

# **Bachelor of Medicine & Bachelor of Surgery (MBBS) Curriculum in Bangladesh**



**Bangladesh Medical & Dental Council (BM&DC)**  
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# Forensic Medicine & Toxicology

## Departmental Objectives:

At the end of the course in Forensic Medicine, the undergraduate student will be able to:

1. To produce competent, compassionate, reflective and dedicated health care professionals according to national goal. Practice medical and medico-legal works as per national goals and objectives.
2. Examine medico-legal cases and prepare reports or certificates in accordance with the law of land.
3. Perform medico-legal postmortem examination and interpret autopsy findings and results of relevant investigations to logically conclude the cause, manner and time since death.
4. Practice medicine ethically with humanly etiquette, discharge duties promptly and execute legal responsibilities of the physician toward his patient, profession, society, state and humanity at large.
5. Prevent and protect himself from medical and legal mishap.
6. Identify and apply relevant legal provisions applicable to the medico-legal and medical practice.
7. Collect, preserve and dispatch specimens in medico-legal case and other concerned materials to the appropriate Government agencies for necessary examination.
8. Diagnose, apply principles of management and understand medico-legal implications of common poisons.
9. Apply general principles of analytical, environmental, occupational and preventive aspects of toxicology.
10. Explain legal provision related to medical and medico-legal practice

## List of Competencies to acquire:

1. Perform ethical medical practice and maintain proper doctor-patient relationship.
2. Capable to give deposition in the court of law as a medical expert.
3. Collect, preserve and dispatch the medico-legally important specimen.
4. Prepare, dispatch and store the proper medical records.
5. Perform proper examination of victim/assailant of physical assault and sexual assault.
6. Perform medico-legal examination (impotency, age determination, sex determination, mental fitness, mental state)
7. Perform medico-legal autopsy and interpret the findings.
8. Prepare certificates and medico-legal reports according to the law of the land.
9. Prepare referral or discharge certificate and death certificate properly and authentically as per ICD-10.
10. Supervise and guide the medical team/practitioner regarding the ethical and legal consequence related to medical issues.
11. Handling dead body ethically and morally.
12. Explain legal provision and guide members related to medical and medico-legal practice
13. Record the dying declaration.
14. Diagnose and declare the death of a person.

The goal of teaching forensic Medicine in the undergraduate medical course is to produce a physician who will be well informed and alerts about his/her medico-legal responsibilities and is capable of being discharging medico-legal duties in medical practice.

Finally, on the basis of above context, those who are concern with Forensic medicine should initiate the thinking to redesign the curriculum where appropriate and give emphasis on those aspects in teaching learning and assessment of the students in under graduate medical education in Forensic Medicine.

## Distribution of teaching - learning hours

Lecture	Tutorial	Practical	Total teaching hours	Integrated Teaching hour for Phase III	Formative		Summative	
					Preparatory leave	Exam time	Preparatory leave	Exam time
100 hrs	45 hrs	40 hrs + 12 days (8 days at mortuary + 4days for court visit, Police Station, OCC visit & DNA/Forensic lab visit)	185hrs + 12 days	20hrs	07 days	12 days	07 days	12 days
<i>Time for integrated teaching, examination, preparatory leave of formative &amp; summative assessment is common for all subjects of the phase</i>								
Related behavioral, professional & ethical issues will be discussed in all teaching learning sessions								

### Teaching-learning methods, teaching aids and evaluation

Teaching methods				Teaching aids	In course evaluation
Large group	Small group	Self learning	Others		
Lecture Integrated teaching	<b>Practical:</b> Demonstration, Exercise,project work <b>Tutorial:</b> Classroom exercise, Question answering session, Brain-storming and discussion, Role play Problem solving exercise	Assignment, self study & self assessment	Video & slide presentation. Community Oriented teaching and learning. 10days in mortuary 6 days in OCC, Court visit, Police station visit & Forensic Lab visit	Multimedia. Camera (Still & Video);OHP), Slide Projector, Black board;Flip chart, Handout / Charts, Reading materials, Paper cutting/Film strip, Textbook Questionnaire, Video film or slide tape	Item exam Card final Term exam Term final exam (Written+SOE+Practical)

### 3<sup>rd</sup> Professional Examination:

#### Marks distribution of Assessment of Forensic Medicine: Total marks – 300

- Written =100 (MCQ+ SEQ+ SAQ+ FA)
  - MCQ-20 (50% SBA+50% MTF),
  - SEQ(Structured Essay Question)-20,
  - SAQ-50 (Short Answer Question) +
  - FA(formative assessment) marks 10
- Structured Oral Examination= 100
- Practical=50, OSPE= 40 & Others (PM report, Injury certificate & Practical assaignment)=10

#### Related Equipments, Aids, Specimen / Models:

- Post-mortem video tape, TV, Cassette Player (available on different events/topics).
- Module on Teaching Health Ethics (WHO, CME and BM&DC)
- Module on mass disaster;
- Sexual Assault examination kit; MR Kit; Microscope; X-ray view box; chomaograph; X-ray film.
- Autopsy instrument set, dummy and photographs showing all major types of injuries and other cases.
- Specimen of poisons and related instruments (Ryles tube, stomach wash tube etc.)
- Weapons: Mechanical weapons, Firearms and ammunitions.

