Undergraduate Assessment Record Forensic Medicine & Toxicology

The Tamil Nadu
Dr. M.G.R. Medical University,
Chennai

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Under Graduate Assessment Record

Department of Forensic Medicine & Toxicology

Preface

Competency based education implemented by this university is an outcome-based learning on a framework of competencies. The present system needs an ongoing and longitudinal assessment to identify the learning, enable learning opportunities and acquire the mandated competency. Consequently, this university is enabling this assessment record to decide if the learner has acquired the mandated competencies. This assessment record is designed to collect and analyse data of a student's learning in relation to a required competency and the learner's stage of training, based on - use of knowledge, technical skills, clinical reasoning, communication, emotions, values and reflection continuously and consistently and not isolated to the final examination. As given in the MCI document on "Competency Based Assessment Module for Undergraduate Medical Education-2019" - "Informal assessments should happen during teaching-learning activities with the express purpose of finding out the stage of the student and taking corrective action in teaching-learning methodology on an ongoing basis. During lectures, small groups or seminars, use of techniques like clickers, one-minute papers and muddiest point provide valuable information to check understanding and provide developmental feedback. Same can be done during practical/clinical teaching using one-minute preceptor (OMP) or SNAPPS technique (Summarize history and findings, Narrow the differential; Analyse the differential; Probe preceptor about uncertainties; Plan management; Select case-related issues for self-study). Many of these do not need to be considered for pass/fail decisions but are useful to aid learning and acquire competencies. These can be planned by the teachers on a day to day basis and modified depending on the tasks at hand.

This Assessment Record for the Undergraduates is to be maintained by the Faculty of the concerned Department and shall be shown to the student during the feedback sessions and at the end of the course period.

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1. University Norms for Assessment of the Course

a. Internal Assessment

No	Type of Assessment	Methods of Assessment	Total Marks	Min Pass Mark
1	**Theory Component**			
a	Theory Tests (Average of 8 Tests)	MCQ, VSAQ, SAQ, LAQ	40	
b	Continuous Formative Assessment*	Integrated Sessions	4	
		Assignments	4	
		Self-Directed Learning	2	
	Total		**50**	
2	**Practical Component**			
a	Practical (Average of 4 tests)	CE, OSCE, DOPS, Viva	40	
b	Continuous Formative Assessment*	Clinical Learning	5	
		AETCOM Learning	5	
	Total		**50**	
	Grand Total		**100**	**50**

*Continuous Formative Assessment shall be based on a day-to-day assessment of learning. It shall relate to different ways in which learners participate in learning process including assignments, preparation for seminar, integrated classes, participation in Clinical OPD and Inpatient Classes, AETCOM, SDL, and Research Projects.

Note:

1. Regular periodic examinations shall be conducted throughout the course. There shall be no less than 8 internal assessment examinations and no less than 4 practical examinations.
2. Day to day records and log book (including required skill certifications) should be given importance in internal assessment. Internal assessment should be based on competencies and skills. Colleges and teachers should try to build their valid assessment tools.
3. Learners must secure at least 50% marks of the total marks (combined in theory and practical / clinical; not less than 40 % marks in theory and practical separately) assigned for internal assessment in a particular subject in order to be eligible for appearing at the final University examination of that subject. Internal assessment marks will reflect as separate head of passing at the summative examination.
4. Learners must have completed the required certifiable competencies for that phase of training and completed the log book appropriate for that phase of training to be eligible for appearing at the final university examination of that subject.
5. Feedback should be provided to learners throughout the course so that they are aware of their performance and remedial action can be initiated well in time. The feedbacks need to be structured and the faculty and learners must be sensitized to giving and receiving feedback.
6. The results of IA should be displayed on notice board within 2 weeks of the test and an opportunity provided to the learners to discuss the results and get feedback on making their performance better. Remedial measures for learners who are either not able to score qualifying marks or have missed on some assessments due to any reason(s) shall be allowed with a record.

7. It is also recommended that learners should sign with date whenever they are shown IA records in token of having seen and discussed the marks.
8. Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination.

b. Summative Assessment - University Examination

University examinations will consist of

1. Theory: 1 paper of 100 marks
2. Practical Exam + Viva: 100 marks

Note:

1. Theory Examinations: Nature of questions will include different types such as structured essays (Long Answer Questions - LAQ), Short Answers Questions (SAQ) and objective type questions (e.g. Multiple-Choice Questions - MCQ). Marks for each part should be indicated separately. MCQs shall be accorded a weightage of not more than 20% of the total theory marks. In subjects that have two papers, the learner must secure at least 40% marks in each of the papers with minimum 50% of marks in aggregate (both papers together) to pass.
2. Practical/clinical examinations will be conducted in the laboratory/Dissection Hall. The objective will be to assess proficiency and skills to conduct experiments, interpret data and form logical conclusion. Emphasis should be on candidate's capability to demonstrate skills, write a description, analyse the case etc
3. Viva/oral examination should assess approach to problem solving, applied situations, attitudinal, ethical and professional values. Candidate's skill in interpretation of clinical case charts, clinical photographs, common investigative data, identification of histopathology slides / specimens, radiological images etc. is to be also assessed
4. Internal assessment marks are not to be added to marks of the University examinations and should be shown separately in the grade card.
5. Pass in University Exam will be 50% marks in theory and clinical.

