

**STUDY GUIDE FOR 2 YEARS DIPLOMA MEDICAL JURISPRUDENCE
(DMJ)**



2023
DEPARTMENT OF FORENSIC MEDICINE
RAWALPINDI MEDICAL UNIVERSITY

Foreword

It is indeed a great honor and privilege for me to be reappointed as Vice Chancellor of Rawalpindi Medical University. This university was founded on 5th May 2017 with many dreams and visions; one of them was the excellence of Medical Education. I am thankful to Allah Almighty for providing me the opportunities not only to initiate Integrated Undergraduate medical education but also to launch ACGME centered competency based postgraduate medical curricula. The day and night rigorous efforts of all honorable Deans, faculty and support staff in successful implementation of University Postgraduate Medical Education is really worth mentioning.



Now RMU is not only ranking as top medical university in Pakistan and among the Times Higher Education (THE) impact rankings for the year 2022, but by the grace of Allah it has become a Degree Awarding Institute (DAI) after prosperously passing out of our University residents. Our University is currently the third one after King Edward Medical University (KEMU) and University of Health Sciences (UHS) to produce competent consultants. The dedication of the whole team inclusive of Examination department, committed faculty, URTMC and QEC in accomplishment of this undertaking throughout this tiring journey is really admirable. I wish them all the best for their future endeavor and pray for their prosperity and success.

**Prof. Muhammad Umar (SI)
Vice Chancellor & CEO
RMU & Allied Hospitals**



Preamble:

The purpose of PG education is to create specialists who would provide high quality health care and advance the cause of science through research & training.

This DMJ program is meant to standardize and strengthen Forensic Medicine teaching at the post graduate level throughout the country so that it will benefit the judiciary and the legal system of the country in providing justice which will ultimately benefit the community at large. It will also help in achieving uniformity in undergraduate teaching.

The purpose of this document is to provide teachers and learners illustrative guidelines to achieve defined outcomes through learning and assessment. This document was prepared by various subject-content specialists. The Reconciliation Board of Academic Committee has attempted to render uniformity without compromise to purpose and content of the document. Compromise in purity of syntax has been made in order to preserve the purpose and content. This has necessitated retention of “domains of learning” under the heading “competencies”.

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1. University Mission & Vision Statement

Mission Statement

To impart evidence based research oriented health professional education in order to provide best possible patient care and inculcate the values of mutual respect, ethical practice of healthcare and social accountability.

Vision and Values

Highly recognized and accredited center of excellence in Medical Education, using evidence-based training techniques for development of highly competent health professionals, who are lifelong experiential learner and are socially accountable.

2. Aim of DMJ Program

The aim of 2 years diploma program in Medical Jurisprudence is to equip medical graduates with relevant professional knowledge, skills and ethical values to enable them to apply their acquired expertise at primary and secondary health care organizations as non-academic mid-level consultants. DMJ training should enable a student to:

- Record all the injuries on the portion of a body in detail, including color, shape, exact measurement, direction etc. in cases of trauma.
- Adjudge correctly the nature of injury, kind of weapon causing them and probable duration of injury in medico-legal cases of trauma.
- If the injuries are kept under observation then to order a set of relevant investigations which are absolutely necessary to declare the injury kept under observation at the time of examination.
- Be aware and apply health department instructions guidelines in the medico-legal work and postmortem conduction and keep himself abreast with latest changes in the instruction from time to time.
- Acquire requisite skill to record relevant findings in the medico-legal cases other than trauma like sexual assault, burn, examination for alcohol intake, poisoning etc. and to take and send necessary sample to the chemical examiner/ bacteriologist to Govt. of Punjab for analysis and expert opinion.
- Counsel patients and relatives in patient's preferred language in elective and emergency situations in keeping with the principles of good communication skills, empathy and empowerment of patients.
- Exhibit emotional maturity and stability, integrity, ethical values and professional approach, sense of responsibility in day-to-day professional activities.
- Take proper informed consent for physical examination and ensure confidentiality and appropriate environment for physical examination in case of sexual offences.
- Act as an independent specialist at Tehsil and District Headquarter Hospital level.
- Show initiative and become lifelong self-directed learner tapping on resources including clinical material, laboratory data, internet, online learning programs and library.