## Learning Objectives and Course Contents in Forensic Medicine & Toxicology

### Section -01: Introduction to Forensic Medicine

and

### Recent advances in Forensic Medicine

Learning Objectives	Contents	Teaching hrs
<p>At the end of session the student will be able to-</p> <ul style="list-style-type: none"> <li>• define forensic medicine, medical Jurisprudence. Differentiate forensic medicine from medical jurisprudence.</li> <li>• explain the attributes and skills of physician for successful medico-legal practice</li> <li>• describe DSD.Explain why combination of all tests are now practiced instead gene based test only.</li> <li>• define and classify consent.Describe the reason of taken consent.Identify the criteria of valid consent.</li> <li>• describe the elements of informed consent.List the indication of informed consent</li> <li>• list the documents constitute medical records.describe the medical and legal purpose of keeping medical record.</li> <li>• describe the reason for identification of dead in disaster.</li> <li>• describe the procedure of identification of deceased in disaster victim(DVI).</li> <li>• describe the legal issues related to age of child.</li> <li>• describe the types,management of sports injury. Explain the medicolegal aspect related to sports medicine.</li> <li>• describe the information provided by exam of a blood&amp; hair</li> <li>• list the blood groups. Describe the Medico-legal issues of blood group.</li> <li>• differentiate hair from fiber, animal hair from human.</li> <li>• define DNA profiling. Describe the method of DNA profiling.</li> <li>• describe the samples collected for DNA profiling (living/dead)</li> <li>• describe the composition of semen; Mention its mL</li> <li>• describe the importance of visit of crime scene and function of forensic lab.</li> </ul>	<p><b>Core</b></p> <ul style="list-style-type: none"> <li>• Introduction to Forensic Medicine&amp; its subdivision; medical jurisprudence</li> <li>• Recent advances in Forensic Medicine <ul style="list-style-type: none"> <li>◦ Emerging issues in sex verification and disorder of sex development(DSD)</li> <li>◦ Medico-legal issues in <b>consent</b>;</li> <li>◦ <b>Euthanasia</b>: legal,social and humanitarian aspect</li> <li>◦ Legal and ethical issues in <b>medical records</b>.</li> <li>◦ Legal issues in End life care &amp; Palliative care</li> <li>◦ <b>Age of child</b>: legal perspective</li> <li>◦ Analytic and Clinical toxicology</li> </ul> </li> <li>• Mass disaster: Introduction, effect, management strategies, disaster victim identification (DVI).</li> <li>• Sports medicine (type, mechanism, management and prevention of sports injuries.</li> <li>• Forensic science: <ul style="list-style-type: none"> <li>◦ <b>Trace evidence</b>(blood stain, blood group, hair, semen);</li> <li>◦ <b>DNA Profiling</b>.</li> </ul> </li> </ul> <p><b>Optional:</b></p> <ul style="list-style-type: none"> <li>• <i>Forensic science</i>: <ul style="list-style-type: none"> <li>◦ criminalistics,</li> <li>◦ crime scene investigation,</li> <li>◦ forensic lab.</li> </ul> </li> <li>• Cybercrime, Basics of ICT.</li> <li>• History and landmarks of Forensic medicine</li> <li>• HLA typing and Bioinformatics</li> </ul>	L-9hrs T-4hrs

## Learning Objectives and Course Contents in Forensic Medicine & Toxicology

### Section-02: Legal aspect (Legal structure; court procedure)

Learning Objectives	Contents	Teaching hours
<p><b>At the end of session the student will be able to-</b></p> <ul style="list-style-type: none"> <li>• define and classify courts Bangladesh.</li> <li>• describe the power and function of session courts and magistrate courts of Bangladesh.</li> <li>• define offence. Give examples of criminal offence.</li> <li>• define and enlist the sentence approved in law. describe death reference.</li> <li>• briefly describe various medico-legal systems .</li> <li>• define summon, evidence, deposition, perjury, dying deposition, witness, and hostile witness.</li> <li>• explain the parts of deposition.</li> <li>• describe the procedure of recording evidence/ deposition in court of law.</li> <li>• list the medical documentary evidences. Explain each type of evidence and witness.</li> <li>• describe the procedure of taken dying declaration.</li> <li>• differentiate dying declaration from dying deposition.</li> <li>• explain the conducts of a doctor as an ideal witness.</li> <li>• prepare medical certificate &amp; report authentically as per expectation of court.</li> </ul>	<p><b>Core:</b></p> <ul style="list-style-type: none"> <li>• Legal structure (courts) of Bangladesh and their jurisdiction: <ul style="list-style-type: none"> <li>○ Supreme Court, High Court, Sessions Court, Additional Sessions Court, Magistrates Court, Metropolitan Magistracy.</li> <li>○ Sentence</li> <li>○ Medico-legal system of Bangladesh; coroners system; Medical examiners system; continental Medico-legal systems.</li> </ul> </li> <li>• Legal (Court) procedures: <ul style="list-style-type: none"> <li>○ Summons: definition, duties</li> <li>○ Evidence, perjury, deposition, parts of deposition, procedure of recording evidence, court questions.</li> <li>○ Witness, types of witness, conduct of doctor in witness box.</li> <li>○ Legal provision related for medical practice</li> </ul> </li> <li>• Medical certification and Medico-legal reports including dying declaration and medical documentary evidence.</li> </ul> <p><b>Additional:</b></p> <ul style="list-style-type: none"> <li>○ The Penal code; CrPc, Evidence act, Organ transplant act, Consumers protection act; MTP act; Workmen's compensation act</li> <li>○ Legal terminology applicable in court procedure.</li> </ul>	L-4hrs T-2hrs