These concepts have been incorporated from the "Competency Based Assessment Module for Undergraduate Medical Education-2019"

2. Curriculum Vitae

Name of Student											
Name of Parent/Guardian											
Date of Birth & Age											
Permanent Address											
Address for Postal Communication											
Landline Phone (Home)											
Mobile Phone (Parent/Guardian)											
Mobile Phone (Parent/Guardian)											
Mobile Phone (Student)											
Email ID (Parent/Guardian)											
Email ID (Student)											

Signature of Student

3. Understanding Competency Based Assessment

Assessment requires specification of measurable and observable entities. This could be in the form of whole tasks that contribute to one or more competencies or assessment of a competency per se. Another approach is to break down the individual competency into learning objectives related to the domains of knowledge, skills, attitudes, communication etc. and then assess them individually. However, as stated earlier, using individual domain framework may not always result in making an accurate assessment of the specific competency. Therefore, efforts should be made to include competencies in the assessment process as much as possible. CBA is very useful to convey a message to the learners to structure their learning around competency framework.

- CBA operates within the framework of competencies. Assessment tools should align competencies/objectives.
- CBA should help to acquire competencies/objectives (*Assessment for learning*) and their certification (Assessment *of learning*).
- CBA is continuous and ongoing process with opportunities for providing developmental feedback.
- Direct observations of learners improve utility of CBA and feedback.
- Multiple assessors, multiple tools and multiple assessments improve the validity and reliability of CBA.

Formative & Internal Assessment (IA)

Formative assessment is an assessment conducted during the instruction with the primary purpose of providing feedback for improving learning. It also helps the teachers and learners to modify their teaching learning strategies. The feedback is central to formative assessment and is linked to deep learning, seeking to explore the educational literature and its pedagogical lessons for healthcare educational practice. It provides inputs to both learners and teachers regarding adequacy of teaching-learning. A variety of feedback principles and techniques can be used depending on the context.

Although there can be a debate on the summative or formative nature of IA, it still provides the best opportunities for formative purposes. IA is when assessment is done by the teachers who have taught the subject. It overcomes the limitations of day-to-day variability and allows larger sampling of topics, competencies and skills. In competency based curriculum, IA provides useful avenues for both formative and summative assessment. The IA focuses on the process of learning i.e. how the learners have learnt throughout the course. This assessment gives priority to psychomotor, communication and affective domains. These are those domains which are usually not assessed by the traditional assessment methods. It should involve all faculty members of a department (Senior Residents upwards) and not just one or two senior teachers. This helps to build the ownership of teaching-learning and assessment as well as provide ‘hands-on’ experience in assessment to all teachers. In that way, IA can be a very useful tool for assessing all competencies in any competency based curriculum.

IA should not be considered as an assessment without external controls and can be utilized in a manner to overcome some its perceived weaknesses. Utility of IA can be further improved by involving all teachers in the department and limiting the contribution of individual teacher, test or tool.

Designing a system of assessment

While designing an internal assessment, all domains of learning i.e. cognitive, psychomotor and affective should be taken into account and weightage should be assigned to these domains for assessment. We can divide various domains into smaller components and assign marks to each component. Make a blueprint of assessment, then circulate to few learners and faculty, take their comments/ views/feedback and revise as per the need.Miller's pyramid (figure 2) provides a simple way to select appropriate tool for assessment. Efforts should be made to climb higher in the pyramid.6, 13 The following adapted example illustrates this:

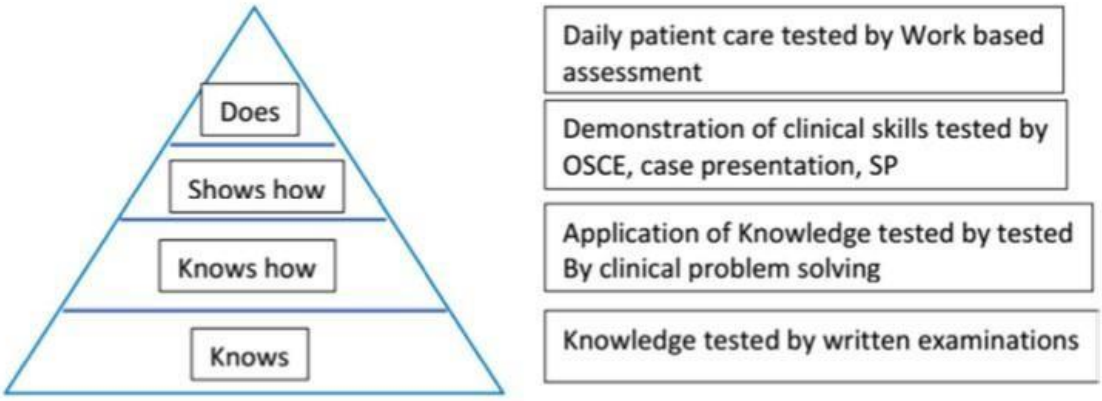

Figure 2. Assessment methods as per levels of competency (Adapted from Ramani)
OSCE: Objective Structured Clinical Examination, SP: Standardised/ Simulated Patients

The key to building validity and to make CBA assessment useful is to align it with competencies/objectives. Including some aspects from competencies of other phases is useful to assess integration of concepts. Some examples of such alignment can be seen in the competency sheet given in Table1.

Table 1. Deriving assessment methods from objectives

Competency: An **observable** ability of a health professional, **integrating multiple components** such as knowledge, skills, values and attitudes.

