Regulations and Curricula
for
Post Graduate Degree and Diploma Courses
in
Medical Sciences

2000

Volume III: Clinical Subjects

M. D. Pediatrics

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

Regulations for Post Graduate Degree and Diploma Courses in Medical Sciences
(Annexure to University Notification No. UA/ORD-6/99-2000 dated 01.01.2000)

Contents

Rajiv Gandhi University of Health Sciences, Karnataka

4th T Block, Jayanagar, Bangalore - 560 041

No. UA/ORD-06/1999-2000 **01.01.2000**

NOTIFICATION

Sub: Revised Ordinances pertaining to Post Graduate Degree, Diploma and Super Speciality Courses in Medicine

Ref: Minutes of the 16th syndicate meeting held on 16.11.1999.

In exercise of the powers conferred under Sec. 35(2) of the RGUHS Act, the Syndicate at its meeting held on 16.11.1999 has been pleased to approve the Revised Ordinances pertaining to Post Graduate Degree, Diploma and Super Speciality Courses in Medicine as given in schedule here to annexed.

The Revised Ordinances as above shall come into force immediately and is applicable for University examination of March 2000 and onwards.

By order,
Sd/
REGISTRAR

To

1. The Principals of all Medical Colleges affiliated to RGUHS
2. The Members of the Syndicate/Senate/Academic Council.

Rajiv Gandhi University of Health Sciences, Karnataka

4th T Block, Jayanagar, Bangalore - 560 041

No. UA/ORD-06/1999-2000 **26.12.2000**

NOTIFICATION

Sub: Revised Ordinance pertaining to PG Degree, Diploma and Super Specialty Courses in Medicine

Read: The Revised Ordinance along with Syllabus and Scheme of Examination of Pre-clinical and Para-clinical subjects pertaining to Postgraduate Degree, Diploma and Super Sociality courses in Medicine as approved by the Syndicate at its meeting held on 16.11.1999 and notified in the University notification No. UA/ORD-6/1999-2000 dt. 01.01.2000. Now the Syndicate at its meeting held on 22.11.2000 has approved Syllabus of Postgraduate Clinical Subjects and the same is notified.

In exercise of the powers conferred under Sec. 35(2) of the RGUHS Act, the Syndicate has been pleased to approve the Curriculum (Syllabus) of following PG Clinical Subjects in respect of above ordinance as given in the schedule here to annexed.

Subject	Degree	Diploma
Anesthesiology	1. M.D.	2. D.A.
Aviation Medicine	3. M.D.	---
Dermatology, Venereology and Leprosy	4. M.D.	5. DDVL
General Medicine	6. M.D.	----
General Surgery	7. M.S.	----
Obstetrics & Gynecology	8. M.S.	9. DGO
Oto-Rhino-Laryngology	10. M.S.	11. DLO
Ophthalmology	12. M.S.	13. DO
Orthopedics	14. M.S.	15. D. Ortho
Pediatrics	16. M.D.	17. DCH
Psychiatry	18. M.D.	19. DPM
Radio-Diagnosis	20. M.D.	21. DMRD
Radiotherapy	22. M.D.	23. DMRT
Tuberculosis & Respiratory Medicine	24. M.D.	25. DTCD

The Syllabus as above shall be applicable from the Academic Year 2000-01.

By order,
Sd/
REGISTRAR

To

1. The Principals of all Medical Colleges affiliated to RGUHS
2. The Members of the Syndicate/Senate/Academic Council.

Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore.

Regulations for Post Graduate Degree and Diploma Courses in Medical Sciences

Chapter I

1. Branches of Study

1.1 Postgraduate Degree Courses

The following courses of studies may be pursued.

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

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

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

B. M.S. (Master of Surgery)

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

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

C. D.M. (Doctor of Medicine)

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

D. M.Ch (Master of Chirurgie)

In the subjects recognised by Medical Council of India.

1.2 Postgraduate Diploma Courses

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

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

2. Eligibility for Admission

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

2.2 D.M and M.Ch Courses:

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

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

3. Obtaining Eligibility Certificate by the University before making Admission

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

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

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

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

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

4. Intake of Students

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

5. Duration of Study

a) M.D /M.S Degree Courses

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

b) D.M /M.Ch

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

c) Diploma courses:

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

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

6. Method of training

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

7. Attendance, Progress and Conduct

7.1 A candidate pursuing degree/diploma course should work in the concerned department of the institution for the full period as a full time student. No candidate is permitted to run a clinic/laboratory/nursing home while studying postgraduate course.

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

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

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

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

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

8. Monitoring Progress of Studies:

8. Monitoring Progress of Studies:

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

8.2 Periodic tests:

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

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

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

9. Dissertation

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

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

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

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

9.5 The dissertation should be written under the following headings:

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

9.6 The written text of dissertation shall be not less than 50 pages and shall not exceed 150 pages excluding references, tables, questionnaires and other annexures. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound properly. Spiral binding should be avoided. The dissertation shall be certified by the guide, head of the department and head of the Institution.

9.7 Four copies of dissertation thus prepared shall be submitted to the Registrar (Evaluation), six months before final examination on or before the dates notified by the University.

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

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

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

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

10. Schedule of Examination

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

11. Scheme of Examination

11.1 M.D. / M.S. Degree

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

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

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

11.1.3 Practical / Clinical Examination:

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

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

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

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

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

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

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

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

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

11.2 D.M / M.Ch:

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

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

11.2.2 Practical / Clinical Examination:

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

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

The maximum marks for Practical / Clinical shall be 200.

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

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

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

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

11.3 Diploma Examination:

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

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

11.3.2 Practical / Clinical Examination:

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

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

The maximum marks for practical / Clinical shall be 150.

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

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

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

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

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

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

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

CHAPTER II

GOALS AND GENERAL OBJECTIVES OF POSTGRADUATE MEDICAL EDUCATION PROGRAM

GOAL

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

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

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

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

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

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

GENERAL OBJECTIVES

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

STATEMENT OF THE COMPETENCIES

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

COMPONENTS OF THE PG CURRICULUM

The major components of the PG curriculum shall be:

- Theoretical knowledge
- Practical/clinical Skills
- Training in Thesis.
- Attitudes, including communication.
- Training in research methodology.