## Learning Objectives and Course Contents in Forensic Medicine & Toxicology

### Section 3: Medical Jurisprudence (Medical ethics)

Learning Objectives	Contents	Teaching hours
<p><b>The student will be able to –</b></p> <ul style="list-style-type: none"> <li>• define ethics, etiquette. Describe etiquettes of a good doctor.</li> <li>• explain the codes of Geneva declaration and its importance.</li> <li>• describe the duties as per International code of medical ethics.</li> <li>• explain the functions of BM&amp;DC. Mention composition of it.</li> <li>• describe the procedure and type of disciplinary action taken by BM&amp;DC.</li> <li>• describe the rights and privileges of a registered medical practitioner.</li> <li>• describe the rights of patients. Mention the duties of patients.</li> <li>• explain the responsibilities and duties of physician.</li> <li>• define professional secrecy and privileged communication.</li> <li>• describe the rules of professional secrecy.</li> <li>• describe the conditions in which the physician can ignore the rules of secrecy.</li> <li>• define Doctor Patient Relationship. Explain elements of it.</li> <li>• explain the skills of effective doctor patient relationship.</li> <li>• describe the issues in relation to DPR.</li> <li>• describe models of doctor patient relationship.</li> <li>• define infamous conduct, covering, dichotomy &amp; malpraxis.</li> <li>• describe the component of infamous conduct with example.</li> <li>• explain the element to be proved in a plea of malpraxis.</li> <li>• differentiate civil from criminal malpraxis.</li> <li>• list the examples of criminal malpraxis and civil malpraxis.</li> <li>• explain the measures to prevent malpraxis.</li> <li>• explain the defenses of a doctor in malpraxis case.</li> <li>• describe therapeutic misadventure, medical maloccurrence, product liabilities.</li> <li>• describe the procedure of dealing ethical dilemma and conflict.</li> <li>• describe the ethical and legal issues in end life care.</li> </ul>	<p><b>Core</b></p> <ul style="list-style-type: none"> <li>• <b>Medical ethics:</b> <ul style="list-style-type: none"> <li>◦ WMA declaration Geneva declaration, international code of medical ethics</li> <li>◦ BMDC: Bangladesh Medical &amp; Dental Council (BMDC), its constituents, functions and disciplinary control. professional death sentence.</li> <li>◦ Right &amp; privilege, Duties. <ul style="list-style-type: none"> <li>➢ Rights and privileges of a doctor.</li> <li>➢ Rights of patients.</li> <li>➢ Duties of a medical practitioner toward patients &amp; society, Professional secrecy &amp; privileged communication.</li> </ul> </li> <li>◦ Doctor-patient relationship; Component; Skills</li> <li>◦ Fairness and Equity; Specific Health Issues; Jargons in the field of medical ethics.</li> <li>◦ Code of Medical ethic of BMDC</li> <li>◦ Malpractice <ul style="list-style-type: none"> <li>➢ Ethical malpractice: Professional Infamous conduct</li> <li>➢ Professional (Medical) Malpractice: civil and criminal Negligence</li> <li>➢ Precautions, prevention &amp; defences against professional negligence.</li> <li>➢ Vicarious liability, Contributory negligence, Corporate negligence; Res ipsa loquitur. Novus actus internen.</li> </ul> </li> <li>◦ Medical maloccurrence; Product liability.</li> <li>◦ Applied ethics and research ethics</li> <li>◦ Soft skill and humanities; End life care; palliative care</li> </ul> </li> </ul> <p><b>Additional:</b></p> <ul style="list-style-type: none"> <li>• Code and law of medical ethics, its history</li> <li>• Tokyo declaration 1975, Helsinki declaration. Other important WMA declaration</li> <li>• Ethical review board. Procedure of ethical review in a research proposal. Dealing ethical dilemma and conflict.</li> <li>• Organ transplant Act. MTP Act. Consumers Protection Act</li> <li>• Legal provision related to medical practice.</li> </ul>	<b>L-10hrs</b> <b>T-04hrs</b>

## Learning Objectives and Course Contents in Forensic Medicine & Toxicology

### Section 4: Forensic Pathology (L-24hrs; T-16hrs)

Learning Objectives	Contents	Teaching hours
<p>The student will be able to-</p> <ul style="list-style-type: none"> <li>• define autopsy. Describe types of autopsy.</li> <li>• describe the objective of medico-legal autopsy.</li> <li>• describe the prerequisite of medico-legal autopsy.</li> <li>• describe the procedure of external and internal examination.</li> <li>• describe cause of negative and obscure autopsy.</li> <li>• describe the procedure of exhumation and second autopsy.</li> <li>• describe the rules of autopsy. Mention the hazards of autopsy.</li> <li>• list the viscera preserved for chemical analysis.</li> <li>• define inquest. Describe the content of an inquest. List the indication of magistrate inquest.</li> <li>• describe the safe working and proper utilization of a modern morgue and laboratory facilities.</li> </ul> <p><b>Additional:</b></p> <ul style="list-style-type: none"> <li>• describe the special procedure in HIV/Corona, custodial death, mutilated and highly decomposed.</li> <li>• describe the methods of dead body preservation.</li> <li>• describe the procedure of autopsy as per UNHCR</li> </ul>	<p><b>Core</b></p> <p><b>01. Autopsy:</b></p> <ul style="list-style-type: none"> <li>• Definition; Type; prerequisite; objective;</li> <li>• Procedure: external, internal (opening body cavity, 3<sup>rd</sup> incision, removal of viscera, internal exam) and laboratory procedure; Report writing; opinion.</li> <li>• Collection and dispatch of specimen.</li> <li>• Inquest report: definition, type, content, magistrate inquest.</li> <li>• Modern morgue.</li> <li>• Exhumation: definition, procedure; importance; 2<sup>nd</sup> autopsy.</li> <li>• Forensic anthropology: Post Mortem exam of mutilated and skeletal remains.</li> </ul> <p><b>Additional:</b></p> <ul style="list-style-type: none"> <li>• Virtual autopsy procedure, Academic autopsy;</li> <li>• Special Autopsy &amp; disposal of radioactive corpse.</li> <li>• Recommendation of autopsy as per human right commission.</li> <li>• Clinical autopsy: Legal formalities, Procedure; Precaution; Importance</li> <li>• Methods of preserving dead body.</li> </ul>	<b>L-5hrs</b> <b>T-4hrs</b>