PA42.3	**Identify** the etiology of meningitis based on given CSF parameters	K/S	SH	Y

Objective: Statement of what a learner should be able to do at the end of a specific learning experience

PA42.3.1	At the end of the session **the PII student** must be able to enumerate the most common causes of meningitis correctly	Short note or part of structured essay: Enumerate 5 causes of meningitis based on their prevalence in India
PA42.3.2	At the end of the session the PII student must be able to enumerate the components of a CSF analysis correctly	Short note or part of structured essay: Enumerate the components tested in a CSF analysis
PA4.3.3	At the end of the session the PII student must be able to **describe** the CSF features for a given etiologic of meningitis **accurately**	Short note or part of structured essay:Describe the CSF findings that are characteristic of tuberculous meningitis
PA4.3.4	At the end of the session the PII student must the able to identify the aetiology of meningitis correctly from a **given set of CSF parameters**	Short note / part of the structured essay/ Skill station/ Viva: Review the CSF findings in the following patient and identify (write or vocalise) the most likely ethology

Table 1. Deriving assessment methods from objectives

A useful approach, especially for affective, psychomotor and communication domains, is to adopt the concept of assessment toolbox. A toolbox is a listing of available tools (and rating forms, if required), which are suggested for a particular competency or sub-competency and aims at improving the value of assessment data.14 The listed tools are suggestions only and can be freely used either singly or in combination by teachers to suit particular requirements. Efforts should be made to use multiple tools even for a given competency to improve validity and reliability of assessment. While assessment will continue to be subject based, efforts must be made to ensure that phase appropriate correlates are assessed to determine if the learner has internalised and integrated the concept and its application.

Internal Assessment Scheduling of IA

A student who has not taken minimum required number of tests for IA each in theory and practical will not be eligible for University examinations. Proper records of the work should be maintained which will form the basis for the learners' internal assessment and should be available to the assessors at the time of inspection of the college by the Medical Council of India.

Components of IA

(i) Theory IA can include: theory tests, send ups, seminars, quizzes, interest in subject, scientific attitude etc. Written tests should have short notes and creative writing experiences.

(ii) Practical/Clinical IA can include: practical/clinical tests, Objective Structured Clinical Examination (OSCE)/Objective Structured Practical Examination (OSPE), Directly Observed Procedural Skills (DOPS), Mini Clinical Evaluation Exercise (miniCEX), records maintenance and attitudinal assessment.

Colleges and teachers should try to build capacity to use a variety of assessment tools. A number of tools are available in the form of assessment toolbox. The construct validity and predictive utility of internal assessment is high. Many of the tools mentioned for IA may appear subjective. However, by virtue of being high on validity and by conveying a message to the learners to not ignoreskills, attitudes and communication (educational impact), they contribute to better learning. Since stakes at IA are low, the use of expert subjective assessments to cover areas which are not assessable by conventional objectivised assessment tools is appropriate. There is plenty of evidence in literature to suggest that expert subjective assessments can be as reliable as highly objective ones.

Assessment of Foundation Course should be included in formative assessment of first phase. Assessment of Early Clinical Exposure should be included in formative as well as in internal assessment in first phase subject-wise. There should be at least one assessment based on direct observation of skills, attitudes and communication at all levels. Communication and attitudinal assessment should also be built in all assessments as far as possible.

Feedback in IA

Feedback should be provided to learners throughout the course so that they are aware of their performance and remedial action can be initiated well in time. The feedbacks

need to be structured and the faculty and learners must be sensitized to giving and receiving feedback.The results of IA should be displayed on notice board within 2 weeks of the test and an opportunity provided to the learners to discuss the results and get feedback on making their performance better. It is also recommended that learners should sign with date whenever they are shown IA records in token of having seen and discussed the marks. Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination.

(These concepts have been incorporated in the proposed Regulations in Graduate Medical Education, 2019 (GMER 2019) and are reproduced here.

4. Formative Assessment of Classroom Learning

The term "Classroom Learning" mentioned here includes any learning that happens within the ambit of the class rooms namely the large group and small group teaching. The learning in the department predominantly fits into the Scale of 1 and 2 of the 5 level Blooms Taxonomy.
The End of Class / Module Assessment shall include: 8-10 MCQ's solved over 8-10minutes. For effective assessment and grading of performances a Likert's scale is given as under:

Grade	Characteristic
1	Score < 35% marks in the end of class assessments
2	Score 35%-50% marks in the end of class assessments
3	Score 50%-60% marks in the end of class assessments
4	Score 60%-75% marks in the end of class assessments
5	Score > 75% marks in the end of class assessments

Number	COMPETENCY The student should be able to	Level K/KH/ S H/P	Grading Scale					Initial of facilitator
			1	2	3	4	5	
Topic: General Information								
FM1.1	Demonstrate knowledge of basics of Forensic Medicine like definitions of Forensic medicine, Clinical Forensic Medicine, Forensic Pathology, State Medicine, Legal Medicine and Medical Jurisprudence	KH						
FM1.2	Describe history of Forensic Medicine	KH						
FM1.3	Describe legal procedures including Criminal Procedure Code, Indian Penal Code, Indian Evidence Act, Civil and Criminal Cases, Inquest (Police Inquest and Magistrate's Inquest), Cognizable and Non-cognizable offences	KH						
FM1.4	Describe Courts in India and their powers: Supreme Court, High Court, Sessions court, Magistrate's Court, Labour Court, Family Court, Executive Magistrate Court and Juvenile Justice Board	KH						
FM1.5	Describe Court procedures including issue of Summons, conduct money, types of witnesses, recording of evidence oath, affirmation, examination in chief, cross examination, re-examination and court questions, recording of evidence & conduct of doctor in witness box	KH						
FM1.6	Describe Offenses in Court including Perjury; Court strictures vis-a- vis Medical Officer	KH						
FM1.7	Describe Dying Declaration & Dying Deposition	KH						

