Faculty of Medicine

JSS ACADEMY OF HIGHER EDUCATION & RESEARCH
(DEEMED TO BE UNIVERSITY) MYSURU

JSS Academy of Higher Education & Research
(Deemed to be University)
Accredited "A" Grade by NAAC
Sri Shivarathreeshwara Nagar, Mysuru – 570 015

Regulation & Syllabus

Post Graduate Degree Programs

FORENSIC MEDICINE 2016

MD

Regulation & Syllabus

MD FORENSIC MEDICINE

2016

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REGULATION AND SYLLABUS FOR POST GRADUATE DEGREE PROGRAMS 2016

MD FORENSIC MEDICINE

CONTENTS

CHAPTER I

REGULATION FOR POST GRADUATE DEGREE AND DIPLOMA COURSES

1. Branch of study

Post graduate degree courses

Doctor of Medicine

a) Anaesthesiology
b) Anatomy
c) Biochemistry
d) Community medicine
e) Dermatology, venereology and leprosy
f) Emergency medicine
g) Forensic medicine
h) General medicine
i) Hospital administration
j) Microbiology
k) Pathology
l) Paediatrics
m) Pharmacology
n) Physiology
o) Psychiatry
p) Tuberculosis and Respiratory Medicine
q) Radio Diagnosis

Master of Surgery

a) General surgery
b) Obstetrics and gynaecology
c) Ophthalmology
d) Orthopaedics
e) Otorhinolaryngology

Post graduate diploma courses

a) Anaesthesiology (DA)
b) Child Health (DCH)
c) Clinical Pathology (DCP)
d) Dermatology, Venereology & Leprosy (DDVL)
e) Medical Radio Diagnosis (DMRD)
f) Obstetrics & Gynaecology (DGO)
g) Ophthalmology (DO)
h) Orthopaedics (D Ortho)
i) Otolaryngology (DLO)
j) Psychiatric Medicine (DPM)

2. Eligibility for admission

MD / MS Degree and Diploma courses: A candidate who has passed final year MBBS examination after pursuing a study in a medical college recognized by the Medical Council of India and has completed one year compulsory rotating internship in a teaching institution or other institution recognized by the Medical Council of India, and has obtained permanent registration of any State Medical Council, shall be eligible for admission.

3. Admission

A candidate desirous of admission to Post Graduate Medical Programmes MD/ MS / PG Diploma Courses is required to complete the application form and submit to the Deemed to be University along with prescribed documents on or before the scheduled date. Eligibility criteria, application form and details of documents to be submitted are available in the Deemed to be University website: www.jssuni.edu.in.

4. Registration

A candidate who has been admitted to postgraduate course shall register in the Deemed to be University within a month of admission after paying the registration fee.

5. Intake of students

The intake of students to each course shall be in accordance with the MCI.

6. Duration of study

MD, MS Degree Courses: The course of study shall be 3 completed years including the period of examination.

Provided that incase of students having a recognized 2 years postgraduate diploma course in the same subject, the period of training including the period of examination shall be 2 years.

Diploma courses: The course of study shall be 2 completed years including the examination period.

7. Methodology 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 shall 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 specialty departments or institutions.

8. Attendance, progress and conduct

A candidate pursuing degree/diploma course, shall work in the concerned department of the institution for the full period as full time student. No candidate is permitted to run a clinic/laboratory/nursing home while studying postgraduate course, nor can he/she work in a nursing home or other hospitals/

clinic/laboratory 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. 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.

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

9. Monitoring progress of study

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 shall 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 scrutinized and certified by the Head of the Department and Head of the Institution, and presented in the Deemed to be University practical/clinical examination.

Periodic tests: In case of degree courses of three years duration (MD/MS), the concerned departments shall conduct three tests, two of them be annual tests, one at the end of first year and the other at the end of the second year. The third test shall be held three months before the final examination. The tests shall include written papers, practical / clinical and viva voce. Records and marks obtained in such tests shall be maintained by the Head of the Department and sent to the Deemed to be University, when called for.

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

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

10. Dissertation

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.

The dissertation is aimed to train a postgraduate 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, and comparison of results and drawing conclusions.

Every candidate shall submit to the Controller of Examinations of the Deemed to be 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 Deemed to be University. The synopsis shall be sent through proper channel.

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

The dissertation should be written under the following headings:

a) Introduction
b) Aims or Objectives of study
c) Review of Literature
d) Material and Methods
e) Results
f) Discussion
g) Conclusion
h) Summary
i) References
j) Tables
k) Annexure
l) Proof of Paper presentation and publication

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.

Four copies 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 Deemed to be University.

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

Guide: The academic qualification and teaching experience required for recognition as a guide for dissertation work is as per MCI Minimum Qualifications for Teachers in Postgraduate Medical Education Regulations, 2000. Teachers in a medical college/institution having a total of eight years teaching experience out of which at least five years teaching experience as Assistant Professor gained after obtaining post graduate degree shall be recognised as post graduate teachers.

Co Guide: 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 JSS Deemed to be University / Medical Council of India.

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 Deemed to be University.

A postgraduate student is required to present one poster presentation, to read one paper at a 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 eligible to appear at the postgraduate degree examination.

11. Schedule of examination

The examination for MD / MS 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.

For students who have already passed Post Graduate Diploma and appearing for MD examination, the examination shall be conducted after two academic years including submission of dissertation The Deemed to be 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.

12. Scheme of examination

MD/MS

Dissertation: Every candidate shall carryout work and submit a dissertation as indicated in Sl. No. 10. Acceptance of dissertation shall be a precondition for the candidate to appear for the final examination.

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

Pattern of Theory Examination Question Paper:

Each paper shall consist of two long essay questions each carrying 20 marks, 3 short essay questions each carrying 10 marks and 6 short answer questions each carrying 5 marks. Total marks for each paper shall be 100.