## Forensic Pathology-contt

<p>At the end of session the student will be able-</p> <ul style="list-style-type: none"> <li>• describe the modes of death. Mention the unnatural death.</li> <li>• give examples of death due to asphyxia, coma and syncope.</li> <li>• describe the changes after death. Mention changes in eyes.</li> <li>• define hypostasis. Differentiate hypostasis from bruise.</li> <li>• define rigor mortis.</li> <li>• explain the mechanism, sequence of appearance and medico-legal importance of rigor mortis.</li> <li>• define putrefaction, adipocere formation &amp; mummification.</li> <li>• describe the mechanism, cardinal sign, external features and medico-legal importance of putrefaction, adipocere formation and mummification.</li> <li>• describe the procedure to estimate time since death.</li> <li>• define sudden death. Describe the cause &amp; ML imp of it.</li> <li>• list the postmortem artifacts. Explain its importance.</li> <li>• describe the autopsy finding to be looked in custodial death.</li> <li>• list the questions to be answered to assess the fatality and liability in anesthetic and operative deaths.</li> </ul>	<p><b>Core:</b></p> <p><b>02. Death</b></p> <ul style="list-style-type: none"> <li>• Mood and manner of death (natural/ unnatural)           <ul style="list-style-type: none"> <li>➢ Asphyxia; syncope; coma</li> </ul> </li> <li>• PM changes after death:           <ul style="list-style-type: none"> <li>➢ Immediate</li> <li>➢ Early change: skin change, eye change, cooling of body, hypostasis, rigor mortis</li> <li>➢ Late change: putrefaction, adipocere formation and mummification</li> </ul> </li> <li>• Post mortem artifacts: Resuscitative artifact, agonal artifact and postmortem artifact.</li> <li>• Sudden death.</li> <li>• Custodial death.</li> <li>• Anaesthetic and operative deaths.</li> </ul> <p><b>Additional:</b></p> <ul style="list-style-type: none"> <li>• Radioactive carbon(<math>C_{14}</math>) estimation</li> <li>• Forensic entomology</li> <li>• Death due to occupational and environmental hazards</li> <li>• Dead body management &amp; handling in disaster</li> </ul>	<b>L-6hrs</b> <b>T-3hrs</b>
<p><b>The student will be able to-</b></p> <ul style="list-style-type: none"> <li>• define infanticide. Describe the signs of live born, stillborn and dead born. Differentiate live born from dead or stillborn.</li> <li>• describe the cause of death in case of infanticide and its modes of death.</li> <li>• describe maceration, spalding sign and umbilical cord change.</li> </ul>	<p><b>Core</b></p> <p><b>03. Infanticide:</b> definition, legal bearing, cause of death, mode of death.</p> <p>a. Dead born(def, spalding sign, maceration)    b. Live born    c. Still born</p> <p><b>Additional:</b></p> <ul style="list-style-type: none"> <li>• Precipitated labor</li> <li>• Cot death, SIDS, foeticide</li> <li>• Death due to neglect</li> </ul>	<b>L-2hrs</b> <b>T-1hrs</b>

## Forensic Pathology-contt

<p><b>The student will be able-</b></p> <ul style="list-style-type: none"> <li>• define hanging, strangulation, drowning, smothering, choking.</li> <li>• describe the types of hanging, strangulation &amp; drowning.</li> <li>• describe postmortem findings of hanging, strangulation and drowning.</li> <li>• describe the cause of death and medico-legal imp of hanging and strangulation.</li> <li>• differentiate hanging from postmortem suspension and strangulation.</li> </ul>	<p><b>Core:</b></p> <p><b>04. Violent asphyxial death:</b></p> <ul style="list-style-type: none"> <li>➢ Hanging: def, types, cause of death, mechanism of death, PM finding, ML imp.</li> <li>➢ Strangulation: definition, type, throatling, ligature strangulation, cause of death, PM finding, ML imp.</li> <li>➢ Drowning: Definition, types, pathophysiology, PM findings, cause of death, ML imp.</li> <li>➢ Suffocation: smothering, choking, and gagging.</li> </ul>	<p>L-5hrs T-3hrs</p>
<p>Students will be able to -</p> <ul style="list-style-type: none"> <li>• describe the medico-legal importance of crush syndrome.</li> <li>• describe the features of traumatic asphyxia.</li> <li>• describe the cause of traffic accident and objectives of autopsy in traffic wound.</li> <li>• explain the injuries sustained by pedestrian, driver, motorcyclist, and passenger.</li> <li>• describe the objectives of autopsy in traffic accident. describe importance of seat belt syndrome.</li> <li>• define forensic ballistic. classify firearms. list the composition of cartridge. Enumerate different cartridges.</li> <li>• differentiate exit from entry firearm wound. Describe the features of suicidal firearm arm injuries.</li> <li>• describe the composition of bomb and effects of bomb blast.</li> <li>• define joule burn. describe complication of electrocution.</li> <li>• describe the cause of death and postmortem features of electrocution.</li> </ul>	<p><b>Core</b></p> <p><b>05. Wound: (L-6hrs; T-3hrs)</b></p> <ul style="list-style-type: none"> <li>• <b>Transportation wound:</b> <ul style="list-style-type: none"> <li>➢ Trauma in RTA; cause, preventive device (helmet, seat belt syndrome);</li> <li>➢ Injuries sustained by pedestrian; driver, motorcyclist; passenger; Crush syndrome.</li> <li>➢ Objectives of autopsy in traffic wounds.</li> </ul> </li> <li>• <b>Firearm and explosives:</b> <ul style="list-style-type: none"> <li>➢ Fire arms, cartridge composition, fire arm injuries (entry and exit) according to range, medico-legal aspect.</li> <li>➢ Bomb blast and explosion</li> </ul> </li> <li>• <b>Electrocution and lightning.</b></li> <li>• <b>Autopsy (mass disaster) protocol</b></li> </ul> <p><b>Additional:</b></p> <ul style="list-style-type: none"> <li>• Transportation: Trauma in Railway disaster; River traffic, Air crush.</li> </ul>	<p>L-6hrs T-2hrs</p>