FM1.8	Describe the latest decisions/notifications/resolutions/ circulars/standing orders related to medico-legal practice issued by Courts/Government authorities etc.	KH						
FM1.9	Describe the importance of documentation in medical practice in regard to medicolegal examinations, Medical Certificates and medicolegal reports especially - maintenance of patient case records, discharge summary, prescribed registers to be maintained in Health Centres. - maintenance of medico-legal register like accident register. - documents of issuance of wound certificate - documents of issuance of drunkenness certificate. - documents of issuance of sickness and fitness certificate. - documents for issuance of death certificate. -documents of Medical Certification of Cause of Death - Form Number4 and 4A - documents for estimation of age by physical, dental and radiological examination and issuance of certificate	KH						
FM1.10	Select appropriate cause of death in a particular scenario byreferring ICD 10 code	KH						
FM1.11	Write a correct cause of death certificate as per ICD 10 document	SH						
Topic : Forensic Pathology								
FM2.1	Define, describe and discuss death and its types including somatic/clinical/cellular, molecular and brain-death, Cortical Death and Brainstem Death	KH						
FM2.2	Describe and discuss natural and unnatural deaths	KH						
FM2.3	Describe and discuss issues related to sudden natural deaths	KH						
FM2.4	Describe salient features of the Organ Transplantation and The Human Organ Transplant (Amendment) Act 2011 and discuss ethical issues regarding organ donation	KH						
FM2.5	Discuss moment of death, modes of death - coma, asphyxia andsyncope	KH						
FM2.6	Discuss presumption of death and survivorship	KH						
FM2.7	Describe and discuss suspended animation	KH						
FM2.8	Describe and discuss postmortem changes including signs of death, cooling of body, post-mortem lividity, rigor mortis, cadaveric spasm, cold stiffening and heat stiffening	KH						
FM2.9	Describe putrefaction, mummification, adipocere and maceration	KH						

FM2.10	Discuss estimation of time since death	KH						
FM2.11	Describe and discuss autopsy procedures including post-mortem examination, different types of autopsies, aims and objectives of post-mortem examination	KH						
FM2.12	Describe the legal requirements to conduct post-mortem examination and procedures to conduct medico-legal post-mortem examination	KH						
FM2.13	Describe and discuss obscure autopsy	KH						
FM2.14	Describe and discuss examination of clothing, preservation of viscera on post-mortem examination for chemical analysis and other medico-legal purposes, post-mortem artefacts	KH						
FM 2.15	Describe special protocols for conduction of medico-legal autopsies in cases of death in custody or following violation of human rights as per National Human Rights Commission Guidelines	KH						
FM2.16	Describe and discuss examination of mutilated bodies or fragments, charred bones and bundle of bones	KH						
FM2.17	Describe and discuss exhumation	KH						
FM2.18	Crime Scene Investigation:- Describe and discuss the objectives of crime scene visit, the duties & responsibilities of doctors on crime scene and the reconstruction of sequence of events after crime scene investigation	KH						
FM2.19	Investigation of anaesthetic, operative deaths: Describe and discuss special protocols for conduction of autopsy and for collection, preservation and dispatch of related material evidences	KH						
FM2.20	Mechanical asphyxia: Define, classify and describe asphyxia and medico-legal interpretation of post-mortem findings in asphyxial deaths	KH						
FM2.21	Mechanical asphyxia: Describe and discuss different types of hanging and strangulation including clinical findings, causes of death, post-mortem findings and medico-legal aspects of death due to hanging and strangulation including examination, preservation and dispatch of ligature material	KH						
FM2.22	Mechanical asphyxia: Describe and discuss patho-physiology, clinical features, post- mortem findings and medico-legal aspects of traumatic asphyxia, obstruction of nose & mouth, suffocation and sexual asphyxia	KH						

FM2.23	Describe and discuss types, patho-physiology, clinical features, post mortem findings and medico-legal aspects of drowning, diatom testand, gettler test.	KH						
FM2.24	Thermal deaths: Describe the clinical features, post-mortem finding and medicolegal aspects of injuries due to physical agents like heat (heat-hyper-pyrexia, heat stroke, sun stroke, heat exhaustion/prostration, heat cramps [miner's cramp] or cold (systemic and localized hypothermia, frostbite, trench foot, immersion foot)	KH						
FM2.25	Describe types of injuries, clinical features, patho-physiology, post- mortem findings and medico-legal aspects in cases of burns, scalds, lightening, electrocution and radiations	KH						
FM2.26	Describe and discuss clinical features, post-mortem findings and medico-legal aspects of death due to starvation and neglect	KH						
FM2.27	Define and discuss infanticide, foeticide and stillbirth	KH						
FM2.28	Describe and discuss signs of intrauterine death, signs of live birth, viability of foetus, age determination of foetus, DOAP session of ossification centres, Hydrostatic test, Sudden Infants Death syndrome and Munchausen's syndrome by proxy	KH						
FM2.29	Demonstrate respect to the directions of courts, while appearing as witness for recording of evidence under oath or affirmation, examination in chief, cross examination, re-examination and court questions, recording of evidence	SH						
FM2.30	Have knowledge/awareness of latest decisions/notifications/resolutions/circulars/ standing orders related to medico-legal practice issued by Courts/Government authorities etc	K						
FM2.31	Demonstrate ability to work in a team for conduction of medico-legal autopsies in cases of death following alleged negligence medical dowry death, death in custody or following violation of human rights as per National Human Rights Commission Guidelines on exhumation	KH						
FM2.32	Demonstrate ability to exchange information by verbal, or nonverbal communication to the peers, family members, law enforcing agency and judiciary	KH						
FM2.33	Demonstrate ability to use local resources whenever required like inmass disaster situations	KH						
FM2.34	Demonstrate ability to use local resources whenever required like inmass disaster situations	KH						