Practical/Clinical Examination: In case of Practical examination for the subjects in Basic Medical Sciences Practical Examination shall be conducted to test the knowledge and competence of the candidates for making valid and relevant observations based on the experimental/Laboratory studies and his ability to perform such studies as are relevant to his subject.

Clinical examination for the subjects in Clinical Sciences shall be conducted to test the knowledge and competence of the candidates for undertaking independent work as a specialist/Teacher, for which candidates shall examine a minimum one long case and two short cases.

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

Viva Voce: Viva Voce shall be thorough and shall aim at assessing the candidate knowledge and competence about the subject, investigative procedures, therapeutic technique and other aspects of the speciality, which form a part of the examination.

The total marks shall be 100 and the distribution of marks shall be as under:

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

If there is skills evaluation, 10 marks shall be reserved for Pedagogy and 10 marks for skill evaluation.

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 Deemed to be University Examination: A candidate shall pass theory and practical including clinical and viva-voce examination separately and shall obtain 40% marks in each theory paper and not less than 50% marks cumulatively in all the four papers for post graduate degree examination to be declared as pass.

A candidate obtaining less than 40% marks in any paper and obtaining less than 50% of marks cumulatively in all the four papers for postgraduate degree examination 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 class: A successful candidate passing the Deemed to be University examination in first attempt and secures grand total aggregate 75% of marks or more will be declared to have passed the examination with distinction, 65% but below 75% declared as First Class and 50% but below 65% declared as Second Class.

A candidate passing the Deemed to be University examination in more than one attempt shall be declared as Pass Class irrespective of the percentage of marks.

Post Graduate Diploma Examinations

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 shall also be asked.

Pattern of Theory Examination Question Paper:

Each paper shall consist of two long essay questions each carrying 20 marks, 3 short essay questions each carrying
10 marks and 6 short answer questions each carrying 5 marks. Total marks for each paper shall be 100.

Practical Clinical Examination: In case of practical examination it shall 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 shall aim at examining clinical skills and competence of candidates for undertaking independent work as a specialist. Each candidate shall 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 shall be thorough and shall aim at assessing the candidate's knowledge and competence about the subject, investigative procedures, therapeutic technique and other aspects of the speciality, which shall from a part of the examination. The total marks shall be 50.

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 Deemed to be University Examination: A candidate shall pass theory and practical including clinical and viva-voce examination separately and shall obtain 40% marks in each theory paper and not less than 50% marks cumulatively in all the three papers for post graduate diploma examination to be declared as pass.

A candidate obtaining less than 40% marks in any paper and obtaining less than 50% of marks cumulatively in all the three papers for post graduate diploma examination 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 class: A successful candidate passing the Deemed to be University examination in first attempt and secures grand total aggregate 75% of marks or more will be declared to have passed the examination with distinction, 65% but below 75% declared as First Class and 50% but below 65% declared as Second Class.

A candidate passing the Deemed to be University examination in more than one attempt shall be declared as Pass Class irrespective of the percentage of marks.

13. Number of candidates per day

The maximum number of candidates to be examined in Clinical/ practical and Oral on any day shall not exceed eight for M.D./M.S. degree, eight for diploma.

CHAPTER II

GOALS AND GENERAL OBJECTIVES OF POSTGRADUATE MEDICAL EDUCATION PROGRAM

GOAL

The goal of postgraduate medical education shall be to produce competent specialists and/or medical teachers:

1. 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.
2. 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.
3. Who shall be aware of the contemporary advance and developments in the discipline concerned.
4. Who shall have acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology and
5. 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:

1. Recognize the importance to the concerned speciality in the context of the health needs of the community and the national priorities in the health section.
2. Practice the specialist concerned ethically and in step with the principles of primary health care.
3. Demonstrate sufficient understanding of the basic sciences relevant to the concerned specialty.
4. 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 primitive measure/strategies.
5. Diagnose and manage majority of the conditions in the speciality concerned on the basis of clinical assessment, and appropriately selected and conducted investigations.
6. Plan and advice measures for the prevention and rehabilitation of patients suffering from disease and disability related to the specialty.
7. Demonstrate skills in documentation of individual case details as well as morbidity and mortality rate relevant to the assigned situation.
8. Demonstrate empathy and humane approach towards patients and their families and exhibit interpersonal behavior in accordance with the societal norms and expectations.
9. Play the assigned role in the implementation of national health programme, effectively and responsibly.

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

11. Develop skills as a self-directed learner, recognize continuing education needs; select and use appropriate learning resources.

12. Demonstrate competence in basic concepts of research methodology and epidemiology, and be able to critically analyze relevant published research literature.

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

14. 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 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 programme so that he or she can direct the efforts towards the attainment of these competencies.

COMPONENTS OF THE POSTGRADUATE CURRICULUM:

The major components of the Postgraduate curriculum shall be:

- Theoretical knowledge
- Practical and clinical skills
- Dissertation skills.
- Attitudes including communication skills.
- Training in Research Methodology, Medical Ethics and Medicolegal aspects.

(Source: Medical Council of India, Regulations on Postgraduate Medical Education, 2000)

CHAPTER III

Monitoring Learning Progress

It is essential to monitor the learning progress of each candidate through continuous appraisal and regular assessment. It not only helps teachers to evaluate students, but also students to evaluate themselves. The monitoring shall 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 include:

1. Personal Attitudes.
2. Acquisition of Knowledge.
3. Clinical and operative skills and
4. Teaching skills.

1. Personal Attitudes: The essential items are:

a) Caring attitude.

b) Initiative.

c) Organisational ability.

d) Potential to cope with stressful situations and undertake responsibility.

e) Trust worthiness and reliability.

f) To understand and communicate intelligibly with patients and others.

g) To behave in a manner that establishesprofessional relationships with patients and colleagues.

h) Ability to work in a team.

i) 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.