## Learning Objectives and Course Contents in Forensic Medicine & Toxicology

### Section 5: Clinical Forensic Medicine (L-18hrs; T-12hrs)

Learning Objectives	Contents	Teaching hours
<p><b>At the end of session the student will be able to-</b></p> <ul style="list-style-type: none"> <li>• define &amp; classify death. Differentiate death from suspended animation. Mention the medico-legal importance of somatic death.</li> <li>• mention the signs of brain stem death. Describe the diagnostic criteria of brain death.</li> <li>• describe the criteria to declare death. Define death trance. Prepare death certificate as per ICT-10.</li> </ul>	<p><b>01. Death:</b></p> <ul style="list-style-type: none"> <li>➢ Basic of death: definition, type, ML imp of somatic death; signs of death; cause, manner, mechanism of death; Brain death: types, signs, diagnostic criteria.</li> <li>➢ Declaration of death.</li> <li>➢ Suspended animation; presumption of death</li> </ul>	<b>L-2hrs T-2hrs</b>
<ul style="list-style-type: none"> <li>• define injury, wound, hurt, battery, assault and homicide.</li> <li>• list the components of grievous hurt.</li> <li>• classify homicide with examples. Describe the defense and fabricated wound. Mention the cause of death due to wound.</li> <li>• classify wounds. Describe the consequence of wound.</li> <li>• define, classify and describe the medico-legal importance of abrasion, bruise, laceration, incised and punctured wound.</li> <li>• how to determine the age of wound (abrasion, bruise, incised).</li> <li>• describe the features of incised wound and chop wound.</li> <li>• differentiate incised wound from incised looking wound; suicidal from homicidal cut throat wound; antemortem from postmortem wound; homicidal, suicidal &amp; accidental wound.</li> <li>• describe the types of skull fracture, types of intracranial hemorrhage and brain injuries. Mention whiplash injury.</li> <li>• describe flail chest; describe the effect of chest wound</li> <li>• define domestic violence. Briefly describe features of BBS.</li> <li>• describe Manchausen syndrome; Battered wife syndrome.</li> <li>• define burn, scald. Describe the types, management, complication and cause of death in burn.</li> <li>• define torture. Describe the methods and effects of torture.</li> </ul>	<p><b>02. Wound:</b></p> <ul style="list-style-type: none"> <li>• <b>Medico-legal aspect:</b> injury, wound, hurt, battery; grievous hurt; cause of death due to wound; homicide; defense wound; fabricated wound.</li> <li>• <b>Mechanical wound:</b> abrasion, bruise, laceration, incised wound and puncture wound</li> <li>• <b>Regional injury:</b> <ul style="list-style-type: none"> <li>○ Head injury: Scalp, skull fracture, Intra cranial hemorrhage, brain injuries.</li> <li>○ whiplash injury. Crush syndrome.</li> </ul> </li> <li>• <b>Domestic Violence:</b> Battered Baby syndrome (BBS); Manchausen syndrome; violence against women.</li> <li>• <b>Thermal injury:</b> Heat (Burn scald) and cold.</li> <li>• <b>Torture</b></li> <li>• <b>Neglect and starvation</b></li> </ul> <p><b>Additional:</b> Chest injury, abdominal injury, genital injury and extremity injury.</p>	<b>L-09hrs T-04hrs</b>

## Clinical Forensic Medicine-Contt

Learning Objectives	Contents	Teaching hours
<p><b>The student will be able to-</b></p> <ul style="list-style-type: none"> <li>• explain the medico-legal issues in marriage. describe when marriage become null and void. Outline conditions where a women can demand divorce.</li> <li>• differentiate between true &amp; false virginity, impotency &amp; sterility.describe the causes of impotency &amp; sterility in male or female.Outline the procedure to examine impotency case. describe the medico-legal issues.</li> <li>• describe the prerequisite and procedure of examination of victim or accused of sexual assault.</li> <li>• identify signs of rape and other sexual offences with their medico-legal importance. Describe the complications of rape.</li> <li>• classify hymen. Differentiate fimbriated from ruptured hymen.</li> <li>• describe the genital and extragenital sign of virginity.</li> <li>• describe collection, preservation, and dispatch of swab, blood, stains, hair and body fluid.</li> <li>• describe different sexual deviations</li> </ul>	<p><b>CORE:</b></p> <p><b>03. Forensic aspect of sex:</b></p> <ul style="list-style-type: none"> <li>• Medico-legal aspect related with marriage.</li> <li>• Impotency, sterility; Medico-legal aspect.</li> <li>• Legitimacy; Paternity and maternity.</li> <li>• Hymen:Type, cause of rupture; medico-legal aspect.</li> <li>• Virginity and defloration.</li> </ul> <p><b>Sexual offences:</b></p> <ul style="list-style-type: none"> <li>• Natural: Rape, Adultery, Incest.</li> <li>• Unnatural: sodomy, Lesbianism, Buccal coitus, Bestiality</li> <li>• Investigations: collection &amp; dispatch of specimen (HVS,stain,hair,blood); radiology</li> </ul> <p><b>Medico-legal report preparation:</b> Impotency, fixation of paternity &amp; maternity, report on sexual violence;rape.</p> <p><b>Sexual perversions:</b> sadism, masochism, voyuerism, necrphilia, necrophagia.</p> <p><b>Additional:</b></p> <ul style="list-style-type: none"> <li>• Psychosexual instinct;</li> <li>• legal provisions related.</li> </ul>	<p><b>L-7hrs</b></p> <p><b>T-3hrs</b></p>