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

Chapter III

Course Description

Postgraduate Courses in Pediatrics

M. D. Pediatrics

Goals

The goals of postgraduate training in Pediatrics would be to train a basic medical graduate (MBBS)

- To practice as a Child Health specialist equipped with appropriate knowledge and skills necessary to care for the normal and sick child.
- To practice Child Health in the community (urban or rural) and to perform professionally at all levels of the existing health care system.
- To practice with empathy and the highest ethical standards of the profession.
- To continue to strive for excellence by continuing medical education throughout his or her professional career.
- To teach by sharing knowledge and skills with colleagues
- To research and find solutions to challenges in health care.

Objectives

The objectives to be fulfilled at the completion of the course are as follows:

At the end of the program, the student should be able to:

- Knowledge:

- Describe, identify and monitor normal patterns of growth and development of children.
- Describe etio-pathogenesis, principles of clinical diagnosis, investigations and treatment of diseases of childhood.
- Demonstrate an understanding of Basic (Pre and Para-clinical) Sciences and its application to the normal and abnormal processes.
- Analyze clinical and investigation data approach and manage a health-related problem.
- Identify and understand socio-economic-environmental-cultural factors in health care.
- Recognize problems outside his or her abilities and appropriately refer.
- Update one's knowledge and skills by self directed learning and by participating in continued medical education programs utilizing media – spoken, written, Print and electronic.
- Teach and share knowledge and skills with colleagues.
- Audit and analyze work, assist in research and publish scientific articles in peer reviewed journals.

- Skills:

- Elicit an appropriate clinical history.
- Demonstrate appropriate clinical physical examination skills on children.
- Plan, decide upon and interpret appropriate cost effective investigations.
- Perform essential procedures both diagnostic and therapeutic.

- Manage, resuscitate and stabilize children in Pediatric or Neonatal emergencies.

- Communication and attitudes:
- Communicate appropriately with guardians and children, assisting in their health care decision making.
- Practice child health care at the highest ethical level, protecting the child at all costs.
- Respect Patient's (and their guardian's) rights and professional relationships (Doctor-Doctor, Doctor-Nurse, Doctor-Patient, Doctor-Society).
- Apply the highest level of ethics in Research, Publication, References and Practice of Pediatrics.

Course Contents

Knowledge
Must Know

The Field of Pediatrics

1. Evaluating Medical Literature

   Critical Appreciation of Journal articles

2. Overview of Child Health

3. The Normal Child
4. Preventive and Social Pediatrics
5. Epidemiology, Statistics and Research Methodology including Dissertation
6. Ethical Issues in Pediatrics

Growth and Development

1. Biopsychological Models of Development
2. Fetal growth and development
3. The newborn G/D
4. Infant, Preschool, Early school, Adolescence G/D
5. Assessment of Growth
6. Development Assessment
7. Standards/Normograms (including Indian)
8. Approach to short stature
9. Approach to Obesity
10. Approach to Undernutrition

Psychological Disorders

1. Assessment and Interviewing
2. Vegetative Disorders-Rumination, Pica, Enuresis, Encopresis, Sleep
3. Habit Disorders
4. Anxiety Disorders
5. Suicide
6. ADHD
7. Autism

Knowledge
Desirable to know

1. History of Pediatrics
2. Traditions and Cultural Issues pertaining to Child Care

1. IQ assessment

1. Psychiatric considerations of CNS injury
2. Mood Disorders
3. Disruptive Behavioral disorders
4. Sexual behavior variations
5. Psychosis
6. Psychological treatment

8. Poor Scholastic performance child
9. Psychosomatic Illness

7. Neurodevelopment dysfunction in school age
8. Learning Disorders

Knowledge Must Know	**Knowledge Desirable to Know**
Social Issues	
1. Adoption	1. Effects of a mobile society
2. Street Child	2. Impact of Violence
3. ChildCare	3. Street Child
4. Separation, death	4. Single parent child
5. Abuse and Neglect	5. Foster care
6. Child Labor	
7. Media (TV, Movies) and its effect on the child	
Children with Special Needs	
1. Failure To Thrive – Problems, Approach and Evaluation	1. Children in Poverty
2. Developmental disabilities, Chronic Illness	2. Homeless children
3. Mental Retardation – Problems, Approach and Evaluation	3. Foster Children
4. Care of Child with fatal illness	4. Runaway Children
Nutrition	
1. Nutritional Requirements- Water, energy, proteins, CHO, Fats, Minerals, Vitamins,	
2. Diet/Nutrition Evaluation	1. Athletic Diet
3. Diet for later childhood and Adolescent	
4. Infant and Child Feeding	
5. Breast Milk Feeding, Human Lactation Management, BFHI	
6. Nutrition Values of Indian Foods, Recipes	
7. Weaning foods	
8. Feeding through 1 and 2nd years	
9. Nutritional Disorders Including Obesity	
10. Protein Energy Malnutrition	
11. Vitamin Deficiencies and Excess	
12. Micro-nutrient Malnutrition	
13. Nutrition in Special situations – LBW, Premature, IEM, Chronic illness, Surgery, Critically ill child	
14. TPN	

Knowledge Must Know	**Knowledge Desirable to Know**
Patho-physiology of Body Fluids and Fluid therapy (Approach and Management)	
1. Physiology of Fluids, Electrolytes and Acid Bases	

2. Dehydration and fluid management
3. Dyselectrolytemia
4. Acid Base Disorders
5. Special Situations - Pyloric stenosis, CNS disorders, Burns, Peri-operative, Endocrine disorders, Renal Failure.