FM2.35	Demonstrate professionalism while conducting autopsy in medicolegal situations, interpretation of findings and making inference/opinion, collection preservation and dispatch of biological or trace evidences	KH/SH						
Topic: Clinical Forensic Medicine								
FM3.1	IDENTIFICATION Define and describe Corpus Delicti, establishment of identity of living persons including race, Sex, religion, complexion, stature, agedetermination using morphology, teeth-eruption, decay, bite marks, bones-ossification centres, medico-legal aspects of age	KH						
FM3.2	IDENTIFICATION Describe and discuss identification of criminals, unknown persons, dead bodies from the remains-hairs, fibers, teeth, anthropometry, dactylography, foot prints, scars, tattoos, poroscopy and superimposition	KH						
FM3.3	Mechanical injuries and wounds: Define, describe and classify different types of mechanical injuries, abrasion, bruise, laceration, stab wound, incised wound, chop wound, defense wound, self-inflicted/fabricated wounds and their medico-legal aspects	KH						
FM3.4	Mechanical injuries and wounds: Define injury, assault & hurt. Describe IPC pertaining to injuries	KH						
FM3.5	Mechanical injuries and wounds: Describe accidental, suicidal and homicidal injuries. Describe simple, grievous and dangerous injuries. Describe ante-mortem and post-mortem injuries	K/KH						
FM3.6	Mechanical injuries and wounds: Describe healing of injury and fracture of bones with its medico-legalimportance	K/KH						
FM3.7	Describe factors influencing infliction of injuries and healing, examination and certification of wounds and wound as a cause of death: Primary and Secondary	K/KH						
FM3.8	Mechanical injuries and wounds: Describe and discuss different types of weapons including dangerous weapons and their examination	K/KH						
FM3.9	Firearm injuries: Describe different types of firearms including structure and components. Along with description of ammunition propellant charge and mechanism of fire-arms, different types of cartridges and bullets and various terminology in relation of firearm – caliber, range, choking	K/KH						

FM3.10	Firearm injuries: Describe and discuss wound ballistics-different types of firearm injuries, blast injuries and their interpretation, preservation and dispatch of trace evidences in cases of firearm and blast injuries, various tests related to confirmation of use of firearms	K/KH						
FM3.11	Regional Injuries: Describe and discuss regional injuries to head (Scalp wounds, fracture skull, intracranial haemorrhages, coup and contrecoup injuries), neck, chest, abdomen, limbs, genital organs, spinal cord and skeleton	K/KH						
FM3.12	Regional Injuries Describe and discuss injuries related to fall from height and vehicular injuries – Primary and Secondary impact, Secondary injuries, crush syndrome, railway spine	K/KH						
FM3.13	Describe different types of sexual offences. Describe varioussections of IPC regarding rape including definition of rape (Section 375 IPC), Punishment for Rape (Section 376 IPC) and recentamendments notified till date	K/KH						
FM3.14	SEXUAL OFFENCES Describe and discuss the examination of the victim of an alleged case of rape, and the preparation of report, framing the opinion and preservation and despatch of trace evidences in such cases	K/KH						
FM3.15	SEXUAL OFFENCES Describe and discuss examination of accused and victim of sodomy, preparation of report, framing of opinion, preservation and despatch of trace evidences in such cases	K/KH						
FM3.16	SEXUAL OFFENCES Describe and discuss adultery and unnatural sexual offences-sodomy, incest, lesbianism, buccal coitus, bestiality, indecentassault and preparation of report, framing the opinion and preservation and despatch of trace evidences in such cases	K/KH						
FM3.17	Describe and discuss the sexual perversions fetishism, transvestism, voyeurism, sadism, necrophagia, masochism, exhibitionism, frotteurism, Necrophilia	K/KH						
FM3.18	Describe anatomy of male and female genitalia, hymen and its types. Discuss the medico-legal importance of hymen. Define virginity, defloration, legitimacy and its medicolegal importance	K/KH						
FM3.19	Discuss the medicolegal aspects of pregnancy and delivery, signs of pregnancy, precipitate labour superfoetation, superfecundation and signs of recent and remote delivery in living and dead	K/KH						
FM3.20	Discuss disputed paternity and maternity	K/KH						

FM3.21	Discuss Pre-conception and Pre Natal Diagnostic Techniques (PC&PNDT) - Prohibition of Sex Selection Act 2003 and DomesticViolence Act 2005	K/KH						
FM3.22	Define and discuss impotence, sterility, frigidity, sexual dysfunction, premature ejaculation. Discuss the causes of impotence and sterilityin male and female	K/KH						
FM3.23	Discuss Sterilization of male and female, artificial insemination, Test Tube Baby, surrogate mother, hormonal replacement therapy with respect to appropriate national and state laws	K/KH						
FM3.24	Discuss the relative importance of surgical methods of contraception (vasectomy and tubectomy) as methods of contraception in the National Family Planning Programme	K/KH						
FM3.25	Discuss the major results of the National Family Health Survey	K/KH						
FM3.26	Discuss the national Guidelines for accreditation, supervision & regulation of ART Clinics in India	K/KH						
FM3.27	Define, classify and discuss abortion, methods of procuring MTP and criminal abortion and complication of abortion. MTP Act 1971	K/KH						
FM3.28	Describe evidences of abortion - living and dead, duties of doctor in cases of abortion, investigations of death due to criminal abortion	K/KH						
FM3.29	Describe and discuss child abuse and battered baby syndrome	K/KH						
FM3.30	Describe and discuss issues relating to torture, identification of injuries caused by torture and its sequalae, management of torture survivors	K/KH						
FM3.31	Torture and Human rights Describe and discuss guidelines and Protocols of National Human Rights Commission regarding torture	K/KH						
FM3.32	Demonstrate the professionalism while preparing reports in medicolegal situations, interpretation of findings and making inference/opinion, collection preservation and dispatch of biological or trace evidences	SH						
FM3.33	Should be able to demonstrate the professionalism while dealing with victims of torture and human right violations, sexual assaults- psychological consultation, rehabilitation	K/KH/SH						
Topic: : Medical Jurisprudence (Medical Law and ethics)								
FM4.1	Describe Medical Ethics and explain its historical emergence	KH						
FM4.2	Describe the Code of Medical Ethics 2002 conduct, Etiquette andEthics in medical practice and unethical practices & the dichotomy	KH						