3. Specific Learning Outcomes

The Goal of DMJ in Forensic Medicine is to train a doctor to become a competent medico-legal expert, teacher and researcher in the subject who:

- Is aware of medico legal aspects in various settings
- Is aware of contemporary advances and developments in the field of Forensic Medicine.
- Has acquired the competencies pertaining to the subject of Forensic Medicine that are required to be practiced at all levels of health system.
- Is oriented to the principles of research methodology.
- Has acquired skills in educating and imparting training to medical, paramedical and allied professionals.
- A post graduate student, upon successfully qualifying in the DMJ examination, should be able to:
 - Become an expert in Forensic Medicine.
 - Identify and define medico-legal problems as they emerge in the community and work to resolve such problems by planning, implementing, evaluating and modulating Medico- legal services.
 - Undertake medico-legal responsibilities and discharge medico-legal duties in required settings.
 - Keep abreast with all recent developments and emerging trends in Forensic Medicine, Medical Ethics and the law.
 - Deal with general principles and practical problems related to forensic, clinical, emergency, environmental, medico-legal and occupational aspects of toxicology.
 - Deal with medico-legal aspects of Psychiatry, mental health and drug addiction.
 - Impart education in Forensic Medicine and Toxicology to under-graduate and post- graduate students with the help of modern teaching aids.
 - Assess the students' knowledge and skills in the subject of Forensic Medicine
 - Oriented to research methodology and conduct of research in the subject.

4. Subject Specific Learning Objectives

The learning objectives in the cognitive, psychomotor and affective domains are:

a. Cognitive Domain:

- Describe the legal and medico-legal system in India.
- Acquire knowledge on the philosophy and guiding principles of Forensic Medicine course.
- Describe the program goals and objectives of the Forensic Medicine course.
- Acquire knowledge on conduct of medico-legal autopsy independently with required physical assistance, prepare report and derive inferences.
- Outline the principles and objectives of postmortem examination.
- Describe the formalities and procedures of medico-legal autopsies in accordance with existing conventions and the law.
- Identify the role of anatomy, physiology, biochemistry, microbiology, pathology, blood bank, psychiatry, radiology, forensic science laboratory as well as other disciplines of medical science to logically arrive at a conclusion in medico-legal autopsies and examination of medico-legal cases.
- Describe the principles of the techniques used in toxicological laboratory namely TLC (Thin Layer Chromatography), GLC (Gas Liquid Chromatography), AAS (Atomic Absorption Spectrophotometry), HPLC (High Performance Liquid Chromatography) and Breath Alcohol Analyzer.
- Describe relevant legal/court procedures applicable to medico-legal/medical practice.
- Describe the general forensic principles of ballistics, serology, analytical toxicology and photography.
- Interpret, analyze and review medico-legal reports prepared by other medical officers at the time of need.
- Describe role of DNA profile and its application in medico-legal practice.
- Describe the law/s relating to poisons, drugs, cosmetics, narcotic drugs and psychotropic substances.

b. Affective Domain:

- Should be able to function as a part of a team, develop an attitude of cooperation with colleagues, and interact with the clinician or other colleagues to provide the best possible opinion.
- Should be able to follow ethical principles in dealings with patients, police personnel, relatives and other health personnel and to respect their rights.
- Follow medical etiquettes in dealing with each other.
- Develop communication skills to word reports and professional opinion as well as to interact with patients, relatives, peers and paramedical staff, and for effective teaching.

c. Psychomotor Domain:

