end of cardiology and neurology posting with Theory and Practical Examinations by concerned specilities along with one faculty from General Medicine and make appropriate recommendation to meet minimal satisfactory guidelines expected of second year PG students. Other specialties with short rotations of one month, should be evaluated with MCQ format and Viva regarding candidates comprehension of the subject.

III Year of M.D. Students

P.G's should be evaluated at the beginning of his 3rd year training by panel of senior Postgraduate teachers. Suggested pattern of assessment with two essay type theory papers and multiple choice questions, clinical skills, diagnostic and therapeutic skills evaluated intermittently by unit faculties.

Mock examination – 3 to 4 months prior to final university exam should consist of four question papers each 3 hours duration, practical and viva voice/OSCE similar to university examination under the supervision of senior faculty.

Results of all evaluations should be entered into postgraduate's diary and departmental file for documentation purposes. Main purpose of periodic examination and accountability is to ensure clinical expertise of students with practical and communication skills and balance broader concept of diagnostic and therapeutic challenges.

Procedures 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.

Scheme of 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 will include Basic Sciences, Current Advances in Genetics, Nutrition, and Clinical Pharmacology

Paper II will include cardiovascular system – Gastro Intestinal system, Infectious diseases including Tropical Medicine

Paper III will include Central Nervous system, Respiratory system, Immune system Connective tissue and joint disorders

Paper IV will include Nephrology, Endocrinology & Metabolism, Haematology, Oncology, Dermatology and Psychiatry Poisoning, Environmental and Occupational hazards.

Note: The distribution of chapters / topics shown against the papers are suggestive only.

B. Clinical Examination **Total marks 300**

To elicit competence in clinical skills and Differential diagnostic formulations

One Long case – 150 marks
Three Short cases - 50 X 3= 150

C. Viva Voice Examination **Marks 100**

Aims to elicit candidates knowledge and investigative / therapeutic skills.

- Viva-voce Examination: (80 marks)

- Theory Examination (4 X 100)
- Clinical Examination – 300 marks
  - Long Case – 1x150 marks
  - Short Case – 3X50marks

    (one emergency short case)
- Viva Voce – 100 marks
  - Pedagogy - 20 marks
  - ECG – 10 marks
  - Instruments – 10 marks
  - Pathology specimen – 10 marks
  - X-ray – 10 marks
  - CT,MRI, ECHO – 20 marks
  - Test – 10 marks
  - Charts – 10 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, 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 also.

2) Pedagogy Exercise: (20 marks)

A topic be given to each candidate in the beginning of clinical examination. He/She is asked to make a presentation on the topic for 8-10 minutes.

D) Maximum marks

Theory	Practical	Viva	Grand Total
400	300	100	800

Recommended Books: Latest Editions

I. Clinical Methods

- Hutchison's Clinical Methods, E.D. Michael Swash, 20th Edition, 1998 (ELBS W.B. Saunders).
- Chamberlain's Symptoms and Signs in Clinical Medicine- Ogilvie & Christopher, 12th
- Edition, 1997 (Butterworth H)

II. General Medicine

- Harrison's Principles of Internal Medicine. 18th edition.
- A.P.I. Textbook of Medicine – G. S. Sainani, 8th edition.
- Cecil's Textbook of Medicine – Bennet & Plum. 20th edition (Saunders)
- Oxford textbook of Medicine – D. J .Seatherall, 3rd edition (Oxford University Press)
- Davidson's Principles & Practice of Medicine. 21th edition.
- Current Medical Diagnosis and Treatment - 2000. Lawrence. 39th edition (Mcgraw Hill)
- Clinical Medicine – Kumar & Clark. 4th edition.
- Medical Complications during Pregnancy – Bunow & Duffy, 5th edition.
- Medical Genetics – Lynn b Jorde, 1998.

III. Cardiology

- The Clinical Recognition of Congential Heart Diseases – Joseph K.Perloff, 4th edition (Jaypee Brothers)
- An introduction to Electrocardiography – Leo Schamroth, 7th edition (Black well Science)
- Practical Electrocardiography – Marriot, 9th edition.

- Textbook of Cardiovascular Medicine – Eugene Braunwald, 8th edition.
- The Heart – Hurst, 9th edition.
- Congenital Heart Diseases in Adults – Perloff, 2nd edition.