Acutely Ill child

1. Evaluation in Emergency
2. Injury Control
3. Emergency Medical Services
4. Pediatric Critical Care
   Respiratory Failure, Ventilation
   Circulatory Failure and Shock
   Acute Neurological Dysfunction
   Resuscitation – Basic and Advanced, NALS/PALS
   Post Resuscitation stabilization
   Cold/Heat Injury
5. Transportation of Sick Child/neonate
6. Post-operative supportive care

1. Pediatric Anesthesia

2. Organization of a PICU/NICU
3. Equipment for Intensive care

Emergencies/ Critical Care Pediatrics

1. Fluid abnormalities
2. Electrolyte abnormalities
3. Thermoregulation problems
4. Acute Renal failure
5. Hypertensive crisis
6. Congestive Cardiac failure
7. Cardiogenic shock
8. Pericardial tamponade
9. Cyanotic spells
10. Unstable and stable Arrythmias
11. Vomiting and Diarrhea

Knowledge **Must Know**	**Knowledge** **Desirable to Know**

12. GI Bleeds - Hematemesis, Melena, Hematochezia
13. Adrenal Crisis
14. Metabolic problems – hyperammonemia, lactic acidosis, acid base abnormalities, Hypoglycemia
15. Septicemic shock, Viral infections and shock
16. Pneumothorax, empyema, pleural effusion, ascites
17. Severe Anemia, Bleeding child, Neutropenia
18. Pain management, Drug therapy
19. ARDS
20. Respiratory Failure
21. Burns/ electrocution
22. Animal Bites
23. Preanesthetic check up PAC

24. Sickle cell crisis, severe complicated malaria
25. Acute severe asthma, Bronchiolitis
26. Status epilepticus
27. Febrile seizure
28. Coma, Increased intra-cranial pressure
29. Cardiopulmonary resuscitation
30. Shock
31. Upper airway obstruction
32. Near drowning
33. Poisoning
34. Snake bite
35. Scorpion sting
36. Physical abuse
37. Sexual abuse

Human Genetics

Knowledge Must Know	**Knowledge Desirable to Know**
1. Molecular Basis of Disorders	
2. Molecular Diagnosis	1. Human Genome Project
3. Inheritance Patterns	
4. Chromosomal/genetic clinical Abnormalities	
5. Genetic Counseling	
6. Dysmorphism	
7. Gene therapy	

Metabolic Disorders

1. Approach to IEM	1. Purine and pyrimidine metabolism defects
2. Aminoacid Metabolic defects - Common	
3. Porphyria	2. Amino acid Metabolic Defects – Rare
4. Lipid Metabolism - Common	3. Lipid Metabolism - Rare
5. CHO Metabolism – Common	4. CHO Metabolism – Rare
6. Mucopolysaccharidosis	5. Mucolipidosis
8. Hypoglycemia	

Fetus and Newborn

1. Mortality and morbidity
2. Newborn – history, examination, routine delivery care, nursery care, bonding
3. High risk pregnancies
4. Dysmorphology
5. Fetus
    - Growth/Development
    - Fetal distress
    - Maternal diseases
    - Maternal medications
    - Detection, treatment, prevention of fetal disease
        - Antenatal diagnosis
        - Fetal therapy

Antenatal therapy
Counseling
Teratogens, radiation

6. High risk infant
   - Multiple pregnancies
   - Prematurity
   - Postdated
   - IUGR/LBW
   - LFD

Knowledge **Must Know**	**Knowledge** **Desirable to Know**

7. Congenital anomalies/ malformations
8. Birth injuries
9. Hypoxia - ischemia, asphyxia
10. Organization and levels of newborn care
11. Normal Newborn
12. Common problems in a normal newborn
13. Delivery room emergencies
14. Respiratory disorders
15. Oxygen therapy, toxicity
16. Ventilation
16. GI disturbances including NEC
17. Hyperbilirubinemia
18. Cardiac problems
19. PPHN
20. Blood disorders
    - Polycythemia
    - Anemia
    - Hemorrhagic disease of newborn
    - Hemolytic disease of newborn
    - Thrombocytopenia
21. Genitourinary disturbances
22. Metabolic disorders
22. Endocrine disorders- IDM, CAH
23. Ambiguous genitalia
24. Fluid and electrolytes in Newborn care
25. Nutrition and feeding the newborn – term/preterm, LBW, IUGR
26. Neonatal transport
27. Surgical problems
    - TEF
    - Anorectal malformations
    - Diaphragmatic Hernia/Eventeration
    - Hirschsprung
    - Urogenital anomalies
    - NEC

Knowledge	**Knowledge**

Must Know	Desirable to Know
Congenital Lobar Emphysema Volvulus 28. Thermoregulation 29. Neonatal follow-up	
Neonatal Infections 1. Epidemiology 2. Intrauterine infections 3. Viral Infections 4. Neonatal sepsis/meningitis 5. Pneumonia 6. UTI 7. Hepatitis 8. Nosocomial 9. Universal precautions 10. Prevention of infections 11. Therapy- antimicrobials, adjuvants	
Adolescent Health 1. Epidemiology 2. Sexual development and SMR stages 3. Deliveries of health care 4. Pregnancy 5. Contraception 6. STD 7. Menstrual problems 8. Anorexia nervosa, bulimia	1. Depression 2. Suicide 3. Substance abuse 4. Sleep disorders 5. Skin/Orthopedics
Immunological system 1. Basics of Immunology 2. Approach to immunodeficiency 3. HIV 4. Bone marrow transplantation	

Knowledge Must Know	Knowledge Desirable to Know
5. Primary B cell diseases 6. Primary T cell diseases 7. Complement and phagocytic diseases 8. Chronic granulomatous disease 9. Chediak Higashi Disease 10. Neutrophil abnormalities 11. Adhesion disorders	
Allergic disorders 1. Allergy and Immunological basis	1. Insect allergy

2. Diagnosis
3. Therapy – principles
4. Allergic Rhinitis
5. Asthma
6. Atopic dermatitis
7. Urticaria, Angioedema
8. Anaphylaxis
9. Serum sickness
10. Adverse drug reactions

2. Ocular allergy
3. Adverse food reaction

Rheumatology

1. Autoimmunity
2. Laboratory evaluation
3. JRA
4. SLE
5. Vasculitis
6. Dermatomyositis
7. Erythema Nodosum

1. Ankylosis spondylosis
2. Neonatal Lupus
3. Scleroderma
4. Mixed connective Tissue Disease
5. Behcet
6. Sjogren
7. Non rheumatic conditions
8. Pain syndromes, panniculitis, polychondritis, amyloidosis

Knowledge **Must Know**	**Knowledge** **Desirable to Know**

Infectious diseases

1. Fever
2. Clinical use of Micro Lab
3. Fever without a focus
4. Sepsis and Shock
5. CNS Infections
6. Pneumonia
7. Gastroenteritis
8. Osteomyelitis, Septic arthritis
9. Compromised host infections
10. Bacterial Infections
11. Anaerobic infections
12. Viral Infections
13. Mycotic infections
    - Candidiasis
    - Aspergillosis
14. Parasitic infections
    - Helminthiasis
15. Protozoal
    - Malaria
    - Kalazar
    - Leishmania