- Perform medico-legal autopsy independently with required physical assistance, prepare report and derive inferences.
- Perform medico-legal examination of users of alcohol, drugs and poisons and prepare report.
- Perform medico-legal examination in cases of sexual offences and prepare report.
- Interpret histo-pathological, microbiological, radiological, chemical analysis, DNA profile and other investigative reports for medico-legal purposes.
- Perform medico-legal examination of bones, clothing, wet specimens and weapons.
- Depose as an expert witness in a court of Law on medico-legal matters.
- Examine, identify, prepare reports and initiate management on medico-legal cases in emergency set up.
- Identify and discharge all legal responsibilities in medico-legal matters.
- Plan, organize and supervise medico-legal work in general/teaching/district hospitals and in any health care set up.
- Collect, preserve and dispatch various samples and trace evidences to the concerned authorities in appropriate manner.
- Help and Advise authorities on matters related to medical ethics and medico-legal issues.

- Discharge duties in respect of forensic, clinical, emergency, environmental, medico-legal and occupational aspects of toxicology.
- Plan, organize and manage toxicological laboratory services in any health care set up.
- Provide information and consultation on all aspects of toxicology to professionals, industry, Government and the public at large.
- Manage medico-legal responsibilities in mass disasters involving multiple deaths like fire, traffic accident, aircraft accident, rail accident and natural calamities.
- Do interaction with allied departments by rendering services in advanced laboratory investigations and relevant expert opinion.
- Participate in various workshops/seminars/journal clubs/demonstration in the allied departments, to acquire various skills for collaborative research.

5. General Statutes and Regulations

a. Documents Required for DMJ Admission:

- Completed DMJ application form.
- Copy of MBBS degree with mark sheets of professional examinations and certificate of number of attempts in the professional examinations.
- Copy of PMDC registration certificate.
- Three latest passport size photographs.
- Certificates of completion of house job.
- NOC from current working place.

• Eligibility Criteria:

Candidates eligible for admission should have MBBS or equivalent qualification, registered with PMDC and fulfill one of the following criteria:

- Two year experience as Demonstrator in department of Forensic Medicine & Toxicology, of a Medical College recognized by PMDC.
- Four year experience as casualty medical officer in any Govt. DHQ/THQ hospital.
- Obtaining pass percentage in the entry test as determined by the RMU rules
- Qualifying the interview successfully.
- Having up to the mark credentials as determined by the RMU rules (no. of attempts in each professional, any gold medals or distinctions, relevant work experience, research experience from a recognized institution, any research article published in a National or an International Journal).

a. Registration & Enrolment:

- The total number of students enrolled for the course must not exceed 10 student including both deputation and private candidates.
- RMU Rawalpindi will approve supervisors for diploma courses.
- Candidates selected for the courses will be registered with relevant supervisors and enrolled with RMU.
- Criteria for supervisors DMJ, MPhil, FCPS or equivalent with at least 2 years of post-graduation experience and research work/publication.

6. Outline of Training Program

The course will consist of instructions and training in Forensic medicine lasting for two years:

- The DMJ part-I examination will be held at the end of first 6 months training period.
- The DMJ part-II examination will be held at the end of remaining 1-1/2 year training and will comprise of both theoretical and practical component.
- The theoretical parts both examinations will be held at old campus, Rawalpindi Medical University.
- The practical component of exam will be conducted in the Department of Forensic Medicine NTB, RMU, Rawalpindi.

The candidates of DMJ shall be working in the different disciplines as per the following schedule:

COURSE	COMPONENTS	ASSESSMENT
DMJ PART I (06 Months)	04 weeks Rotation in Anatomy	Continuous / Formative internal assessment DMJ Part-I training assessment. Details in assessment section
	04 weeks Rotation in Pathology	
	04 weeks Rotation in Community Medicine	
	04 weeks Rotation in Psychiatry Department BBH (For Behavioral Sciences)	
	06 Months training in Forensic Medicine	
DMJ PART II (1Year & 06 Months)	02 RMU mandatory workshops on Research Methodology & Biostatistics	Continuous / Formative internal assessment Summative Assessment at the end of Two years training Details in assessment section
	1 Year Theoretical Training in Forensic Medicine	
	6 Months Practical Medico legal Training In DHQ ,Rawalpindi	
	02 RMU mandatory workshops on Research Methodology & Biostatistics	