IV. Neurology

- Principles of Neurology – Adam's, Victor, 6th edition (Mcgraw Hill).
- Diseases of the brain – Ed Brain, John Walton, 12th edition (Oxford univ)
- Neurological differential diagnosis – John pattern.

V. Gastroenterology

- Current Diagnosis & treatment in Gasteroenterology.
- Diseases of the Liver and Biliary System – S.Sherlock, Dooley, 10th edition (Blackwell Sciences)
- Gastrointestinal and liver diseases – Mark Feldman, Bruce Scharschmidt, 6th edition (Saundars)
- Schiff's Diseases of the Liver – Schiff's, 8th edition.

VI. Nephrology

- Textbook of Renal Diseases , Judith, Lowrence, 2nd edition (Churchill Livingstone)
- Diseases of Kidney, Schrier, 6th edition (Little Brown).
- Manual of Nephrology.

VII. Hematology

- Wintrobe's Clinical Hematology, Richard Lee, 10th edition (Willium & Wilkins)
- De Gruchy's Hematology in Medical Practice, Frank Firkin, 5th edition.

VIII. Rheumatology

1. Rheumatology, John Klippel, 1994.

IX. Endocrinology

1. William's Textbook of Endocrinology, Wilson Fuster, 9th edition (W.B.Saunders)

X. Respiratory Medicine/Critical Care Medicine

1. Chest Medicine essentials of Pulmonary and Critical Medicine, Ronald George, 3rd edition (Williams & Wilkins)
2. Manual of Intensive Care Medicine, Irwin and Rippe, 3rd edition.
3. Textbook of Respiratory Diseases, Crofton & Douglas.
4. A Practical guide Pulmonary medicine, Goldstein.
5. Interpretation of pulmonary Function Tests, Hyatt, scalan.

X. Geriatrics/gerontology

1. Geriatric Medicine, 3rd edition.

XI. Oncology

1. Principles and Practice of Oncology, De Vita.

XII. Infectious Disease

1. A Practical approach to Infectious Diseases, Reese, 3rd edition.
2. Manual of Clinical Problems in Infectious Diseases, 4th edition.

References Books:

Anatomy/Physiology/Biochemistry/Biostatistics

- Clinical Neuroanatomy for Medical Students. 4th edition
- Textbook of Medical Physiology, Guyton. 9th edition.
- Review of Medical Physiology, Ganong, 18thedition.
- Harper's Biochemistry, 25th edition
- Lippincott's illustrated review- Biochemistry, 2nd edition
- Methods in Biostatistics, B.K.Mahajan,6th edition

Pharmacology/Microbiology/Patholy

1. Textbook of Pharmacology,Goodmann & Gillmann's
2. Washington Manual of Medical Therapeutics, 29th edition

Clinical Methods

1. Mcleod's Clinical Examination, 10th edition (Churchill Livingstone)
2. Bickerstaff's Neurological examination clinical practice, J.Spillane, 6thedition (Blackwell science)
3. Beside Cardiology, Constant, 5th edition.
4. The Neurologic Examination, de'jong, 5th edition (Lippincott)

Journals

- Journals of Association of Physicians of India(JAPI)
- British Medical Journal (BMJ) – weekly
- New England Journal of Medicine – Bimonthly
- The Lancet – monthly
- American Journal of Medicine – monthly
- Issues in Medical Ethics
- Indian Journal of Tuberculosis
- Dermatology Clinics
- GUT(Gastroenterology)
- Postgraduate Medical Journal
- Stroke
- Blood
- Neurologic Clinic
- Indian Journal of Nephrology
- Public Health Papers

SECTION - III

MEDICAL ETHICS & MEDICAL EDUCATION

Sensitization 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 Objectives (ii) stated in Chapter II (pages 2.1 to 2.3), and develop human values it is urged that **ethical sensitization** 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 presentations, bedside rounds and academic postgraduate programs.

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
   Heteronymous 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 Behavior 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 Intra fallopian Transfer (SIFT),
   Gamete Intra fallopian Transfer (GIFT), Zygote Intra fallopian 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\
   ICMR Guidelines for Ethical Conduct of Research – Human and Animal
   ICH / GCP Guidelines
   Schedule Y of the Drugs and Cosmetics Act.