2. 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.

a) **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 III)

b) **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 III)

c) **Clinico-pathological conferences.** This should be a multidisciplinary 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.

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

3. Clinical skills:

a. **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 III).

b. **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 III).

c. **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 III).

4. 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 III).

5. Periodic tests: In case of degree courses of three years duration, the department 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. In case of diploma courses of two year duration, the departments may conduct two tests. One of them 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.

6. Work diary: 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.

7. 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 Deemed to be University or MCI.

8. 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
III. 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 him or herself right.

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 otherrelevant 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 Faculty/Observer:

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.	Beside manners					
8.	Rapport with patients					
9.	Counseling patient's relatives for blood donation or Postmortem and Case follow up.					
10.	Overall 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	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 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 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 of the Student:

Name of the Faculty:

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					
	Total Score					

Check List - VII

CONTINUOUS EVALUATION OF DISSERTATION WORK BY GUIDE / CO GUIDE

Name of the Student:

Name of the Faculty:

Date:

Sl No	Items for observation during presentations	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:

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:

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

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

Sl No	Faculty Member & Others	Name of Student and Mean Score*									
		A	B	C	D	E	F	G	H	I	J
1.	**Journal Review Presentations**										
2.	**Seminars**										
3.	**Clinical work in wards**										
4.	**Clinical presentation**										
5.	**Teaching skill practice**										
	Total Score										

Note: Use separate sheet for each year.

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

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

* KEY:

Mean score : Is the sum of all the scores of checklists 1 to 7.

A, B, ... Name of the trainees.

Chapter IV

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 patients, 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 and General Objective stated in Chapter II and develop human values it is urged that ethical sensitisation be achieved by lectures or discussion on ethical issues, clinical 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
     - 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 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 care.
- Malpractice and Negligence.

8. Research Ethics

- Animal and experimental research / humaneness.
- 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

1. Francis C.M., Medical Ethics, 1 Ed, 1993, Jaypee Brothers, New Delhi.
2. Good Clinical Practices:GOI Guidelines for clinical trials on Pharmaceutical Products in India (www.cdsco.nic.in)
3. INSA Guidelines for care and use of Animals in Research – 2000.
4. CPCSEA Guidelines 2001 (www.cpcsea.org.)
5. Ethical Guidelines for Biomedical Research on Human Subjects, 2000, ICMR, New Delhi.
6. ICMR Guidelines on animal use 2001, ICMR, New Delhi.

Chapter V – Syllabus

M D FORENSIC MEDICINE

1. General Introduction

Title of the Program:
The Program shall be called the Doctor of Medicine (MD Forensic Medicine).

Duration of the Program:
Duration of the program shall be three years.

Eligibility for Admission:
The candidates should have obtained full registration i.e., they must have completed satisfactorily one year of compulsory rotating internship after passing final MBBS degree examination or any other examinations recognized by this Deemed to be University as equivalent there to and must have full registration with the State Medical Council.

Selection of the Student:
Selection is based strictly on the academic merit in undergraduate course, and /or the qualifying entrance examinations conducted by the Deemed to be University, depending on the values in force.

2. GOALS

The goal of postgraduate medical education shall be to produce a competent specialist and / or a medical teacher:	
a	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.
b	Who shall have mastered most of the competencies, pertaining to the speciality, that are required to be practiced at the secondary and the tertiary levels of the health care delivery system
c	Who shall be aware of the contemporary advances and developments in the discipline concerned
d	Who shall have acquired a spirit of scientific inquiry and is oriented to the principles of research methodology and epidemiology
e	Who shall have acquired the basic skills in teaching of the medical and paramedical professionals.

3. 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 speciality in the context of the health need of the community and the national proprieties 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 social norms and expectations.
IX. Play the assigned role in the implementation of national health programmes, 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 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 discipline shall aim at development of specific competencies, with 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 2000.

4. Syllabus

THEORY

4.1 Basic medical sciences namely Anatomy, Physiology, Pharmacology, Pathology and Microbiology as applied to Forensic Medicine.

Anatomy

1.	Surface land marks & regional anatomy of medico legal significance.
2.	Comparative anatomical study of male & female skeleton.
3.	Anatomy of neck with special reference to violent asphyxial deaths.
4.	Anatomy of reproductive organs.
5.	Gross anatomy of heart and coronaries.
6.	Outline of embryonic / foetal development.
7.	Microscopic anatomy (histology of different organs & tissues, such as brain, heart, lungs, liver, kidneys, spleen, thyroid, adrenals, bone, skin)

Physiology

1.	Body water & fluid balance.
2.	Blood grouping & Rh incompatibility.
3.	Physiology of menses & pregnancy.
4.	Physiology of thermo-regulation.
5.	Patho-physiology of shock.
6.	Blood sugar regulation & diabetic coma, hypoglycemic coma.
7.	Outline of the functions of circulation, respiration, and haemopoietic, and nervous, digestive, endocrine, excretory, reproductive and musculo-skeletal systems. Physiology of sexual functions.

Pathology

1.	General pathology: Pathology of cell / tissues – degenerative changes & secondary changes (atrophy, hypertrophy, aplasia, hyperplasia, ischemia, necrosis, infarction, cloudy swelling, and amyloidosis), embolism, asphyxial deaths, electrocution, gun-shot wounds, poisoning, thrombo-embolism, fat embolism, aspiration pneumonia, wound healing, histological determination of time of death.
2.	Body's local and systemic response to trauma.
3.	Healing and fibrosis (Pathology of scar).
4.	Common general and systemic diseases and caused by physical/chemical agents.
5.	Disorders of infancy and old age changes relevant to forensic medicine.
6.	Gross and microscopic pathology in myocardial infarction, congenital heart diseases, tuberculosis, cirrhosis, malnutrition, starvation.
7.	Histology with important staining procedures.