7. Course Content

Part-I DMJ

FORENSIC ANATOMY

- General osteology (introduction).
- Axial skeleton (skull, mandible, vertebrae, sternum, ribs) Ossification.
- Human skull & cephalic indices.
- Age and sex determination from skull.
- Appendicular skeleton and ossification.
- Age and sex determination from limb bones.
- Height determination from limb bones.
- Sex differences in pelvis.
- Teeth (morphology, variations and age determination).
- Dentition (development and medico-legal aspects).
- Hair (anatomy and development)
- Hair (sex and racial variations)
- General outlines of gross human anatomy and important relations and distribution of major organs of the body.
- Oogenesis; spermatogenesis; fertilization
- Embryonic period
- Placenta; amnion; umbilical cord
- Organogenesis; basic teratology
- Foetal crown-rump + crown-heel length, weight
- Estimation of fetal age

GENERAL & FORENSIC PATHOLOGY

- **Cell Injury and adaptation**
 - ✓ Cell Injury.
 - ✓ Reversible and Irreversible Injury.
 - ✓ Fatty change, Pigmentation, Pathologic calcification.
 - ✓ Necrosis and Gangrene.
 - ✓ Cellular adaptation.
 - ✓ Atrophy, Hypertrophy, Hyperplasia, Metaplasia, Aplasia.
- **Inflammation**
 - ✓ Acute inflammation --- Vascular changes, Chemotaxis.

- ✓ Opsonization and Phagocytosis.
- ✓ Cellular components and chemical mediators of acute inflammation
Exudates and transudate.
- **Chronic inflammation**
 - ✓ Etiological factors, pathogenesis and classification.
 - ✓ Granuloma.
- **Cell repair and wound healing**
 - ✓ Regeneration and Repair.
 - ✓ Healing--- steps of wound healing by first and second intention.
 - ✓ Factors affecting healing.
 - ✓ Complications of wound healing.
- **Haemodynamic disorders**
 - ✓ Classification, etiology and pathogenesis of Edema.
 - ✓ Haemorrhage, Thrombosis, Embolism, Infarction & Hyperaemia.
 - ✓ Shock, classification, etiology and pathogenesis.
 - ✓ Compensatory mechanisms involved in shock.
- **Neoplasia**
 - ✓ Dysplasia and Neoplasia.
 - ✓ Differences between benign and malignant neoplasms.
 - ✓ Common etiological factors for neoplasia.
 - ✓ Different modes of metastasis.
 - ✓ TNM staging system and tumor grade.
- **Immunity and Hypersensitivity**
 - ✓ Humoral and cellular immunity.
- **Occupational Diseases**
 - ✓ Pneumoconiosis, definition, types and morphology
 - ✓ Anthracosis.
 - ✓ Asbestosis.
 - ✓ Silicosis.
 - ✓ Baganosis
 - ✓ Occupational cancer, agents, site, and human cancer.

FORENSIC SEROLOGY

- Morphology of blood and their differences from other specimens.
- Series of antigen-antibody reactions in blood; ABO blood group system and its basis.

- ABO genotypes / phenotypes, grouping & cross matching and their application in disputed paternity / maternity
- Rh blood group system
- Agglutinins / agglutinogens and their reaction (agglutination).
- Mendelian law of inheritance
- Other body fluids e.g. semen, saliva etc.
- Secretors and non-secretors
- The chemical, immunological and microscopic laboratory techniques commonly used for the examination and identification of body fluids, stains and determination of species.
- Different chemical tests for identification of hair, blood, semen
- Structure of DNA molecules
- DNA replication
- DNA recombinant techniques and its forensic applications
- Technique of sampling for DNA profiling
- Forensic DNA quality control issues.
- Current research and development for forensic DNA instrumentation and applications, statistical interpretation of results and case report writing.
- Students will process mock forensic casework.