Giardia
Amoeba

16. Antiparasitic drugs
17. Antimicrobials
18. Antivirals drugs, interferon
19. Preventive measures
    Health advice for travelling
    Infection control
20. Immunization
    Principles
    Schedules
    Controversies

Knowledge Must Know	**Knowledge Desirable to Know**
Standard and Optional Vaccines Recent advances in Vaccines	
Digestive system	
1. Normal tract – Physiology, Anatomy, Development	1. Food allergy
2. Clinical features of Disorders	
3. Disorders of Esophagus	
4. Disorders of Stomach	
5. Disorders of Intestines except Food allergy	
6. Disorders of Pancreas	
7. Disorders of Liver and biliary system Acute Hepatitis, Chronic Hepatitis, Cirrhosis, Metabolic Liver Diseases, Cholestatic liver disease, Neonatal Obstructive Cholangiopathy, Complications of Liver Disease – Portal Hypertension, Encephalopathy, Coagulopathy,	
8. Disorders of Peritoneum	
9. GI function tests	
10. Approach to Malabsorption	
Respiratory system	
1. Development and function	1. Congenital disorders of nose
2. Disorders of Upper Respiratory tract	
3. Disorders of Lower respiratory tract	2. Hypoventilation
4. Pleural disorders	
5. Chronic Respiratory Disease Interstitial fibrosis, ILD, empyema, lung abscess, bronchiectasis	3. Hypostatic pneumonia 4. Kyphoscolosis
6. Recurrent Respiratory Disease	
7. Ventilation	5. Central hyperventilation
8. Pulmonary Function tests	6. Obesity
9. Cystic Fibrosis	

10. Obstructive sleep apnea
11. Pulmonary Hemosiderosis

Knowledge Must Know	**Knowledge Desirable to Know**
12. Neuromuscular skeletal disorders	7. Cough Syncope
13. Bronchial Asthma	
Cardiovascular System	
1. Investigations –Lab, ECG, CXR, ECHO, Cath	
2. Physiology and Pathophysiology of Transitional Circulation	1. Sick Sinus
Embryology	2. Tumors of Heart
3. Congenital Heart Disease	3. Heart Lung, Heart Transplants
Epidemiology	4. Aneurysms and fistulae
Approach	
Cyanotic	
Acyanotic	
4. Cardiac Arrhythmia	
5. Acquired heart disease	
Infective Endocarditis	
Rheumatic Heart Disease	
6. Diseases of the Myocardium – Myocarditis, Cardiomyopathy	
7. Cardiac Therapeutics	
Blood	
1. Development of Hematopoietic system	1. Elliptocytosis
2. Anemias	2. Stomatocytosis
Inadequate production	3. Other membrane defects
Nutrition – Iron, Folate, B12	
Bone Marrow failure	
Hemolytic	
Congenital and Acquired	
3. Constitutional pancytopenia	
4. Polycythemia	
5. Granulocyte transfusions	
6. Pancytopenia	
7. Blood and component transfusions	
8. Thrombotic disorders	

Knowledge Must Know	**Knowledge Desirable to Know**
9. Hemorrhagic disorders – acquired and congenital	

Physiology
Bleeding disorders
Coagulation disorders

10. Hyposplenism, trauma, splenectomy
11. Physiology and Disorders of the Spleen
12. Lymphatics

4. Lymphatic vessel disorders

Neoplasms

1. Principles of diagnosis
2. Principles of treatment
3. Leukemia
4. Lymphomas
5. Neuroblastomas
6. Liver neoplasm
7. Kidney tumors
8. Bone Neoplasms
9. Retinoblastoma

1. Epidemiology
2. Molecular pathogenesis
3. Soft tissue sarcomas
4. Gonadal, germ cell tumours
5. GI neoplasm
6. Carcinomas
7. Skin Cancer
8. Benign tumours

Nephrology

1. Structure and function of kidney
2. Hematuria and conditions
3. HUS
4. Evaluation
5. Proteinuria
5. Nephrotic syndrome
6. Acute Glomerulonephritis
7. Tubular disorders
   Function
   RTA
   DI
8. Renal Failure
9. RPGN
10. Renal Replacement therapy

1. Membranous GN
2. Lupus nephritis
3. Membr Prolif GN
4. Chronic infn GN
5. Goodpasture

Knowledge **Must Know**	**Knowledge** **Desirable to Know**

11. Bartter syndrome
12. Investigations
13. Toxic nephropathy

7. Interstitial nephritis
8. Cortical necrosis

Urological disorders

1. UTI
2. Congenital anomalies, dysgenesis kidney
3. Vesicoureteral reflux
4. Bladder anomalies
5. Obstructions
6. Penis, urethra anomalies
7. Voiding dysfunction
8. Scrotal anomalies

9. Genitourinary trauma
10. Urinary lithiasis
11. Investigations – imaging, renal function tests
12. Neurogenic bladder

Gynecological problems

1. Menstrual Problems	1. Neoplasms
2. Vulvovaginitis	2. Breast Disorders
3. Developmental anomalies	3. Hirsuitism, polycystic ovaries
4. A child with special gynea needs	4. Gyne imaging
	5. Athletic problems

Endocrine

1. Hypothalamus and pituitary
    - Hyperpitutarism
    - Hypopitutarism, Growth hormone
    - DI
    - ADH
    - Physiology of Puberty
    - Disorders of puberty
        - Precious Puberty
        - Delayed puberty
2. Thyroid
    - Thyroid studies
    - Hypothyroidism
    - Thyroiditis
    - Goitre
    - Hyperthyroidism
3. Parathyroid and disorders
4 Diabetes mellitus
5. Adrenal Disorders
    - CAH
    - Cushing
    - Addisons
    - Excess mineralocorticoids
    - Feminizing adrenal tumours
    - Pheochromocytoma

1. Carcinoma of thyroid
4. Tumours of testis/ovary
5. Multiple Endocrine Disorders

Knowledge Must Know	**Knowledge Desirable to Know**

CNS

1. Examination, Localization of lesions	1. Movement disorders
2. Congenital anomalies	
3. Seizures	
4. Headaches	
5. Neurocutaneous disorders	
6. Coma	
7. Brain death	
8. Head Injury	