FM4.3	Describe the functions and role of Medical Council of India and State Medical Councils	KH						
FM4.4	Describe the Indian Medical Register	KH						
FM4.5	Rights/privileges of a medical practitioner, penal erasure, infamous conduct, disciplinary Committee, disciplinary procedures, warning notice and penal erasure	KH						
FM4.6	Describe the Laws in Relation to medical practice and the duties of a medical practitioner towards patients and society	K/KH						
FM4.7	Describe and discuss the ethics related to HIV patients	K/KH						
FM4.8	Describe the Consumer Protection Act-1986 (Medical Indemnity Insurance, Civil Litigations and Compensations), Workman's Compensation Act & ESI Act	KH						
FM4.9	Describe the medico - legal issues in relation to family violence, violation of human rights, NHRC and doctors	KH						
FM4.10	Describe communication between doctors, public and media	KH						
FM4.11	Describe and discuss euthanasia	KH						
FM4.12	Discuss legal and ethical issues in relation to stem cell research	KH						
FM4.13	Describe social aspects of Medico-legal cases with respect to victims of assault, rape, attempted suicide, homicide, domestic violence, dowry- related cases	KH						
FM4.14	Describe & discuss the challenges in managing medico-legal cases including development of skills in relationship management – Human behaviour, communication skills, conflict resolution techniques	KH						
FM4.15	Describe the principles of handling pressure – definition, types, causes, sources and skills for managing the pressure while dealing with medico-legal cases by the doctor	KH						
FM4.16	Describe and discuss Bioethics	KH						
FM4.17	Describe and discuss ethical Principles: Respect for autonomy, non- malfeasance, beneficence & justice	KH						
FM4.18	Describe and discuss medical negligence including civil and criminal negligence, contributory negligence, corporate negligence, vicarious liability, Res Ipsa Loquitor, prevention of medical negligence and defenses in medical negligence litigations	KH						
FM4.19	Define Consent. Describe different types of consent and ingredients of informed consent. Describe the rules of consent and importance of consent in relation to age, emergency situation, mental illness and alcohol intoxication	KH						

FM4.20	Describe therapeutic privilege, Malingering, Therapeutic Misadventure, Professional Secrecy, Human Experimentation	KH						
FM4.21	Describe Products liability and Medical Indemnity Insurance	KH						
FM4.22	Explain Oath – Hippocrates, Charaka and Sushruta and procedurefor administration of Oath.	KH						
FM4.23	Describe the modified Declaration of Geneva and its relevance	KH						
FM4.24	Enumerate rights, privileges and duties of a Registered Medical Practitioner. Discuss doctor- patient relationship: professional secrecy and privileged communication	KH						
FM4.25	Clinical research & Ethics Discuss human experimentation including clinical trials	KH						
FM4.26	Discuss the constitution and functions of ethical committees	KH						
FM4.27	Describe and discuss Ethical Guidelines for Biomedical Research on Human Subjects & Animals	KH						
FM4.28	Demonstrate respect to laws relating to medical practice and Ethicalcode of conduct prescribed by Medical Council of India and rules and regulations prescribed by it from time to time	SH						
FM4.29	Demonstrate ability to communicate appropriately with media, publicand doctors	KH/SH						
FM4.30	Demonstrate ability to conduct research in pursuance to guidelinesor research ethics	KH/SH						
Topic: Forensic Psychiatry								
FM5.1	Classify common mental illnesses including post-traumatic stress disorder (PTSD)	K/KH						
FM5.2	Define, classify and describe delusions, hallucinations, illusion, lucid interval and obsessions with exemplification	K/KH						
FM5.3	Describe Civil and criminal responsibilities of a mentally ill person	K/KH						
FM5.4	Differentiate between true insanity from feigned insanity	K/KH						
FM5.5	Describe & discuss Delirium tremens	K/KH						
FM5.6	Describe the Indian Mental Health Act, 1987 with special reference to admission, care and discharge of a mentally ill person	K/KH						
Topic: Forensic Laboratory investigation in medical legal practice								
FM6.1	Describe different types of specimen and tissues to be collected both in the living and dead: Body fluids (blood, urine, semen, faeces saliva), Skin, Nails, tooth pulp, vaginal smear, viscera, skull, specimen for histo-pathological examination, blood grouping, HLA Typing and DNA Fingerprinting. Describe Locard's Exchange Principle	K/KH						