## Learning Objectives and Course Contents in Forensic Medicine & Toxicology

### Section 6: Identification

Learning Objectives	Contents	Teaching hours
<p><b>The student will be able to-</b></p> <ul style="list-style-type: none"> <li>• describe the objectives/purpose of identification.</li> <li>• enumerate the traits of identification.</li> <li>• identify those traits that are applicable for living.</li> <li>• describe how to differentiate different race.</li> <li>• explain the technique of sex determination. Describe the ML imp of sex.</li> <li>• describe the medico-legal importance of age. Mention the prerequisite &amp; procedure of age estimation.</li> <li>• explain the role of forensic radiology and forensic odontology in identification.</li> <li>• define dactylography. Describe its type &amp; importance.</li> <li>• define scar. Describe nature &amp; importance.</li> <li>• define trace evidence. Describe the information that could be concluded by blood stain, hair and semen.</li> <li>• determine the cause and nature of death from the trace evidences.</li> <li>• describe the information provided by examination of bite marks.</li> <li>• describe procedure of identification in mass death &amp; skeleton remain.</li> </ul>	<p><b>CORE:</b> <b>Identification:</b></p> <ul style="list-style-type: none"> <li>• Definition, types, objectives, and method of identification.</li> <li>• Identification traits; Identity of living persons &amp; dead bodies.</li> <li>• Race, religion, sex.</li> <li>• Age: medico-legal importance; estimation of age.</li> <li>• Tattoo, scar, stature, mole, birthmark</li> <li>• Stature, occupational marks.</li> <li>• Trace Evidence.</li> <li>• Forensic Dactylography.</li> <li>• Forensic Radiology: introduction, scope and medico-legal issues.</li> <li>• Forensic Odontology: introduction, scope and forensic issues.</li> <li>• Bite marks; Modern technologies used in identification</li> <li>• Identification in mass death &amp; examination of human remains.</li> </ul> <p><b>Additional:</b></p> <ul style="list-style-type: none"> <li>• X-ray identification.</li> <li>• Superimposition. Lip print</li> <li>• Brain fingerprinting;</li> <li>• Lie detector.</li> <li>• Biometrics;retina scan, Iris scan.</li> <li>• Forensic Voice analysis</li> <li>• Questioned document examination</li> <li>• Forensic ballistic</li> </ul>	<b>L-6hrs</b> <b>T-3hrs</b>

## Section 7: Forensic aspect of reproduction

Learning Objectives	Contents	Teaching hours
<p><b>The student will be able to-</b></p> <ul style="list-style-type: none"> <li>• explain the procedure of artificial insemination with their medico-legal importance.describe the medico-legal issues in IVF.</li> <li>• Diagnose pregnancy and delivery with their medico-legal importance.describe the signs &amp; PM findings of pregnancy. describe the signs of recent delivery in living and dead.</li> <li>• define abortion with its type. Describe the method, complication, management, duties and medico-legal importance of criminal abortion. List the indication of therapeutic abortion.</li> <li>• describe medico-legal importance of viable age.</li> </ul>	<p><b>Forensic aspect reproduction:</b></p> <ul style="list-style-type: none"> <li>• Artificial insemination and other artificial methods of conception with medico-legal implication (IVF,cloning).</li> <li>• Surrogated mother &amp; baby.</li> <li>• Pregnancy: Medico-legal importance; Signs of pregnancy&amp; duration. PM finding of pregnancy.</li> <li>• Delivery: signs of recent &amp; remote delivery in living &amp; dead.</li> <li>• Abortion: types, methods, complication, managementandduties of medical practitioner.</li> <li>• Indication of therapeutic abortion. Spontaneous, Artificial (justifiable and criminal abortion).</li> </ul> <p><b>Additional:</b></p> <ul style="list-style-type: none"> <li>• Feticide and viability; IUF death. •MTP act;</li> <li>• Infertility &amp; its medico-legal issues; Invitro Fertilization</li> </ul>	L- 5hrs T-3hrs

## Section -08: Forensic Psychiatry

Students will be able to: <ul style="list-style-type: none"> <li>• define forensic psychiatry. describe the features of mental illness.</li> <li>• how to diagnose a case of mental disorder.</li> <li>• describe how to fix-up civil, criminal and social responsibilities of an insane person.</li> <li>• define delusion, illusion, hallucination &amp; delirium. Describe the types of hallucination and delusion with its medico-legal importance.</li> <li>• Explain McNaughten's rule. Describe the civil &amp; criminal responsibilities.</li> <li>• Explain the role of personality disorder and substance abuse related with crimes and its medicolegal importance.</li> <li>• Differentiate true from false insanity.</li> </ul>	<p><b>CORE:</b></p> <ul style="list-style-type: none"> <li>• Definition of forensic psychiatry. Classification of mental disorder, lucid interval, testamentary capacity.</li> <li>• Important terms of forensic psychiatry. Elements of forensic psychiatry(psychosis, neurosis,delirium, delusion, illusion, hallucination, confabulation, phobia, impulse etc)</li> <li>• Issues of incompetency to stand trial/event.</li> <li>• Criminal responsibility of an insane person.</li> <li>• Personality disorder related with crime.</li> <li>• Aggressive behavior and medicolegal issues</li> <li>• Diminished responsibility.</li> <li>• Civil and Social responsibilities.</li> <li>• Substance abuse affecting mental state</li> <li>• True insanity and feigned insanity:</li> <li>• Rules in relation to forensic psychiatry.</li> </ul> <p><b>Additional:</b></p> <p>Mental health act  Advances in forensic Psychiatry.  Psychosexual instinct</p>	L-4hrs T-2hrs
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## Learning Objectives and Course Contents in Forensic Medicine & Toxicology