LAW RELEVANT TO MEDICAL MAN

- Basic matters relevant to the Medical Jurisprudence
- Pakistan Medical & Dental Council (constitutions, powers and responsibilities)
- Medical ethics
- Principles of legal system in Pakistan
- Duties and responsibilities of the doctors
- Medico-legal system in other countries
- History of legal medicine
- Medical aspect of law in relation to poisons, dangerous drugs
- Mental Health, Legal Aspect of Insanity Lunacy Act 1912 (Obsolete) and the latest Mental Health Ordinance 2001.
- Registration of births and deaths
- Factory Act-workmen compensation
- Social Security (Industrial injuries)
- Crimes of violence-Homicide
- Suicide-Accidents-Infanticide-Sexual assaults

- Medical Negligence
- Privileged communication
- Law and Legal procedures
- Law of evidence-Responsibility of law-(criminal responsibility including testamentary capacity-contract law-writing of will)
- Consent in medical treatment
- Validity of printed consent forms
- General procedure of enquiring into the matters needing medico- legal investigation
- Hudood Ordinance 1979, Qisas and Diyat Ordinance 1990
- injured person medical aid act 2004
- Women protection bill 2006.

BEHAVIOURAL SCIENCES

- Use of non-medicinal interventions in clinical practice
- Bio-psycho-social (BPS) model of health care
- Communication skills
- Counseling
- Informational skills
- Crisis intervention/disaster management
- Conflict resolution
- Breaking bad news
- Medical ethics, professionalism and doctor-patient relationship
- Hippocratic oath
- Four pillars of medical ethics (autonomy, beneficence, nonmalficence and justice)
- Informed consent and confidentiality
- Ethical dilemmas in a doctor's life
- Psychological aspects of health and disease
- Psychological aspect of health
- Psychological aspect of disease
- Stress and its management
- Psychological aspect of pain
- Psychological aspect of aging

BIOSTATISTICS AND RESEARCH METHODOLOGY

- Introduction to bio-statistics
- Introduction to bio- medical research
- Why research is important?
- What research to do?
- Selecting a field for research
- Drivers for health research
- Participation in national and international research
- Participation in pharmaceutical company research
- Where do research ideas come from
- Criteria for a good research topic
- Ethics in health research
- Writing a scientific paper
- Making a scientific presentation
- Searching the literature

Part-II DMJ

GENERAL FORENSIC MEDICINE

- **Thanatology:** Definition and diagnosis of death, time since death-changes after death.
- **Trace evidence:** Recognition, collection and preservation of such material
- Identification problems (living-dead)
- Examination of human remains
- Method of re-construction.
- Examination and interpretation of injury / wounds and other medical findings in common physical assaults-various types/ relationship of trauma to disease
- Trauma and pre-existing disease-Regional trauma.
- Medico-legal autopsy-procedure-technique, facilities and accommodation in the mortuaries.
- Exhumation procedure-rules-precautions-value of exhumations.

SPECIAL FORENSIC MEDICINE

- Pathology of un-expected death with special emphasis on coronary heart disease and death due to vagal inhibition
- Study of possible methods of violent deaths-methods of disposal of dead bodies
- Infanticide-methods examination of infants and interpretation of findings
- Special trauma-especially explosive; Industrial; automobile- (Railway Aircrafts)
- Determination of disability
- Sexual assaults-Sexual deviations.
- Medicolegal aspect of pregnancy delivery-Abortion-Nullity- Divorce
- Psychiatry from the point of view of diagnosis and disposal
- Forensic aspect of the following specialties;
- Anesthesiology
- Radiology.
- Surgery and Orthopaedic
- Photography

TOXICOLOGY

- Introduction to Toxicology
- Occupational Toxicology
- Environmental Toxicology
- Ecotoxicology
- Toxicokinetics Routes of Administrations of Poisons
- Action of Poisons
- Factors modifying the action of poisons
- Fate of poisons in body
- Diagnosis of poisoning in living and dead
- Medico-legal duties of doctors in case of suspected poisoning
- Antidotes: types of antidotes and their use
- Approach / Management of the poisoned patient

FORENSIC BIOCHEMISTRY

- Value of “Acid-Base Balance” in the body and its clinical significance.
- Biochemistry of asphyxia.
- Biochemistry of rigor-mortis.
- Biochemical changes in cerebro-spinal fluid / vitreous humour in relation to time since death.
- Biochemistry of autolysis.
- Biochemical changes in blood after death.
- Biochemical changes for assessment of age of wound.