Microbiology

1.	Microbiology and serology of venereal diseases infections.
2.	Microbiology of Cadavers.

Pharmacology

1.	Relevant general pharmacology, pharmacology of important antidotes & drugs of addiction, anti-sera, hormones & anaesthetic drugs.
2.	Applied aspects in relation to forensic medicine.
3.	Pharmacology of addictive drugs and their effects.
4.	Drugs used to procure abortion.
5.	Drugs causing impotency.
6.	Anaesthetic drugs and their forensic aspects.

4.2 Forensic Medicine including other clinical subjects as applied to it.

1.	Identification of the living and dead, determination of race and religion, sex, age, external peculiarities such as moles, birth marks, occupational marks, anthropometry, finger prints, foot prints, handwriting etc. and their medico legal aspects. Evaluation of evidence from the skeleton. Problems of reconstruction, superimposition technique.
2.	Medico legal aspects of allergy and anaphylaxis.
3.	Evidence from trace elements like hair and biological stains of blood, semen, sweat, saliva, milk, sputum etc.
4.	Laboratory investigations as required in medico legal situations like unconsciousness, sudden death from unknown causes, therapeutic misadventures, industrial exposures.
5.	Outlines of analytical and histopathological techniques as applied to forensic medicine.
6.	Death from starvation.
7.	Examination of weapon in relation to inflicted injuries.
8.	Firearm and Thermal injuries.
9.	Causes of death from wounds.
10.	Forensic radiology in identification, pathology, dentistry, child abuse, trauma, medico legal implications of radiological procedures.

Forensic psychiatry

1.	Various Acts in relation to forensic psychiatry, classification of mental disorders and abnormal human behaviours. Medico legal aspects of insanity and abnormal human behaviour as regards to civil & criminal responsibilities and rules regarding admission, treatment and discharge of mentally ill person in the mental hospitals, feigned insanity, juvenile delinquency in the juvenile court. Restraint of mentally ill person.
2.	Biology of behaviour, emotion, stress, attitudes, normal & abnormal personalities.
3.	Psychological assessment & testing personality and its disorders, abnormal psychology, health psychology, assessment strategies in medical education.
4.	Study of suicide, production of personality and circumstances. Post mortem analysis of suicide notes and circumstances.
5.	Counseling in normal sexual behavior and sex related disorders.

6.	Medico legal aspects of emergency & resuscitation intensive care, medical negligence, death.
7.	Trauma, work Stress & disease.

Forensic Traumatology

1.	Mechanical injuries & their medico legal aspects in relation to nature of injuries, accidental, suicidal, homicidal, distinction between injuries caused during life and after death.
2.	Medico legal examination of injured person. Regional and transportation injuries. Injuries and thermal death from cold coma, heat coma, electricity coma, lightning and radiation
3.	Torture medicine: medico legal aspects & duties of physician in cases of torture. Type of personalities.
4.	Mass disasters.
5.	Bombs and other explosives. Biological and chemical warfare and barotraumas.

Forensic Obstetrics

1.	Impotence, sterility, artificial insemination, sterilization. Test tube babies & their medico legal aspects.
2.	HIV and AIDS.
3.	Virginity, pregnancy, delivery in relation to suit of nullity of marriage, divorce, and legitimacy affiliation cases etc.
4.	Abortion – criminal & justifiable, laws in relation to criminal abortion. Duties of medical persons when called to treat a case of criminal abortion. MTP Act 1971.
5.	Sexual offences – rape, incest, unnatural sexual offences such as sodomy, tribadism, bestiality & buccal coitus, sexual perversions.

Forensic Paediatrics

1.	Infanticide, battered baby syndrome, child abuse, SIDS

Medical Jurisprudence

1.	General & forensic toxicology including classification, mechanism of action, clinical features, diagnosis , management , autopsy appearances & medico-legal importance of poisons.
2.	Addiction, de-addictions and drug abuse.
3.	Important toxicological analytical techniques.
4.	Forensic science: recent advances & modern trends.
5.	Introduction & working of various wings of forensic science laboratory. Immunology, examination of biological trace material evidence. Ballistics, identification, crime laboratory, forensic photography.
6.	Definition of medical jurisprudence.
7.	Introductory remarks, criminal courts & their powers, inquests and legal procedures, procedure in court, medical evidence, various medical certificates, medico legal reports, dying declaration & dying deposition, witness, conduct and duties of the doctor in the witness box, professional secrecy.
8.	Regulation of medical profession, various governing bodies, their constitution & functions. Laws in relation to medical man.
9.	Rights, duties & privileges of a registered medical practitioner.
10.	Informed consent in medical practice. Infamous conduct. Medical malpraxis.
11.	Physician duties under various public health & medical Acts.
12.	Problems of privileges and confidentiality etc. Physician in the witness box.
13.	Liabilities of hospitals, nursing home and public dispensaries to patients.
14.	Medical practice in relation to insurance.
15.	Relevant parts of Indian Penal Code of criminal procedure, Indian Evidence Act, Suppression of Immoral Trafficking Act. Workman's Compensation Act and other laws related to medical practice.
16.	Law & Procedures related to Organ Transplantation.
17.	Legal & Ethical aspects of family planning procedures.
18.	Therapeutic trial & human experimentation etc.
19.	Medico legal aspects of organ & tissue transplantation.