### Section-09: Forensic Toxicology

Learning Objectives	Contents	Teaching hours
<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>• define and classify poison.</li> <li>• describe the factors modifying the action of poisons.</li> <li>• describe the duties of a doctor in case of poisoning.</li> <li>• outline the principles of management of acute poisoning.</li> <li>• outline the principles of management of chronic poisoning.</li> <li>• describe the mechanism, FD, features, complication, management, ML imp &amp; postmortem finding of specific poison.</li> <li>• describe post mortem appearances in respective poisoning cases.</li> <li>• describe preventive measure of drug abuse, domestic, insecticides and food poisoning.</li> <li>• define drunkenness, vitriolage.</li> </ul>	<p style="text-align: center;"><b>Toxicology</b></p> <p><b>CORE:</b></p> <p>General aspects of poisoning:</p> <ul style="list-style-type: none"> <li>• Forensic Toxicology. Legal provisions related to Poisons &amp; poisoning.</li> <li>• General aspect of toxicology.</li> <li>• Poisons. Classification of poisons.</li> <li>• Factors modifying the action of poison.</li> <li>• Antidote.</li> <li>• Principles of Management of acute &amp; chronic poisoning.</li> <li>• Prevention of domestic poison &amp; therapeutic poison.</li> </ul> <p><b>Specific Poisoning:</b></p> <ul style="list-style-type: none"> <li>• Corrosive poisons: strong acids and alkalis.</li> <li>• Acetaminophen (paracetamol) poisoning.</li> <li>• Metallic poisons: Lead, Arsenic, Copper and Mercury.</li> <li>• Delirients: Datura, Cannabis.</li> <li>• Somniferous agents: Opium and its derivatives; Hypnotics- Barbiturate.</li> <li>• Inebriates: Alcohol, methyl alcohol.</li> <li>• Petroleum product: Kerosene oil.</li> <li>• Gaseous poisons: Carbon monoxide, Chlorine, CO<sub>2</sub>, Cooking gas (methane).</li> <li>• Insecticides: Organo-phosphorus comp (OPC) and chloro-compound.</li> <li>• Snake Bite.</li> <li>• Drug dependence and drug abuse. Doping.</li> <li>• Food poisoning.</li> <li>• Potka fish(Puffer fish)</li> </ul> <p><b>Additional:</b></p> <ul style="list-style-type: none"> <li>• Spinal poison; Cardiac poison; cocaine;</li> <li>• Organic irritant: ricinus communis; ergot; arbuspessorius; calatropis; cathraides; scorpion.</li> <li>• Clinical toxicology; Environmental toxicology; Occupational toxicology; Analytic toxicology.</li> </ul>	<p style="text-align: center;"><b>L- 20hrs</b></p> <p style="text-align: center;"><b>T- 05hrs</b></p>

## **Learning Objectives and Course Contents in Forensic Medicine & Toxicology**

### **Section-10: PRACTICAL (40hrs)**

<p>The students will be able to:</p> <ul style="list-style-type: none"> <li>• explain the procedures of examination of victim of sexual offences, physical assault.</li> <li>• explain and describe the procedure of postmortem examination.</li> <li>• explain the procedures of determination of age.</li> <li>• describe the suspected poisoning cases and can describe the emergency management of an intoxicated patient in the ward.</li> <li>• prepare injury report, postmortem report; age estimation report, mental state report, death certificate, death note for patients record, Sickness and fitness certificate, discharge certificate,</li> </ul>	<p><b>B. Exercise:</b> (22yrs)</p> <ul style="list-style-type: none"> <li>• Preparation of certificates on following Medico-legal situations: <ul style="list-style-type: none"> <li>◦ Prepare 5-10 Injury report</li> <li>◦ Prepare 10 Postmortem reports</li> <li>◦ Prepare death certificate according to ICD-10 with recording of death note.</li> <li>◦ Prepare medical(fitness &amp; sickness) certificate; discharge certificate; Birth certificate.</li> <li>◦ Prepare report on Insanity.</li> <li>◦ Prepare age estimation report.</li> <li>◦ Prepare report of sexual assault.</li> </ul> </li> <li>• Recoding Dying declaration.</li> <li>• Examine for estimation of the age of a person.</li> <li>• Examine victim of physical assault.</li> <li>• Examine victim of sexual assault.</li> <li>• Examine a drunkenness case</li> <li>• Management of poisoning case</li> <li>• Age estimation from bones by X-rays.</li> <li>• Assignment.</li> </ul>	10hrs
	<p><b>C. Observation</b></p>	
	<p><b>D. Experiment:</b></p> <p><b>E. Role play:</b> Drunkenness Infamous conduct</p> <p><b>F. Presentation</b></p> <p><b>G. Problem solving:</b></p>	

## **Learning Objectives and Course Contents in Forensic Medicine & Toxicology**

### **Section-11: Observation of ten Medico-legal Autopsies (10days)**

<b>Learning Objectives</b>	<b>Contents</b>	<b>Teaching hours</b>
<p>The student will be able to:</p> <ul style="list-style-type: none"> <li>• note the particulars of deceased, case no, Police station reference case/GDE no with date; name &amp; number of the police constable, date of time of dispatch and arrival of dead body.</li> <li>• scrutinize the documentary prerequisites and other prerequisites for medico-legal autopsy</li> <li>• observe and note the changes of death on the dead body.</li> <li>• observe and note the marks in relation to identification.</li> <li>• observe and note the external injuries.</li> <li>• observe and note the external examination.</li> <li>• observe and note the incisions for opening body cavities.</li> <li>• observe and note the findings of internal examination &amp; viscera.</li> <li>• observe and note the procedure of viscera preserved, preservative used, packed &amp; labeled.</li> </ul>	<ul style="list-style-type: none"> <li>• College authority will contact and fix the schedule with suitable time &amp; date to attend.</li> <li>• Transport will be provided by the college authority.</li> </ul>	8 days