9. Neurodegenerative disorders- Approach, Grey/white
10. Acute Stroke
11. Brain abscess
12. Tumors
13. Spinal cord disorders
14. Investigations
15. Antiepileptic drugs
16. SSPE

Knowledge **Must Know**	**Knowledge** **Desirable to Know**
17. Rabies Vaccine Encephalomyelitis, 18. Acute Demyelinating Encephalomyelitis 19. Approach, Investigations of UMN, LMN, Extrapyramidal, Cerebellar lesions 20. Cerebral Palsy 21. Neuroinfections 22. Encephalopathies	
Neuromuscular	
1. Evaluation, investigations 2. Muscular Dystrophies, Congenital Myopathy, Myositis 3. Neuromuscular transmission and motor neuron abnormalities 4. GB syndrome 5. Bell's Palsy 6. Floppy Infant 7. Myasthenia Gravis	1. Development disorders of muscle 2. Endocrine 3. Metabolic 4. Motor sensory neuropathy 5. Autonomic
Eye	
1. Examination of eye 2. Diseases of Eye movement and alignment disorders 3. Diseases of Conjunctiva - Conjunctivitis 6. Diseases of Lens - Cataracts 7. Diseases of Optic nerve – Papillitis, Neuritis, Papilledema 8. Diseases of Cornea - Clouding 8. Vitamin A deficiency 9. Lacrimal problems - Dacrocystitis 10. Retinopathy of Prematurity 11. VER	1. Refraction, accommodation 2. Vision 3. Pupils and iris 4. Lids 5. Uveal tract 6. Retina and vitreous 7. Glaucoma 8. Orbital abnormalities 9. Injuries to eye
Ear	
1. Clinical manifestations 2. Hearing loss 3. External Otitis 4. Otitis media 5. BAER	1. Congenital malformations 2. Inner ear dis 3. Trauma 4. Tumors

Knowledge Must Know	Knowledge Desirable to Know
Skin	
1. Morphology	1. Cutaneous defects
2. Evaluation	2. Hypersensitivity
3. Principles of therapy	3. Epidermis dis
4. Diseases of the neonate	4. Keratinization dis
5. Ectodermal dysplasias	5. Dermis dis
6. Vascular disorders	6. Subcutn dis
7. Cutaneous nevi	7. Sweat glands
8. Pigment Disorders Hyperpigmentation Hypopigmentation	8. Hair
9. Vesiculobullous dis	9. Nails
10. Eczema	10. Mucous membranes
11. Cutaneous Infections – Bacterial, Viral, Fungal	11. Tumors
12. Arthropod bites, infestations	
13. Acne	
14. Nutritional diseases	
15. Drug Reactions	
Bone/Joint	
1. Evaluation	1. Sports medicine
2. Diseases of Foot, toes	2. Pseudoachondroplasia
3. Torsional, angular deformities	3. Diagnosis, assessment of genetic skeletal disorders
4. Leg length discrepancy	4. Dysplasias- Thantophoric, diastrophic, camptomelic
5. Diseases of Knee	5. Ellis van Creveld
6. Diseases of Hip	6. Osteochondrodysplasia
7. Diseases of Spine	7. Inherited osteoporosis
8. Diseases of Neck	
9. Upper limb	11. Hypophosphatasia
10. Arthrogryposis	12. Primary Chondrodystrophy
11. Common Fractures	13. Idiopathic hypercalcemia
12. Arthritis – approach, investigations, Management	14. Hyperphosphatasia
12. Congenital Dislocation of Hip	
13. Osteomyelitis	

Knowledge Must Know	Knowledge Desirable to Know
14. Septic Arthritis	
15. Rickets – Nutritional and non nutritional	
Genetic skeleton	
1. Lethal and nonlethal bone dysplasias	
2. Achondroplasia	

3. Osteopetrosis
4. Marfans

Metabolic Bone disease

1. Bone and vitamin D
2. Familial Hypophosphatemia
3. Rickets – Nutritional and non nutritional

Unclassified disease

1. SIDS
2. Histiocytosis
3. Cystic fibrosis
1. Sarcoidosis
2. Progeria
3. Chronic fatigue syndrome

Environmental

1. Lead poisoning
2. Envenomation
3. Mammalian bites
4. Radiation
5. Chemical pollutants
6. Mercury
7. Nonbacterial poisoning

3. Common Poisonings – OP, Kerosene, Phenobarbitone, Iron, etc

PEDAGOGY

Principles of learning, objectives, teaching learning methods, evaluation

HEALTH STATISTICS, NATIONAL PROGRAMS

ORGANIZATION OF OFFICE PRACTICE

Equipment, Documentation, Records, Space and functioning

Knowledge Must Know	**Knowledge Desirable to Know**

RECENT ADVANCES IN PEDIATRICS

DURATION 5 years

ALLIED SUBJECTS

Anatomy

Applied Embryology, Development of major organ systems

Physiology

Applied Physiology with regard to major organ systems

Biochemistry

Biochemical basis or diseases in children – Nutritional and metabolic

Pathology

Pathophysiology of diseases in children, Pathogenesis, Basic Histo-pathology

Microbiology

Clinical Microbiology applied to investigations for diseases in childhood, serology, staining, cultures

Pharmacology

Clinical Pharmacology, Therapeutics of childhood diseases, drug interactions, Rational drug therapy, Adverse Drug Reactions,

Community Medicine

Health Care Delivery Systems – structure and function, Health Statistics, National Programs

Pediatric Surgery

Recognition and referral of surgical conditions in Pediatrics

Radiology

Clinical Indications and interpretations of Xray, Ultrasound, CT, MRI

Legal and Ethical Medicine

Rights and protection of children, Consumer Protection Act, Basic Principles of Ethics

I. Postgraduate skills

Please note code:

PI: Perform Independently
PA: Perform with assistance
O: Observe
Number at end of item indicates minimum number of supervised and documented skills.