20.	Euthanasia.
21.	Supreme Court and High Court landmark judgments related to forensic medicine and medical jurisprudence
22.	Relevant laws, legal procedures & psych general medical jurisprudence including MCI, MMC, ethics & bio med research, consent, negligence, relevant sections , courts & their powers , evidence & recording of evidence,
23.	Relevant sections of IPC, Cr Pc, IEA, Acts Like CPA , MTP , PCPNDT , NDPS & other acts in relation to poisons, Organ Transplantation Act , NHRC, Domestic Violence Act 2005, Immoral Trafficking Prevention Act, Dowry Prohibition Act, Mental Health Act, Right to information Act,
24.	Medical certification of cause of death and relevant vital statistics.
25.	Day-to-day MLC problems in hospitals.
26.	Recent laws applicable to medical man.
27.	Value of medical opinion in the court of law.

TOXICOLOGY

PRINCIPLES:

* Lead role in teaching all aspects of toxicology to be with the department of Forensic Medicine, as stipulated by the MCI.

Introduction, laws in relation to poisons, toxicological, medico-legal aspects and pattern of poisoning in India. Duties of medical practitioners in cases of suspected poisoning.

- For clinical toxicology, integration is necessary with department of internal medicine, for pharmaceutical toxicology with department of pharmacology, and for analytical toxicology with forensic toxicology division of FSL.
- Define contents which have relevance even in the future with a focus for the next decade.

Section 1: General Toxicology

1. Details of Diagnosis and Management

Poisons encountered in India, General symptoms of poisoning, bedside tests and advanced laboratory methods to detect poison / drug in a patient's body fluids and other samples, details of methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination, etc.

2. Medico-legal Considerations

Procedure of intimation of suspicious cases or actual cases of foul play to the po-

lice, maintenance of records, preservation and dispatch of relevant samples for laboratory analysis, Medico legal issues involving consent in poisoned / intoxicated victims, psychological issues, etc., Detailed knowledge about Indian Statues on poisoning, drug abuse, etc.

3. Analytical Toxicology

Detailed description of analytical methods available for toxicological analysis: Chromatography – thin layer chromatography, gas chromatography, liquid chromatography, spectro-photometric techniques, neutron activation analysis, advanced instrumentation techniques.

4. Importance of Poison Control Centres and their mode of establishment and functioning.

Section 2: Chemical Toxicology

1. Caustics

Inorganic acids – sulphuric, nitric, hydrochloric, hydrofluoric acids.
Organic acids – carbolic acid (phenol), oxalic, formic, and acetylsalicylic acids Common alkalis

2. Inorganic Elements

Phosphorus, phosphine, halogens, barium

3. Heavy Metals

Arsenic, lead, mercury, copper, iron, cadmium, thallium, zinc, metal fume fever.

4. Alcohols

Ethanol, methanol, isopropanol, ethylene glycol, diethylene glycol

5. Hydrocarbons and Pesticides

Aliphatic, aromatic, and halogenated hydrocarbons.
Detailed classification of pesticides, and detailed knowledge about organophosphates, carbamates, organochlorines, pyrethroids, paraquet, aluminium and zinc phosphide, ethylene dibromide, long acting anticoagulant rodenticides (bromodiolone),

6. Toxic Gases

Ammonia, formaldehyde, hydrogen sulfide, phosgene, carbon monoxide, hydrogen cyanide & derivatives, methyl isocyanate, tear (riot control) gases

Section 3: Pharmaceutical Toxicology

1. Antipyretics, analgesics, NSAIDs, antihistamines
2. Anti-Infectives
3. Common antibacterial, and antiviral, antiprotozoal, antifungal drugs: overview
4. Neuropsychotoxicology: Sedative-hypnotics, anticonvulsants, antipsychotic, antidepressants, and antimanic Drugs, with special emphasis on barbiturates, benzodiazepines, phenytoin, lithium, haloperidol, neuroleptics, tricyclics
5. Narcotic analgesics, anaesthetics, and muscle relaxants
6. Cardiovascular Toxicology

7. Cardiovascular drugs, anticoagulants, and cardiotoxic plants – oleander, odollam, aconite, digitalis
8. Gastro-intestinal and endocrinal drugs.

Section 4: Biotoxicology

1. Poisonous plants

Castor, croton, calotropis, abrus, datura, strychnos, etc.

2. Food poisoning & food adulterants

Bacterial, viral, chemical food poisoning, toxic mushrooms and fish, argemone

3. Venomous bites and stings

Snakebite, scorpion sting, bee & wasp sting, spider bite, marine envenomation

Section 5: Sociomedical Toxicology

1. Substances of dependence and abuse Tobacco, cannabis, amphetamines, cocaine, opiates, hallucinogens, designer drugs & solvent abuse.

Forensic immunology & recent advances.

1.	Medico legal autopsy of dead body, decomposed and mutilated body or its fragments / skeleton, bones, exhumation & rules regarding it.
2.	Death, manner of death, modes of death, cause of death, sudden death, signs of death and changes following death. Estimation of post mortem interval, Forensic entomology, post mortem chemistry of body fluid like blood, CSF and vitreous humour, presumption of death and presumption of survivorship. Violent asphyxial deaths: hanging, strangulation, suffocation and drowning
3.	Death from sudden violent, suspicious, unknown and unnatural cause, disease following trauma.
4.	Basic concepts of immunology and serology.
5.	Principles of various immune-serological tests, precipitin test, pregnancy test, sperm antibody test.
6.	Role of immunological techniques in crime investigation and exclusion of parentage.
7.	Incompatibility and adverse reaction of drugs commonly used in therapy etc.
8.	Anaphylaxis and hypersensitivity reactions.
9.	Different types of teaching aids, methods of teaching & question paper formation of different types (MCQs, structures, traditional, short, and essay types).
10.	DNA & finger print system, lie detector & polygraph, narco-analysis.
11.	National Health policies.
12.	Life saving maneuvers and pre-hospital first aid.
13.	Routine and advanced imaging techniques and equipments.
14.	Medico-legal record keeping.
15.	Basics of medical education technology and research methodology.