8. Teaching And Learning Methods

The two-year training program for Diploma in Medical Jurisprudence may be arranged in the form of postings to different assignments/laboratories/sections for specified periods as outlined below:

- 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.

Monthly Rotations in Department

- Anatomy
- Pathology
- Community Medicine
- Psychiatry

Weekly Academic Activity

- 03 days/Week deputed in different Departments
- From Mon-Wed (09am to 12pm)
- 06 days/week in Forensic Medicine
- From Mon-Wed (12pm to 02pm)
- 3 days Medicolegal training in DHQ mortuary
- From Thurs-Sat (09am to 12pm)
- Daily Forensic Medicine Topic Presentation
- Thurs-Sat (12pm to 02pm)

Guideline To Various Teaching/learning Activities

The following is a broad guideline to various teaching/learning activities that may be employed.

Lectures:

- Lectures are to be kept to a minimum. They may, however, be employed for teaching certain topics. Lectures may be didactic or integrated.
- The course shall be of three years, organized in six units (0-5). This modular pattern is a guideline for the department, to organize training. Training programme can be modified depending upon the work load and academic assignments of the department.

Journal Club & Subject seminars:

Both are recommended to be held once a week. All the PG students are expected to attend and actively participate in discussion and enter in the Log Book relevant details. Further, every PG trainee must make a presentation from the allotted journal(s), selected articles and a total of 12 seminar presentations in three years. The presentations would be evaluated and would carry weightage for internal assessment.

Case Presentations:

Every PG trainee will present atleast 8-10 cases minimum each year. They should be assessed using check lists and entries made in the log book.

Clinico-Pathological correlation \ Conference:

Recommended once a month for all post graduate students. Presentation is to be done by rotation. If cases are not available, it could be supplemented by published CPCs.

Inter-Departmental Meetings:

These meetings should be attended by post graduate students and relevant entries must be made in the Log Book.

Rotation:

Other than the Department of Forensic Medicine, student may be posted for training in the following clinical disciplines for a given period of time on rotational basis.

Teaching Skills:

The postgraduate students shall be required to participate in the teaching and training program of undergraduate students and interns.

- Undertake audit, use information technology tools and carry out research, both basic and clinical, with the aim of publishing his work and presenting his work at various scientific fora.
- **Continuing Medical Education Programmes (CME):** At least one CME programs should be attended by each student in 2 years.
- **Conferences:** The student to attend courses, conferences and seminars relevant to the speciality.
- A DMJ postgraduate student would be required to present two research paper

9. Log Book

The trainees must maintain a log book and get it signed regularly by the supervisor. A complete and duly certified log book should be part of the requirement to sit for DMJ examination. Log book should include adequate number of diagnostic and therapeutic procedures, routine and emergency management of patients, case presentation of medico-legal, trauma, poisoning and sexual assault in CPCs, journal club meetings and literature review. Proposed Format of Log Book is as follows:

Candidate's Name:-----

Roll No:-----

PROCEDURES:

- Techniques of autopsy incisions
- Techniques of neck dissection layer by layer
- Opening of body cavities
- Demonstration/examination of coronary arteries by stepwise dissection of heart and check their patency
- Demonstration of pneumothorax, fat embolism and pulmonary embolism at autopsy table
- Differentiate between blackening and tattooing of the fire arm case at autopsy table
- Differentiate between bruise and postmortem clot at autopsy table.
- Techniques of using stomach wash tube in case of poisoning
- Collection, sampling, sealing and dispatch of appropriate material in case of poisoning, rape/ zina, sodomy etc. to the chemical examiner to the Govt. of Punjab Rawalpindi
- Collection, sampling, sealing and dispatch of appropriate material/viscera in case of suspected disease to the Bacteriologist Govt. of Punjab Lahore

AUTOPSY CASES HANDLED

No	Date	Name, Age & Sex of victim	Examination of the case, Injuries recorded, Kind of weapon, viscera sent to the chemical examiner	Scrutiny of the dead body/ clothes	Scrutiny/dissection of the dead body. Any foreign body recovered.	Cause of Death	Probable time that elapsed between; Injury & Death & postmortem examination	Supervisor's signature
1.								
2.								