Psychomotor skills

Procedural

Procedures: List of PI Skills

• Clinical History and Physical examination	-
• Human Lactation management (counseling and practical skills)	20
• Neonatal resuscitation	30
• Pediatric resuscitation	30
• Teaching encounters	5
• Intravenous injections	50
• Intravenous cannulation	50
• Lumbar puncture	50
• Test dose	10
• Infusions	10
• Blood transfusions	10
• Neonatal Exchange transfusions	10
• ABG	10
• Central line, CVP	10
• Intraosseous	10
• Bone marrow aspiration, trephine biopsy	10
• Pleural tap	10
• Paracentesis – diagnostic and therapeutic	10
• Mantoux test	10
• DPT, OPV, Measles vaccination	10
• Sampling for Fluid cultures	10
• Liver biopsy	10
• Neonatal, Pediatric Partial exchange	5

Respiratory management (All PI)

- Nebulization 50
- Inhaler therapy 10
- Oxygen delivery 50

Critically Ill child (All PI)

- Monitoring a sick child 50
- Pulse oximetry 10
- Infant feeding tube/ Ryles tube, stomach wash 10
- Urinary catheterization 10
- Restraining a child for a procedure 10
- ORS and ORT 10
- Prognostication 10

Laboratory- Diagnostic (All PI)

- Urine Protein, sugar, microscopy 10
- Peripheral blood smear 10
- Malarial smear 10
- Ziehl Nielson smear – sputum, gastric aspirate 10
- Grams smear – CSF, pus 10
- Stool pH, reducing substances, microscopy 10
- KOH smear 2

Neonatal tests (All PI)

- Apt test 5
- Shake test 5

Clinical Assessment skills (All PI)

- Clinical History and Physical examination -
- Anthropometry 50
- Dietary recall, calorie and protein estimation 50
- Nutritional advice 50
- Gestational assessment 10
- Neurological examination of newborn 10
- Primitive reflexes 10
- Fundoscopy 10
- Otoscopy 10
- Examination of external genitalia – male and female 10
- Tanner's SMR scales 5
- DDST or Baroda scales, TDS 5
- Amiel Telson's angles 5
- Per rectal examination 2

Interpretation *(All PI)*

- Clinical History and Physical examination -
- Blood, Urine, CSF and Fluid investigations – hematology, biochemistry 50

- Chest Xray 50
- ECG 20
- ABG interpretation 20
- Abdominal Xray 20
- Bone and joint Xray 20
- CT scan Brain 20
- Barium studies 10
- IVP, VUR studies 10
- Ultrasound abdomen 10
- Neurosonogram 10

Communication skills

All PI:

- Clinical History and Physical examination
- Communicating health, disease
- Communicating about a seriously ill or mentally abnormal child
- Communicating death
- Informed consent
- Empathy with a family
- Referral letters, Replies
- Discharge summaries
- Death Certificates
- Pre-counseling for HIV
- Post counseling for HIV
- Basic Pedagogy sessions – teaching students, adults
  Lectures, bedside clinics, discussions
- Medline search, internet, Computer usage

List of Observations:

- Genetic counseling 2
- Classification of diseases 2

List of PA skills:

- Sedation 10
- Analgesia 10
- Brain death 10
- Intercostal tube placement with underwater seal 5

List of PA skills:

- Peritoneal dialysis 2
- Subdural,Ventricular tap 5

Teaching Learning Activities

Methods suggested for Pediatric Postgraduate Training Programs:

- **Didactic Lectures:** (Faculty lectures)

Objective: To introduce a broad-based concept in an important area of learning to orient the postgraduate student.

Examples: Potential introductory topics to Pediatrics like Fluid and Electrolytes, Early recognition of Shock and Respiratory Failure, DTTU management, Recent advances, Basic Science/ Concepts and ARI program.

Frequency: Three times a week during the introductory phase of the first one-two months of the new postgraduates joining the course. Following this period of orientation, it does not serve a purpose of self-directed learning and is best avoided as a regular activity except as an exceptional guest lecture.

- **Seminars:**

Objective: To enable a student to study in depth an important area of learning important to the training of the student.

Examples: Examples of potential seminar topics would be Protein Energy Malnutrition, Pediatric Tuberculosis, Pediatric HIV, Bronchial Asthma, Chronic Liver Disease and its complications.

Frequency: Three times a month. Topics to rotate once every 2-3 years (DCh, MD). Topic to be shared among 2-3 students and to be equally distributed depending upon the number of postgraduate students in the department.

- **Journal Club:**

Objective: To appreciate and enable the critical analysis of scientific literature published in peer reviewed journals – studies, reviews.

Examples: Articles like the study on prophylactic Zidovudine to HIV positive pregnant women in prevention of vertical transmission to the fetus, Digoxin versus Captopril in VSD in CCF, etc.

Frequency: Ideally, once in 1-2 months. MDs get the first opportunity and juniors begin after their first year in the course.

- **Undergraduate Teaching Clinics**

Objective: To teach effectively undergraduate and colleagues utilizing simple educational methods.

Methodology: During the third year of MD course, postgraduate students should be given opportunities to teach undergraduates.

Examples: Bedside Clinic, Didactic lecture, skill workshop (e.g. NALS, PALS)

Frequency: During undergraduate postings in the department each postgraduate should have a minimum of 2 opportunities per year after the first year of the postgraduate course is completed.

- **Bedside Clinics**

Objective: To learn bedside techniques - interview, physical examination, analysis, diagnostic decision making, investigation decisions, treatment and communication.

Examples: Child with hemiplegia, hepatosplenomegaly, anemia, jaundice, etc.

Frequency: Once in a week is the minimum as it forms the basis of good clinical training activities.

- **Mortality Review Meeting**
  Objective: To analyze, discuss and learn from mortalities.
  Frequency: Once in a month preferably in the first week to allow the previous months mortality to be presented for discussion.

- **Grand Rounds**
  Objective: To improve on bedside techniques – interview, physical examination, analysis, diagnostic decision making, investigation decisions, treatment, communication.
  Examples: The child with pyrexia of unknown origin, undiagnosed hepato-splenomegaly, multi-systemic disease.
  Frequency: Once in a week presuming the Head of Unit or Department does not daily interfere with the day to day management of the ward except in special circumstances.

- **Inter-departmental Meetings**
  Objective: To experience inter-departmental cooperation and develop a healthy professional respect for each others opinions in addition to the subject learning experience.
  Methodology: Case discussions or students present investigations to members of both faculty. The discussion is a learning experience and improves communications between departments.
  Examples: Chest X-rays of a complicated bronchopneumonia progressing to an empyema, CT scans of intra-cranial pathology, Tracheo-esophageal fistulae and supportive care.
  Frequency: Once or twice in a month and rotated between departments – Radiology, Pediatric Surgery, Cardiology, Nephrology, Neurology, Clinical Hematology, etc.