FM6.2	Describe the methods of sample collection, preservation, labelling,dispatch, and interpretation of reports	K/KH						
FM6.3	Demonstrate professionalism while sending the biological or trace evidences to Forensic Science laboratory, specifying the required tests to be carried out, objectives of preservation of evidences sent for examination, personal discussions on interpretation of findings	KH/SH						
Topic : Emerging technologies in Forensic Medicine								
FM7.1	Enumerate the indications and describe the principles and appropriate use for: - DNA profiling Facial reconstruction - Polygraph (Lie Detector) - Narcoanalysis, - Brain Mapping, - Digital autopsy, - Virtual Autopsy, - Imaging technologies	K/KH						
Topic : Toxicology: General Toxicology								
FM8.1	Describe the history of Toxicology	K/KH						
FM8.2	Define the terms Toxicology, Forensic Toxicology, ClinicalToxicology and poison	K/KH						
FM8.3	Describe the various types of poisons, Toxicokinetics, and Toxicodynamics and diagnosis of poisoning in living and dead	K/KH						
FM8.4	Describe the Laws in relations to poisons including NDPS Act, Medico-legal aspects of poisons	K/KH						
FM8.5	Describe Medico-legal autopsy in cases of poisoning including preservation and dispatch of viscera for chemical analysis	K/KH						
FM8.6	Describe the general symptoms, principles of diagnosis and management of common poisons encountered in India	K/KH						
FM8.7	Describe simple Bedside clinic tests to detect poison/drug in apatient's body fluids	K/KH						
FM8.8	Describe basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination	K/KH						
FM8.9	Describe the procedure of intimation of suspicious cases or actual cases of foul play to the police, maintenance of records, preservation and despatch of relevant samples for laboratory analysis.	K/KH						
FM8.10	Describe the general principles of Analytical Toxicology and give a brief description of analytical methods available for toxicological analysis: Chromatography – Thin Layer Chromatography, Gas Chromatography, Liquid Chromatography and Atomic AbsorptionSpectroscopy	K/KH						

Topic : Toxicology : Chemical Toxicology								
FM9.1	Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to: Caustics Inorganic – sulphuric, nitric, and hydrochloric acids; Organic- Carboloic Acid (phenol), Oxalic and acetylsalicylic acids	K/KH						
FM9.2	Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Phosphorus, Iodine, Barium	K/KH						
FM9.3	Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Arsenic, lead, mercury, copper, iron, cadmium and thallium	K/KH						
FM9.4	Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Ethanol, methanol, ethylene glycol	K/KH						
FM9.5	Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Organophosphates, Carbamates, Organochlorines, Pyrethroids, Paraquat, Aluminium and Zinc phosphide	K/KH						
FM9.6	Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Ammonia, carbon monoxide, hydrogen cyanide & derivatives, methyl isocyanate, tear (riot control) gases	K/KH						
Topic : Toxicology : Pharmaceutical Toxicology								
FM10.1	Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy,procedures of enhanced elimination with regard to: i. Antipyretics – Paracetamol, Salicylates ii. Anti-Infectives (Common antibiotics – an overview) iii. Neuropsychotoxicology Barbiturates, benzodiazepinsphenytoin, lithium, haloperidol, neuroleptics, tricyclics iv .Narcotic Analgesics, Anaesthetics, and Muscle Relaxants v. Cardiovascular Toxicology Cardiotoxic plants – oleander, odollam, aconite, digitalis Intestinal and Endocrinal Drugs – Insulin	K/KH						

Topic: Toxicology : Biotoxicology								
FM11.1	Describe features and management of Snake bite, scorpion sting,bee and wasp sting and spider bite	K/KH						
Topic: Toxicology : Sociomedical Toxicology								
FM12.1	Describe features and management of abuse/poisoning with following camicals: Tobacco, cannabis, amphetamines, cocaine, hallucinogens, designer drugs & solvent	K/KH						
Topic: Toxicology : Environmental Toxicology								
FM13.1	Describe toxic pollution of environment, its medico-legal aspects & toxic hazards of occupation and industry	K/KH						
FM13.2	Describe medico-legal aspects of poisoning in Workman'sCompensation Act	K/KH						
Topic: Skills in Forensic Medicine & Toxicology								
FM14.1	Examine and prepare Medico-legal report of an injured person withdifferent etiologies in a simulated/ supervised environment	SH/P						
FM14.2	Demonstrate the correct technique of clinical examination in a suspected case of poisoning & prepare medico-legal report in a simulated/ supervised environment	SH						
FM14.3	Assist and demonstrate the proper technique in collecting, preserving and dispatch of the exhibits in a suspected case of poisoning, along with clinical examination	SH						
FM14.4	Conduct and prepare report of estimation of age of a person for medico-legal and other purposes & prepare medico-legal report in a simulated/ supervised environment	KH						
FM14.5	Conduct & prepare post-mortem examination report of varied etiologies (at least 15) in a simulated/ supervised environment	KH						
FM14.6	Demonstrate and interpret medico-legal aspects from examination of hair (human & animal) fibre, semen & other biological fluids	KH						
FM14.7	Demonstrate & identify that a particular stain is blood and identifythe species of its origin	KH						
FM14.8	Demonstrate the correct technique to perform and identify ABO &RH blood group of a person	SH						
FM14.9	Demonstrate examination of & present an opinion after examination of skeletal remains in a simulated/ supervised environment	SH						
FM14.10	Demonstrate ability to identify & prepare medicolegal inference from specimens obtained from various types of injuries e.g. contusion, abrasion, laceration, firearm wounds, burns, head injury and fracture of bone	KH						