MEDICO-LEGAL CASES HANDLED

No.	Date	Sex of Patient. Admitted /not admit. Time of arrival	Examination of the case, Injuries recorded, Kind of weapon, Investigations advised	Type of assault	Nature of injuries KUO/ Declared	Probable duration of injuries	Supervisor's signature
1.							
2.							

POISONING CASES HANDLED

No.	Date	Name, Age & Sex of Patient Adm ission no.	Examination of the case, Signs and symptoms observed and recorded. Clinical condition	Samples sent to the chemical examiner/ Any other investigation prescribed	Internal scrutiny/ dissection of the dead body. Any foreign body recovered.	Treatment of the case conducted	Supervisor's signature
1.							
2.							

SEMINAR/JOURNAL CLUB PRESENTATION

Sr	Date	Topic	Supervisor's Signature

EVALUATION RECORD

Sr	Date	Method of evaluation (Oral, Practical Theory)	Rating	Supervisor's Signature

LITERATURE REVIEW

Students will be assigned a clinical problem; most commonly encountered in the relevant specialty and will be specifically trained to review literature in the relevant field and write a 'Review of an **Article**' comprising of:

- Topic
- Introduction
- Discussion of the reviewed literature
- Conclusion
- References

10. Assessment

It will consist of action and professional growth **oriented student centered integrated assessment** with an additional component of **informal internal assessment, formative assessment** and measurement-based **summative assessment**.

Student-Centered Integrated Assessment

It views students as decision-makers in need of information about their own performance. Integrated Assessment is meant to give students responsibility for deciding what to evaluate, as well as how to evaluate it, encourages students to **'own'** the evaluation and to use it as a basis for self-improvement. Therefore, it tends to be growth oriented, student-controlled, collaborative, dynamic, contextualized, informal, flexible and action-oriented. In the proposed curriculum, it will be based on:

- Self Assessment by the student
- Peer Assessment
- Informal Internal Assessment by the Faculty

Self Assessment by the Student

Each student will be provided with a pre-designed self-assessment form to evaluate his/her level of comfort and competency in dealing with different relevant clinical situations. It will be the responsibility of the student to correctly identify his/her areas of weakness and to take appropriate measures to address those weaknesses.

Peer Assessment

The students will also be expected to evaluate their peers after the monthly small group meeting. These should be followed by a constructive feedback according to the prescribed guidelines and should be non-judgmental in nature. This will enable students to become good mentors in future.

Informal Internal Assessment by the Faculty

There will be no formal allocation of marks for the component of Internal Assessment so that students are willing to confront their weaknesses rather than hiding them from their instructors.

It will include:

- Punctuality
- Medico legal work
- Monthly assessment (written tests to indicate particular areas of weaknesses)
- Participation in interactive sessions

Formative Assessment

It will help to improve the existing instructional methods and the curriculum in use.

Feedback to the faculty by the students:

After every three months students will be providing a written feedback regarding their course components and teaching methods. This will help to identify strengths and weaknesses of the relevant course, faculty members and to ascertain areas for further improvement.

Multisource Feedback (360 Degree Evaluation)

Assessment Records/Evaluation Performa's Shift to main log book	Evidence of all available assessment records and six monthly 360 degree evaluation records should be mentioned in this section to have a reflection about resident's medical knowledge, patient care, communication skills, system based learning, practice based learning and professionalism. Copies of the result cards/assessment records should be attached as evidence.
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Monthly Written Test MCQ

SR NO	TOPIC
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

Summative assessment:

a) Details of TOS for written and clinical exam in Curriculum.