- **Clinical Pathological Conference CPC**
  Objective: To analyze clinical material to reach a differential diagnosis and correlate with the pathological biopsy findings.
  Frequency: Once in two months. First choice is a senior MD student. All are encouraged to participate.

- **Records Round**
  Objective: To appreciate the importance of documentation of facts and record keeping.
  Methodology: Faculty in the presence of the team scrutinizes random case records. History sheets, doctor order sheets, progress sheets and discharge summaries are discussed.
  Frequency: Once a week with the entire team present at the session.

Dissertation

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

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

3. Every candidate shall submit to the Registrar (Academic), RGUHS, in the prescribed proforma, a synopsis containing particulars of proposed dissertation work 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.

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

5. The dissertation should be written under the following headings:

   i. Introduction
   ii. Aims or Objectives of study
   iii. Review of Literature
   iv. Material and Methods
   v. Results
   vi. Discussion
   vii. Conclusion
   viii. Summary
   ix. References (Vancouver style)
   x. Tables
   xi. Annexures

6. The written text of dissertation shall be not less than 50 pages and shall not exceed 150 pages excluding references, tables, questionnaires and other annexures. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound properly. Spiral binding should be avoided. The dissertation shall be certified by the guide, head of the department and head of the Institution.

7. Four copies of dissertation thus prepared shall be submitted to the Registrar (Evaluation), six months before final examination on or before the dates notified by the University.

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

9. For some more details regarding Guide etc., please see Chapter I and for books on research methodology, ethics, etc., see Chapter IV.

Rotation Postings

Core

Pediatrics	--	18 - 23 months
Neonatology	--	6 - 8 months
Intensive Care/Emergency	--	2 - 3 months

Optional Specialities (optional subject to availability) -- 6 months

- Oncology
- Neurology
- Pediatric Surgery
- Nephrology
- Cardiology
- Clinical Hematology
- Dermatology
- Pulmonology
- Gastroenterology
- Clinical Microbiology
- Community/Rural

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 are given in Chapter IV.

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

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

ii) ***Acquisition of Knowledge*** : The methods used comprise of `Log Book' which records participation in various teaching / learning activities by the students. The number of activities attended

and the number in which presentations are made are to be recorded. The log book should periodically be validated by the supervisors. Some of the activities are listed. The list is not complete. Institutions may include additional activities, if so, desired.

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

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

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

iii) ***Clinical skills***

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

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

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

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

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 finalisation for critical evaluation and another before final submission of the completed work (See Model Checklist VI & VII, Chapter IV)

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. The third test may be held three months before the final examination. The tests may include written papers, practicals / clinicals and viva voce.

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

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

Log book

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

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

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

Scheme of Examination

a) 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 : Fetal and newborn

Paper II : General Pediatrics I*
* General Paediatrics I includes: -Respiratory, CNS, Hematology, Nutrition, Growth and Development, Oncology, Endocrine, Metabolic, Allergy/Immunology, Psychiatry.

Paper III : General Paediatrics II**
Includes: Infection, Gastroeneterology, Hepatology, Immunization,Renal, CVS, Surgical, Adolescent, Collagen Vascular, Miscellaneous.

Paper IV : Ambulatory (OPD) Pediatrics, Community and Social Pediatrics, Emergency and Critical Care Pediatrics

Basic Sciences and Recent Advances as applied to clinical paediatric disorders should be **incorporated** into relevant and appropriate question papers covering the respective areas.

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

b) Clinical Examination 200 Marks

	No. of Cases	Marks
Long case	1	80
Short Case	1	45
OPD case	1	25
Emergency case	1	25
Newborn	1	25
Total	**5**	**200**

c) Viva – voice: 100 marks

1) Viva-Voce Examination: (80 Marks)

All examiners will conduct viva-voce conjointly on candidate's comprehension, analytical approach, expression and interpretation of data. It includes all components of course contents. In addition candidates may also be given case reports, charts, gross specimens, pathology slides, instruments, X- rays, ultrasound, CT scan images, for interpretation. 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 for M.D. degree course	Theory	Practical	Viva	Grand Total
	400	200	100	700

Recommended Books and Journals

Texts:

Essential

1. Nelson's Textbook of Pediatrics, Harcourt Asia Saunders
2. Cloherty's Manual of Neonatal Care
3. Meharban Singh's Care of the Newborn
4. Harriat Lane
5. Manual of Pediatric Therapeutics, Little Brown's Children's Hospital, Boston.
6. O.P. Ghai's Textbook of Pediatrics

Reference

1. Rudolf's Pediatrics, Appelton and Lange

2. Forfar and Arneil's Textbook of Pediatrics, ELBS
3. Frank Oski's Principles and Practice of Pediatrics
4. Avery's Disease of the Newborn
5. Roberton's Textbook of Neonatology
6. Illingworth's The normal child
7. Guha's Textbook of Neonatology
8. IAP Textbook of Pediatrics
9. Nadas' Pediatric Cardiology
10. Perloff's Approach to Congenital Heart Disease
11. Moss and Adam's Heart Disease in Infants, children and Adolescent
12. Miller's Blood Diseases of Infancy and Childhood
13. DeGruchy's Clinical Hematology in Medical Practice
14. Barret and Holiday's Pediatric Nephrology
15. Caffey's Pediatric X-Ray diagnosis
16. Alleyne's Protein Energy Malnutrition
17. Miller, Tuberculosis
18. Vimlesh Seth, Tuberculosis
19. Swanson's Pediatric Surgery
20. Cherry and Feigen's Pediatric Infectious Diseases
21. Fenichel's Pediatric Neurology
22. Kendig's Respiratory Diseases in Pediatrics
23. Alex Mowat's Liver Disease in Children
24. Roger's Pediatric Critical Care
25. H.P.S. Sachdev's Principles of Pediatric and Neonatology Emergencies
26. Smith's Recognition patterns of Human Malformations

Indexed Journals

1. Indian Pediatrics
2. Indian Journal of Pediatrics
3. Pediatric Clinics of North America
4. New England Journal of Medicine
5. Lancet
6. British Medical Journal
7. Journal of Pediatrics
8. Archives Disease of Childhood and Adolescence
9. Pediatrics
10. Perinatal Clinics of North America

Reference Series

1. Suraj Gupta's Recent Advances in Pediatrics
2. David's Recent Advances in Pediatrics
3. Advances in Pediatrics
4. Year Book of Pediatrics

ADDITIONAL READING

1. Indian Council of Medical Research, "Ethical Guidelines for Biomedical Research on Human Subjects", I.C.M.R, New Delhi, 2000.