9. Ethical work -up of cases
   Gathering all scientific factors
   Gathering all human factors
   Gathering value factors
   Identifying areas of value – conflict, setting of priorities,
   Working our criteria towards decisions

Recommended Reading

1. Francis C. M., **Medical Ethics**, 2nd Ed, 2004Jaypee Brothers, Bangalore/-
2. Ethical guidelines for biomedical research on human participants, ICMR publication 2006
3. Santosh Kumar: the elements of research, writing and editing 1994, Dept of Urology, JIPMER, Pondicherry
4. Srinivas D.K etal, Medical Education Principles and Practice, 1995, National Teacher Training Centre, JIPMER, Pondicherry
5. Indian National Science Academy, Guidelines for care and use of animals in scientific Research, New Delhi, 1994
6. International committee of Medical Journal Editors, Uniform requirements for manuscripts submitted to biomedical journals, N Engl G Med 1991
7. Kirkwood B.R, Essentials of Medical Statistics, 1st Ed.,Oxford: Blackwell Scientific Publications 1998
8. Mahajan B.K. Methods in bio statistics for medical students, 5th Ed, New Delhi, Jaypee, Brothers Medical Publishers, 1989
9. Raveendran, B. Gitanjali: A Practical approach to PG dissertation, New Delhi, Jaypee Publications, 1998.

10. John A Dent. Ronald M Harden, A Practical guide for medical teacher, 4th Edition, Churchill Livingstone, 2009.
11. Tejinder Singh Anshu, Principles of Assessment in Medical Education, Jaypee brothers
12. Dr. K.Lakshman, A Hand Book on Patient Safety, RGUHS & Association of Medical Consultants, 2012
13. Bernard Mogs, Communication skills in health & social care, 3rd Edition, (S) SAGE, 2015
14. Manoj Sharma , R. Lingyak Petosa, Measurement and Evalution for Health Educators, Jones & Bartlett Learning.
15. David E. Kern, Particia A, Thomas Mark T, Hughes, Curriculum Development for Medical Education. A six-step approach, The Johns Hopkins University press/Baltimore.
16. Tejinder Singh Piyush Gupta Daljit Singh, Principles of Medical Education (Indian Academy of Paediatrics), 4th Edition, Jaypee Brothers, 2013.
17. Robert Reid, Torri Ortiz Linenemann, Jessica L.Hagaman, Strategy Instruction for Students with learning disabilities, 2nd Edition, The Guilford Press London.
18. Lucinda Becker Pan Demicolo, Teaching in higher education, (S) SAGE, 2013.
19. C.N. Prabhakara, Essential Medical Education (Teachers Training), Mehta publishers.
20. Tejinder Singh Piyush Gupta, Principles of Evaluation & Research for health care programmes, 4th Edition, IAP National Publication House (Jaypee Brothers).
21. R.L.Bijlani, Medical Research, Jaypee Brothers, 2008
22. Stephen Polgar Shane A Thomas, Introduction to Research in the Health Sciences, Churchill Livingstone Elsevier, 2013.
23. Amar A,Sholapurkar. Publish & Flourish -A practical guide for effective scientific writing, Jaypee Brothers, 2011
24. Charles R.K.Hind, Communication Skills in Medicine, BMJ, 1997.

SECTION - IV

ANNEXURES

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 1	Average 2	Good 3	Excellent 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 defend 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	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.	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: Date:

Name of the Unit Head:

Sl. No.	Points to be considered	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: Date:

Name of the Faculty:

Sl. No.	Points to be considered	Below Average 1	Average 2	Good 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				
	Total Score				

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 sequences 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 SYNOPSIS PRESENTATION

Name of the Student: Date:

Name of the Faculty:

Sl. No	Points to be considered divine	Poor	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					
	Total Score					

Check List – VII

CONTINOUS EVALUATION OF DISSERTATION WORK BY GUIDE / CO-GUIDE

Name of the Student: Date:

Name of the Faculty:

Sl. No.	Items for observation during presentation	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: **Academic 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.	Faculty Member & Others	Name of Student and Mean Score									
		A	B	C	D	E	F	G	H	I	J
1.											
2.											
3.											
4.											
5.											
Total Score											

Note: Use separate sheet for each year.

REGISTRAR
BLDE (Deemed to be University)
Vijayapura-586103. Karnataka