16.	Computer and its use and its applicability in the specialty.
17.	Medical auditing.

Note: The project syllabus is minimal and may require further improvement time to time as per requirements of MCI and the advances in the specialty of forensic medicine & toxicology.

PRACTICAL

1.	Medico-legal autopsy.
2.	Fetal Autopsy
3.	Age estimation
4.	Medico-legal injury report preparation.
5.	Medico-legal examination of an alcoholic and other drugs.
6.	Medico-legal examination in cases of sexual offences
7.	Medico-legal examination of poisoning cases
8.	Medico-legal examination of bones, weapons, clothing, wet specimens, poisons.
9.	Detection of common poisons in toxicology laboratory
10.	Medico-legal examination of photographs.
11.	Medico-legal examination of X-rays.
12.	Laboratory examination of biological trace material evidence.
13.	Court evidence / attendance.
14.	Expert opinion on clinical cases of medico legal importance.
15.	Awareness of various intensive care setups & operation theatre setups.
16.	Awareness of medico legal & crime laboratory instruments & equipments.
17.	Attending CME/Workshops/Conference; involvement in UG Teaching.

5. Teaching Program:

Mode of Training

1.	Emphasis should be on "in service" training and not on the didactic lecture.
2.	Candidates should take part in seminars, group discussions and inter-disciplinary academic postings and meetings.

3.	The candidates should be required to write a Thesis or Dissertation with detailed commentary, which should provide the candidate with necessary background of training in research methods and techniques, along with the art of writing in research papers and learning the use of library.
4.	The in-service training requires the candidate to be a resident in the campus and should be given graded responsibilities in the management of medico legal cases, including medico legal postmortem examination, deriving expert opinions.
5.	The period of training should also include adequate training in basic medical sciences of anatomy, physiology, biochemistry, pathology, in all its applied aspects relevant to the specialty concerned.
6.	The candidate should participate in teaching and training programme of undergraduate (MBBS) students.
7.	The candidate should maintain a log book of the activities held during the training period.

General Principles:

Acquisition of practical competencies being the keystone medical education, postgraduate is skills oriented.

Learning in postgraduate program is essentially self-directed and primarily emanating from academic and experimental work. The formal sessions are merely meant to supplement this core effort.

Teaching Schedule:

The suggested departmental teaching schedule is as follows:

Fortnightly seminars & Journal clubs, Weekly Case discussion

The postgraduate student shall be required to actively participate in the teaching / training programmes of undergraduates, nursing students, interns. The candidates are also expected to be aware of basics of medical education teaching technology principles and use of audiovisual aids in the same.

The postgraduate student should maintain a Log Book of the work assigned to him. This log book will be assessed by the postgraduate Guide of the student and will be jointly evaluated by the Guide & Head of the Department.

Note: ·

- All sessions are to be attended by the faculty members. All PGs are supposed to attend the sessions.
- All the teaching sessions are assessed by the consultants at the end of session and marks are given out of 10 (for participant) & 100 (for presenter) and kept in the office for internal assessment
- Attendance of the residents at various sessions has to be at least 75%.

7.Postings

Table showing Tenure wise duration & Assignments of Rotational Postings of Degree (MD) Students

Department	Period of Posting	Assignment / Contents of the posting
Anatomy	2 Weeks	Dissection techniques, gross & histological appearances of vital organs & endocrines. Forensic osteology, anthropometry, embalming & relevant embryology. Acquire knowledge of human anatomy with emphasis on brain & bones; identify normal histology of heart, liver, lung, kidney, spleen & adrenals, dissection techniques, gross & histological appearances of vital organs & endocrines. Forensic osteology, anthropometry, embalming & relevant embryology.
Physiology & Biochemistry (CCL)	1 Week	Functional aspects of vital organs & e endocrines, physiology & biochemistry of blood, semen, saliva, sweat, CSV, P.M. biochemistry of body fluids functional aspects of vital organs & endocrines,
Pathology & Microbiology	3 Weeks	Injury, inflammation, repair, thrombus-embolism, shock, gross & microscopic appearances of vital organs and histopathology in cases of sudden death e.g. myocardial infarctions and other related diseases e. g, which can cause sudden death by complications e.g. tuberculosis, renal failure etc.& endocrines imp. staining techniques, museum procedures, infection, immunology, HIV, anaphylaxis, insulin, penicillin, observation- collection-preservation & forwarding of pathological & microbial evidence
Medicine+ Paediatrics+ Psychiatry+ Pharmacy+ Medical Record section	3 Weeks	Medical record section: awareness of diagnosis, evaluation of ECG in cases of myocardial infarctions medico legal aspects & management of critical care, poisoning & psychiatry cases, visit to MICU set up, important paediatric procedures + NICU set up, pharmacology & detection of drugs of dependence, ,