2. Code of Medical Ethics framed under section 33 of the Indian Medical Council Act, 1956. Medical Council of India, Kotla Road, New Delhi.

3. Francis C M, Medical Ethics, J P Publications, Bangalore, 1993.

4. Indian National Science Academy, Guidelines for care and use of animals in Scientific Research, New Delhi, 1994.

5. Internal National Committee of Medical Journal Editors, Uniform requirements for manuscripts submitted to biomedical journals, N Engl J Med 1991; 424-8

6. Kirkwood B R, Essentials of Medical Statistics , 1st Ed., Oxford: Blackwell Scientific Publications 1988.

7. Mahajan B K, Methods in Bio statistics for medical students, 5th Ed. New Delhi, Jaypee Brothers Medical Publishers, 1989.

8. Compendium of recommendations of various committees on Health and Development (1943-1975). DGHS, 1985 Central Bureau of Health Intelligence, Directorate General of Health Services, min. of Health and Family Welfare, Govt. of India, Nirman Bhawan, New Delhi. P - 335.

9. National Health Policy, Min. of Health & Family Welfare, Nirman Bhawan, New Delhi, 1983

10. Srinivasa D K etal, Medical Education Principles and Practice, 1995. National Teacher Training Centre, JIPMER, Pondicherry

Annexure

Record to be maintained by Post graduate students

Name	**Academics**		**Service**		**Skills**		**Responsibility**		
Name	Teaching Programs	Discussion	Patient work up	Patient Care	Procedures	Communi-cation	Discipline	Punctuality	Anecdotal events +/-

Pediatric Postgraduate Training Log book

Contents:

1. Personal Data:

Name
Institution
Dates of Postgraduation studies
Joining
Completion
Degree
University
Dissertation Title
Name and Designation of Guide
Signature of candidate
Signature of Supervisor
Signature of Head of Department

2. Professional Education: *(eg. MBBS, DCh)*

Degree	Institution	University	Dates of Training

3. Professional Experiences: *(eg. SHO Pediatrics, CMO, Tutor)*

Professional Post	Institution	Dates of Work period

4. Clinical Postings: *(eg. General Pediatrics, PICU, NICU, Oncology, Neurology)*

Speciality	Duration	Dates of Posting

5. Case Presentations: *(eg. Clinics, tutorials)*

Date	Name/age/sex	Problem/ Diagnosis	Grade	Supervisor

6. Seminars: *(eg. Seminar on TB)*

Date	Topic of Presentation	Grade	Supervisor

7. Mortality Meetings *(eg. Mortality case discussion)*

Date	Name/age/sex	Problem/ Diagnosis	Supervisor

8. Multi-disciplinary Meetings *(eg. Urinary Lithiasis with Urology and Nephrology)*

Date	Topic	Departments involved

9. Community Activity: *(eg. Pulse polio, Education programs, Rural visits, Slum visits)*

Date	Description of Activity	Supervisor

10. Paper Presentation *(Local, State, National, International Forum- eg. IAP local meetings, NNF meetings)*

Date	Title of Paper presented	Supervisor

11. Undergraduate Classes taken by MD candidate *(eg. Didactic lecture or clinic)*

Date	Topic	Supervisor

12. Academic Meetings, CMEs and Conferences attended *(Extra mural: Local, State, National, International Forum- eg. IAP local meetings, NNF meetings)*

Date	Title	Organization

13. Training Courses *(eg. BFHI Lactation course, PALS, NALS, Research Methodology)*

Date	Title	Supervisor

Chapter IV

Monitoring Learning Progress

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

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

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

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

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

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

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

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

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

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

iv) ***Clinical skills***

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

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

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

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

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

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

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

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

Log book

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

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

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

CHAPTER IV (Contd.)

Format of Model Check Lists

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

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

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

Check List - III

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

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

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

Sl. No.	**Points to be considered:**	**Poor 0**	**Below Average 1**	**Average 2**	**Good 3**	**Very Good 4**
1.	Regularity of attendance					
2.	Punctuality					
3.	Interaction with colleagues and supportive staff					
4.	Maintenance of case records					
5.	Presentation of cases during rounds					
6.	Investigations work up					
7.	Bedside manners					
8.	Rapport with patients					
9.	Counseling patient's relatives for blood donation or Postmortem and Case follow up.					
10.	Over all quality of Ward work					
	Total Score					

Check List - IV

EVALUATION FORM FOR CLINICAL PRESENTATION

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

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

Check List - V

MODEL CHECK LIST FOR EVALUATION OF TEACHING SKILL PRACTICE

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

Check list VI

MODEL CHECK LIST FOR DISSERTATION PRESENTATION

Name: Faculty/observer: Date:

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

Checklist-VII

CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE / CO-GUIDE

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

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

LOG BOOK

Table 1 : Academic activities attended

Name: Admission Year:

College:

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

LOG BOOK

Table 2 : Academic presentations made by the student

Name: Admission Year:

College:

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

LOG BOOK

Table 3 : Diagnostic and Operative procedures performed

Name: Admission Year:

College:

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

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

Model Overall Assessment Sheet

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

Sl. No	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.

Chapter V

Medical Ethics
Sensitisation and Practice

Introduction

There is now a shift from the traditional individual patient, doctor relationship, and medical care. With the advances in science and technology and the needs of patient, their families and the community, there is an increased concern with the health of society. There is a shift to greater accountability to the society. Doctors and health professionals are confronted with many ethical problems. It is, therefore necessary to be prepared to deal with these problems. To accomplish the Goal (i), General Objective (ii) stated in Chapter II (pages 2.1 to 2.3), and develop human values it is urged that ***ethical sensitisation*** be achieved by lectures or discussion on ethical issues, clinical case discussion of cases with an important ethical component and by including ethical aspects in discussion in all case presentation, bedside rounds and academic postgraduate programmes.

Course Contents

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

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

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

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

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

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

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

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

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

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

Recommended Reading

Francis C.M., **Medical Ethics**, 1 Ed, 1993, Jaypee Brothers, New Delhi, p 189, Rs. 60/-