FM14.11	To identify & describe weapons of medicolegal importance which are commonly used e.g. lathi, knife, kripan, axe, gandasa, gupti, farsha, dagger, bhalla, razor & stick. Able to prepare report of the weapons brought by police and to give opinion regarding injuries present on the person as described in injury report/ PM report so as to connect weapon with the injuries. (Prepare injury report/ PM report must be provided to connect the weapon with the injuries)	KH						
FM14.12	Describe the contents and structure of bullet and cartridges used & to provide medico-legal interpretation from these	KH						
FM14.13	To estimate the age of foetus by post-mortem examination	KH						
FM14.14	To examine & prepare report of an alleged accused in rape/unnatural sexual offence in a simulated/ supervised environment	KH						
FM14.15	To examine & prepare medico-legal report of a victim of sexual offence/unnatural sexual offence in a simulated/ supervised environment	KH						
FM14.16	To examine & prepare medico-legal report of drunk person in asimulated/ supervised environment	KH						
FM14.17	To identify & draw medico-legal inference from common poisons e.g. dhatura, castor, cannabis, opium, aconite copper sulphate, pesticides compounds, marking nut, oleander, Nux vomica, abrus seeds, Snakes, capsicum, calotropis, lead compounds & tobacco.	KH						
FM14.18	To examine & prepare medico-legal report of a person in police, judicial custody or referred by Court of Law and violation of human rights as requirement of NHRC, who has been brought for medical examination	KH						
FM14.19	To identify & prepare medico-legal inference from histo-pathological slides of Myocardial Infarction, pneumonitis, tuberculosis, brain infarct, liver cirrhosis, brain haemorrhage, bone fracture, Pulmonary oedema, brain oedema, soot particles, diatoms & wound healing	KH						
FM14.20	To record and certify dying declaration in a simulated/ supervisedenvironment	KH						
FM14.21	To collect, preserve, seal and dispatch exhibits for DNA-Finger printing using various formats of different laboratories.	KH						
FM14.22	To give expert medical/ medico-legal evidence in Court of law	KH						

5. Formative Assessment of Integrated Sessions

Note:

1. Formative Assessment of integrated teaching sessions involves assessment of student level of sessional learning.
2. The student shall be given a 15-20 MCQ test at the end of the session. This can be both in the offline and online modes,
3. The grading of the assignment shall be done by the faculty team as follows

Faculty Decision	Grade
Poor content & presentation	1
Below Average content & presentation	2
Average content & presentation	3
Above Average content & presentation	4
Excellent content & presentation	5

No	Title of Assignment	1	2	3	4	5	Initial of Facilitator
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

6. Formative Assessment for Assignments

Note:

1. Formative Assessment involves various methods of which out of class assignments are an important instrument.
2. The structure for the assignment should be clear mentioned at the start. The structure should include an introduction, main body of the assignment and a conclusion if it is an essay work. Illustrations, flow charts, tables and graphs should be part of the submission where ever necessary.
3. Plagiarism should be discouraged.
4. The grading of the same shall be done by the faculty team as follows:
   Scale
   1 : End of Session Assessment <35%
   2 : End of Session Assessment 35-50%
   3 : End of Session Assessment 50-60%
   4 : End of Session Assessment 60-75%
   5 : End of Session Assessment >75%

No	Topic of Integrated Session	1	2	3	4	5	Initial of Facilitator
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

7. Formative Assessment of Self-Directed Learning

Note:

a Formative Assessment of SDL sessions involves assessment of student level of learning through assessment of the synopsis and biblliography

b The student shall submit the same at the end of the session. This can be both in the offline and online modes.

c The grading of the same shall be done by the faculty team as follows:

Scale

Faculty Decision	**Grade**
Poor content & presentation	1
Below Average content & presentation	2
Average content & presentation	3
Above Average content & presentation	4
Excellent content & presentation	5

No	Assigned SDL Topic	1	2	3	4	5	Initial of Facilitator
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

8. Formative Assessment of AETCOM Learning

Note:

1. Formative Assessment of AETCOM sessions involves assessment of student level of learning through DOPS, OSPE sessions
2. The grading of the same shall be done by the faculty team as follows:

1 : End of Session Assessment <35%
2 : End of Session Assessment 35-50%
3 : End of Session Assessment 50-60%
4 : End of Session Assessment 60-75%
5 : End of Session Assessment >75%

No	Assigned AETCOM Topic	1	2	3	4	5	Initial of Facilitator
1							
2							
3							
4							
5							
6							
7							
8							

9. Formative Feedback Record

Note:

1. Feedback should be provided to learners throughout the course so that they are aware of their performance and remedial action can be initiated well in time.
2. The feedbacks need to be structured and the faculty and learners must be sensitized to giving and receiving feedback.
3. The evaluation of tests should be provided to the student within 2 weeks of the test and an opportunity provided to the learners to discuss the results and get feedback on making their performance better.
4. The learner should sign with date whenever they are shown the test records in recognition of their having seen and discussed the performance.
5. The learner Internal assessment marks will not be added to University examination marks and will reflect as a separate head of passing at the summative examination
6. Some suggestions for handling the Feedback process
    a. Start with the learner's agenda for the session
    b. Evaluate the performance of the learner in the previous sessions and outcomes the learner is trying to achieve
    c. Enquire about problems faced by the learner in the process of learning in the classroom, at home and during the assessments.
    d. Encourage the learner to think about goal setting
    e. Encourage self-assessment and self-solving problems
    f. Offer space for the learner to make suggestions, to generate solutions
    g. Be non-judgmental and specific, prevent vague generalisation, provide balanced feedback
    h. Offers suggestions and alternatives, make suggestions rather than prescriptive comments. Be valuing and supportive
    i. Structure and summarise the session to ensure that learner has some specifics to take home.

Formative Feedback Session	1
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	2
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	3
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	4
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	5
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	6
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	7
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	8
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	9
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	10
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	11
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	12
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	13
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	14
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	15
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

Formative Feedback Session	16
Date	

Type of Assessment			
Topic of Assessment			
Feed Back received from Student			
Feed Back given to the Student			
Remedial Action Suggested			
Timeline of Remedial Action			
Signature of Mentor		**Signature of Student**	

10A. Record of Internal Assessment Tests-Theory

No	Topic of Assessment	Type of Assessment	Max Mark	Mark Given	% Mark	Initials of FIC

10B. Record of Internal Assessment Tests-Practical

No	Topic of Assessment	Type of Assessment	Max Mark	Mark Given	% Mark	Initials of FIC

11. ATTENDANCE RECORD

Details	**Percent of Attendance**
Theory	
Practicals	
Self Directed learning	
AETCOM	