Casualty & Trauma	4 Weeks	First aid , examination, diagnosis & medical + medico legal management of clinical medico-legal cases, dying declaration and dying deposition, gastric lavage, parental injections, emergency tray, casualty administration in mass disasters. e. surgery + orthopaedics +dentistry + radiology + anaesthesiology: awareness regarding examination, diagnosis & medical + medico legal management of cases of imp. regional injuries (poly trauma & burns), injury certification & disability evaluation, x-ray findings in bony trauma age determination cases intracranial hemorrhages with the help of MRI and CT scans visit to surgical ICU & operation theatre, awareness of imp anaesthetic procedures and complications, important OT instruments & equipments. f. Obstetrics & Gynaecology: Abortion, sterilization techniques, introduction to major obs.& gyn. procedures, prenatal diagnostic techniques. Study of fetuses and placenta g. Forensic science laboratory: Introduction to various sections of the FSL setup & instrumentation, introduction to & relevant awareness of imp qualitative & quantitative detection & analytical techniques. Introduction to & relevant awareness of identification, biology, chemistry, toxicology & ballistics divisions. Note:-The casualty posting should be split in to two periods. the initial posting during first year is introductory type. The second casualty posting is during second year. This posting is major one & it is expected that students must be exposed to maximum quantity & variety of cases. Their ability to manage the casualty in major casualties can be observed during this period**.**
Surgery + Orthopaedics + Dentistry + Radiology + Anasthesiology.	3 Weeks	Awareness regarding examination, diagnosis & medical + medico legal management of cases of imp. regional injuries (poly trauma & burns), injury certification & disability evaluation, X-ray findings in bony trauma age determination cases visit to surgical ICU & operation theatre, awareness of imp anaesthetic procedures, important OT instruments & equipments. Gain knowledge about anatomy of teeth (both temporary and permanent). Acquire the knowledge of interpreting OPG. Acquire the skill of documenting the dental findings.
Obstetrics & Gynecology	1 Week	Abortion, sterilization techniques, introduction to major OBG procedures, prenatal diagnostic techniques.

Forensic Science Laboratory	2 Weeks	Introduction to various sections of the FSL setup & instrumentation, introduction to & relevant awareness of imp qualitative & quantitative detection & analytical techniques. Introduction to & relevant awareness of identification, biology, chemistry, toxicology & ballistics divisions.

8.Dissertation/Theses

DISSERTATION

a.	Every candidate is required to carry out work on a select research project under the guidance of a recognized postgraduate teacher. The results of such work shall be submitted in the form of a dissertation.
b.	The students will identify a relevant research question; (ii) conduct a critical review of literature; (iii) formulate a hypothesis; (iv) determine the most suitable study design; (v) state the objectives of the study; (vi) prepare a study protocol; (vii) undertake a study according to the protocol; (viii) analyze and interpret research data, and draw conclusions; (ix) write a research paper.
c.	For details regarding registration of dissertation topic, please see Chapter I, Sl.No.9
d.	The dissertation is to be submitted at least six months before the final examination as notified by the Deemed to be University to the Registrar (Evaluation).
e.	The dissertation shall be valued by three examiners. Prior acceptance of the dissertation shall be a precondition for a candidate to appear for the final examination

9. Assessment:

All the PG residents are assessed daily for their academic activities and also periodically.

7. 1. General principles:

- The assessment is valid, objective, and reliable
- It covers cognitive, psychomotor and affective domains
- Formative, continuing and summative (final) assessment is also conducted in theory as well as practical /clinical. In addition, thesis is also assessed separately.

7. 2.Formative:

The formative assessment is continuous as well as end-of-term. The former is based on the feedback from the senior residents and the consultants concerned. End-of-term assessment is held at the end of each semester (up to the 5th semester). Formative assessment will not count towards pass/fail at the end of the program, but will provide feedback to the candidate.

7.3 Internal Assessment:

Items Marks

Sl.No.	Particulars	Marks
1	Personal attributes*	20
2	Clinical skills and performance	20
3	Academics activities (Journal club, seminars, drug review)	20
4	End of term theory examination (1st year, 2nd year, 2 years and 9 months)	20
5	End of term practical examination / Oral	20

7.3.1. The record of internal assessment will be presented to the board of examiners for consideration at the time of final examination.
*Personal attributes:

- Availability: Punctual, available continuously on duty, responds promptly to calls and takes proper permission for leave.
- Sincerity and motivation: Dependable, honest, admits mistakes, does not falsify information, exhibits good moral values, loyal to institution, has initiative, takes on responsibilities, goes beyond routine work, exhibits keen desire to learn.
- Diligence and performance: Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management (where applicable), skilled in procedures, proficient in record keeping and file work.
- Academic ability: Intelligent, shows sound knowledge and skills, participates adequately in academic activities, and performs well in oral presentation and departmental tests
- Inter-personal skills: Has compassionate attitude towards patients, gets on well with colleagues and paramedical staff, respectful to seniors.

7.4 Summative Assessment

- Ratio of marks in theory and practical will be equal
- The pass percentage will be 50%
- Candidate will have to pass theory and practical examination separately.

7.5 Theory Examination

Paper	Title	Marks
Paper - 1	Basic medical sciences • Anatomy, Physiology, Biochemistry, Pathology, Microbiology, Pharmacology, Medicine, Surgery, Obstetrics and Gynecology, • Forensic Odontology, Forensic Radiology, Forensic Anthropology.	100
Paper – 2	Medical Jurisprudence and Clinical Forensic Medicine • Law in Relation to Medical Practice, Legal Procedure. • Forensic OBG and sexual offences, Child abuse, Infanticide, • Forensic Psychiatry, Identification.	100

Paper – 3	Forensic Pathology • Medico Legal Autopsy • Thanatology • Trauma – Mechanical, Regional, Thermal, Electrical, Radiation injuries, etc., • Asphyxial deaths	100
Paper – 4	Toxicology and Recent Advances • Toxicology • FSL • Criminalistics • Recent Advances in Forensic Medicine and Toxicology	100
	Total	**400**

Practical: (200 marks):
Duration of practical examination will be 2 days including viva-voce

1.	One long case – Adult autopsy & Foetal autopsy : 100 Marks	
2.	Short Cases : 100 Marks	
	Examination of injury case.	10
	Alcoholic case.	10
	Sexual offence case.	10
	Psychiatry	05
	Skeletal Remains.	10
	Photography	05
	Toxicology specimens.	10
	Weapons.	10
	Microscopy slides.	10
	X-ray films.	10
	Expert opinion	10
Viva-Voce: 100 Marks:		
1.	Viva-Voce Examination: (80 Marks)	
	Students will be examined by all the examiners together about students comprehension, analytical approach, expression and interpretation of data. Student shall also be given case reports, charts for interpretation. It includes discussion on dissertation.	
2.	Pedagogy Exercise: (20 Marks)	
	A topic be given to each candidate along with the practical examination question paper on the first day. Student is asked to make a presentation on the topic on the second day for 8 to 10 minutes.	