It will be carried out at the end of the programme to empirically evaluate **cognitive, psychomotor** and **affective domains** in order to award diplomas for successful completion of courses.

b) Eligibility to Appear in Final Examination

- Only those candidates will be eligible to take final examination, who have passed Part 1 examination (after 6 months of education) and have completed two years of structured/supervised training program.
- Candidates who have completed their log books and hold certificates of 75% attendance should be allowed to sit for the exam
- The application for the final examination will be forwarded with recommendations of the supervisor
- Only those candidates who qualify in theory will be called for practical/ clinical examination

DMJ Examination

Part I DMJ

Topics included;

- Forensic Anatomy (15 MCQs)
- Forensic & General Pathology (15 MCQs)
- Forensic Serology (15 MCQs)
- Law relevant to medical man (40 MCQs)
- Behavioral Sciences (10 MCQs)
- Introduction to Biostatistics and Research (05 MCQs)

Components of the Part 1 examination

- MCQ Paper 100 One Best Type
- Total Marks 100 Marks

Part II DMJ

Topics included in paper 1

- General forensic medicine
- Special forensic medicine

Topics included in paper 2

- Toxicology (80 % component)
- Forensic Biochemistry (20 % component)

Part II Examination

Theory

Paper I 100 Marks 3 Hours

- 10 SEQs (No Choice) 50 Marks
- 50 MCQs 50 Marks

Paper II 100 Marks 3 Hours

- 10 SEQs (No Choice) 50 Marks
- 50 MCQs 50 Marks
- The candidates who pass in theory papers, will be eligible to appear in the practical / clinical & viva voce.

OSCE 90 Marks

10 stations each carrying 9 marks of 10 minutes duration; each evaluating performance based assessment with five of them interactive

Clinical 90 Marks

Four short cases each carrying 15 marks and one long case of 30 marks.

Components of the Part II examination

- Theory paper 1 - 100 marks
- Theory paper 2 - 100 marks
- Clinical/Oral - 180 marks
- Log Book - 20 marks
- Total Marks - 400 marks

11. Regulations Regarding Examination

Examiners

A panel of four examiners from Forensic Medicine and Toxicology, Biochemistry and Pharmacology (One internal and two external) will be appointed for practical examination. Each component of practical examination will be assessed by two examiners awarding marks simultaneously and independently. The final score awarded will be an average score, as agreed by both examiners.

Pass Criteria and Other Regulations Regarding Examination

- Criterion referenced assessment principles will be used
- 20 marks for the log book will be included in the OSCE component
- 60% marks will be a pass score in each component
- Candidates failing in any one component will have to reappear the entire examination
- A maximum of 5 attempts to sit for the examination will be allowed, to be availed within 3 calendar years of the first attempt Re-admission in DMJ course is not permissible under any circumstances

12. Fee Structure

Registration fee: Rs.10,000

Total course fee: Rs. 50,000 / (2 years , to be paid at the start of the course)

Admission Call: During Fall of every year through advertisement in 2 leading newspapers (English and Urdu).

13. Recommended Books and Journals

- Anderson Pathology (Latest Edition).
- Knight's Forensic Pathology by Knight (Latest Edition).
- Forensic Pathology by Bernard Knight (Latest Edition).
- Principle And Practice Of Forensic Medicine By Nasib R Awan (Latest Edition).
- Parikh's Textbook of Medical Jurisprudence, Forensic Medicine and Toxicology (Latest Edition).
- Gradwohl's Legal Medicine By Francis E. Camps (Latest Edition).
- Medicolegal Investigation Of Gunshot Wound By Abdullah Fateh (Latest Edition).
- Robbin's. Pathologic Basis of Diseases
- Last R. J. Anatomy (Regional and Applied)
- Snell. Clinical Anatomy.
- Langmman J. Embryology
- Introduction To Statistics, Publishing Co. Inc, New York.
- Spiegel, Murray R.: Theory & Problems Of Statistics, Sehawm Publishing Co., New York.