Maximum marks for	Theory	Practical	Viva-Voce	Total
MD Forensic Medicine	400	200	100	700

9. Job Responsibilities

The junior residents should:

1. Maintain log book on daily basis
2. Maintain daily record of post graduate activities including:

- Practical exercises
- Statistics exercises
- PG teaching schedule

3. Prepare for undergraduate and postgraduate practical
4. Provide the basic medico-legal services in relation to practice of medicine.
5. Must be able to conduct, interpret and report common medico-legal autopsies.
6. Identify diagnose and manage common acute and chronic poisonings.
7. Be able to examine, interpret , report and if required give expert opinion in various clinical medico-legal matters like age estimation, alcoholics, sexual offences, injuries, abortion, sex determination, paternity, disability evaluation etc.,
8. Teach the practical undergraduate medical students the subject of forensic medicine and also to actively participate in the training and re-orientation programmes of interns.

10. Suggested books.

a. **Core books-Name of book & author**

1. Modi's Text book of medical Jurisprudence & Toxicology.
2. The essentials of forensic medicine & toxicology. K.S.N. Reddy.
3. The textbook of Forensic Medicine. J.B. Mukharjee, Vol. 1 & 2.
4. Principles of Forensic Medicine. A. Nandy.
5. A Textbook of Forensic Medicine & Toxicology, Principles & Practice. Krishan Vij
6. Textbook of Forensic Medicine & Toxicology V.V. Pillay.
7. Modern Medical Toxicology. V.V. Pillay
8. Forensic Pathology. Bernard Knight
9. Handbook of Forensic Pathology. Vincent J.M. Di Maio & Suzzanna E. Dana.

b. **Reference Books:**

1. Bernard Knight et.all: Cox's Medical Jurisprudence & Toxicology.
2. Russel S. Fisher & Charles S. Petty: Forensic Pathology.
3. Keith Simpson's Forensic Medicine.
4. Jurgen Ludwig, Current methods of autopsy practice.
5. Camps F.E. Gradwohls- Legal Medicine, Bristol Wright.
6. Simpson's: A Doctors guide to Court.
7. Polson C.J.: The essentials of Forensic Medicine.
8. Adelson L.: The pathology of Homicide.
9. Atlas of Legal Medicine: Tomio Watanabe.
10. Spitz W.U., & Fisher R.S. , Medici Legal Investigation of Death.
11. A.Keith Mant, Taylor's principles & practice of Medical Jurisprudence: Churchil Lvng.
12. Justice Hidayatullah & V.R.Manohar , Ratanlal & Dhirajlal : The Indian Penal Code.
13. Justice Hidayatullah & S.P.Sathe : Ratanalal & Dhirajlal ; The Code of Crm. Procdr.
14. Justice Hidayatullah & V.R. Manohar , Ratanlal & Dhirajlal :The Law of Evidence.
15. H.S. Mehata: Medical Law & Ethics in India.

16. Code of Medical Ethics, Medical Council of India, approved by Central Govt. U/S 33(m) of IMC Act 1956 (Oct. 1970).
17. Krogman W.M.: The Human Skeleton in Legal Medicine.
18. F.E. Camps, J.M. Cameren David Lanham: Practical Forensic Medicine.
19. Dr.B.V. Subrahmanyam, Textbook of Forensic Medicine & Toxicology.
20. The Medical Profession & Law, Dr. R.D. Lele. (IMA, Mumbai Publication).

11. Journals

1. Journal of Karnataka Medico-Legal Society
2. Journal of South India Medico-Legal Association
3. Journal of Indian Academy of Forensic Medicine
4. Journal of Forensic Sciences.
5. Journal of Legal Medicine (Of American College Medicine.).
6. Journal of Forensic Science Society.
7. Medico-legal Journal.
8. American Journal of Law & Medicine.
9. American Journal of Forensic Medicine.
10. Forensic Science International.
11. Journal of Clinical Forensic Medicine.
12. Medicine Science & Law.
13. Science & Justice.
14. Journal of Punjab Academy of Forensic Medicine and Toxicology
15. Journal of Forensic Medicine & Toxicology, (Medico-legal Society.)
16. Medico-legal Update, An International Journal.
17. Journal of Clinical Forensic Medicine.
18. Journal of Forensic and Legal Medicine

J.S.S.Deemed to be University
Department of Forensic Medicine
J.S.S. Medical College, Mysore

Postgraduate – Log Book

Students Name:

Registration number:

Certificate

Certified that this is the bonafide record of practical work done and Medico-Legal Autopsies conducted / witnessed by Dr……
……as post-graduate in the Department of Forensic Medicine, J.S.S. Medical College, Mysore during the academic year

Principal
JSS Medical College
Mysore – 570 015

Professor and Head
Department of Forensic Medicine
JSS Medical College
Mysore – 570 015

Deemed to be
University Reg. No.:

Department of Forensic Medicine

POSTGRADUATE LOG BOOK

Name : Dr.

Deemed to be University Reg. No. :

University : JSS (Deemed Deemed to be University), Mysore

Course : M.D. (Forensic Medicine)

Academic year :

Dissertation topic :

Dissertation done

Under the guidance of : Dr.

J.S.S. Medical College
Mysore – 570 015
Karnataka, India

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SL.No.	Period		Speciality	Topics Covered
	From	To		

JSS Academy of Higher Education & Research
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Sri Shivarathreeshwara Nagar, Mysuru – 570 015