## **Learning Objectives and Course Contents in Forensic Medicine & Toxicology**

### **Section-12: Day visit-06**

<b>Learning Objectives</b>	<b>Contents</b>	<b>Teaching hours</b>	
<p>The student will be able to:</p> <ul style="list-style-type: none"> <li>• note the name of the court students attend &amp; other type of courts present here; date</li> <li>• observe the court environment and court etiquette.</li> <li>• observe role of public prosecutor office.</li> <li>• observe the role of judge, public prosecutor &amp; defense lawyer</li> <li>• observe the court procedure and gain a practical experience.</li> <li>• prepare an assignment on your experience of court visit.</li> </ul>	Visit to court.	<ul style="list-style-type: none"> <li>• College authority will contact and fix suitable time &amp; date to attend.</li> <li>• Transport will be provided by the institute.</li> </ul>	One day

<p>The Student will be able to:</p> <ul style="list-style-type: none"> <li>• note the name of police station and the administrative structure</li> <li>• observe the procedure of first information report (FIR); Inquest report; chalan form and general diary entry (GDE).</li> <li>• observe the activities perform in police station.</li> <li>• prepare experience report.</li> <li>• prepare an assaignment on the activities perform in police station.</li> </ul>	<p><b>Visit to police station</b></p>	<ul style="list-style-type: none"> <li>• College authority will contact and fix suitable time &amp; date to attend.</li> <li>• Transport will be provided by the institute.</li> </ul>	<p>One day</p>
<p>The Student will be able to:</p> <ul style="list-style-type: none"> <li>• note the name of hospital and the administrative structure.</li> <li>• observe the victim of sexual assault; victim of domestic violence; victim of battered baby syndrome.</li> <li>• observe the activities of OCC.</li> <li>• prepare experience assaignment.</li> <li>• prepare report on the case you observed here with findings and opinion.</li> </ul>	<p><b>One stop Crisis Center (OCC)</b></p>	<ul style="list-style-type: none"> <li>• College authority will contact and fix suitable time &amp; date to attend.</li> <li>• Transport will be provided by the institute.</li> </ul>	<p>one day</p>
<p>The Student will be able to:</p> <ul style="list-style-type: none"> <li>• note the name of DNA lab or forensic lab.</li> <li>• observe the activities perform by forensic lab.</li> <li>• observe the problems in collection, packing &amp; dispatch of samples for forensic lab.</li> <li>• prepare report on your observation.</li> </ul>	<p><b>DNA lab. Forensic lab.</b></p>	<ul style="list-style-type: none"> <li>• College authority will contact and fix suitable time &amp; date to attend.</li> <li>• Transport will be provided by the institute.</li> </ul>	<p>One day</p>

## Existing summative assessment of Forensic Medicine & Toxicology

Assessment systems and mark distribution.

Components	Marks	Total Marks
<b>Formative assessment</b>	10	10
WRITTEN EXAMINATION MCQ (50% Single Best Answer+50% Multiple True False) SEQ (Structured Essay Question)-20 SAQ (Short Answer question)	20 20 50	90
<b>Practical Examination</b>		100
ORAL EXAMINATION (Structured Oral Examination).		100
<b>Grand Total</b>		<b>300</b>

- There will be separate Answer Script for MCQ.
- Pass marks 60 % in each of theoretical, oral and practical.

### *Example of a “Format” for Integrated Teaching*

Teacher of Anaesthesiology	Teacher of Pharmacology	Teacher of Medicine	Teacher of Forensic Medicine
Hazards of anaesthesia and causes of death, injury and disability.	The Pharmacological aspects of opium and opiods.	Clinical aspects of acute opium and opiods poisoning.	<ul style="list-style-type: none"> <li>□ When and how far anaesthetists are responsible for such death?</li> <li>□ Legal responsibilities of an anaesthetist.</li> <li>□ Forensic aspects of acute opium and opiod poisoning.</li> <li>□ Determination of causes of death due to above poison.</li> <li>□ Methods for determination and confirmation of the poison.</li> </ul>

## TIME SCHEDULE

<b>Sl no</b>	<b>Section</b>	<b>Topic</b>	<b>Lecture</b>	<b>Tutorial</b>
<b>01</b>	<b>Section -01</b>	Introduction to Forensic Medicine and Recent advances in Forensic Medicine	09hrs	04hrs
<b>02</b>	<b>Section -02</b>	Legal structure and court procedure	4 hrs	02hrs
<b>03</b>	<b>Section -03</b>	Medical Jurisprudence and Medical ethics	10hrs	04hrs
		<b>Section -04: Forensic Pathology (L-24hrs; T-13hrs)</b>		
<b>04</b>		Medico-legal Autopsy	05hrs	04hrs
<b>05</b>		Death: Mode, manner; Changes after death; Artifact Sudden death; Custodial death. Anesthetic & surgical death	06hrs	03hrs
<b>06</b>		Infanticide	02hrs	01hrs
<b>07</b>		Violent asphyxia	05hrs	03hrs
<b>08</b>		Wound: Transportation wound; Firearm & explosives; Electrocution & lightning	06hrs	02hrs
		<b>Section-05: Clinical Forensic Medicine (L- 53hrs; T- 22hrs)</b>		
<b>09</b>		Basics of Death	02hrs	02hrs
<b>10</b>		Wound: Mechanical wound; Regional wound; Thermal wound; domestic violence; Torture & Neglect.	09hrs	04hrs
<b>11</b>		Forensic aspect of sex	07hrs	03hr
<b>12</b>	<b>Section -06</b>	Identification	06hrs	03hrs
<b>13</b>	<b>Section -07</b>	Forensic aspect of Reproduction	05hrs	03hrs
<b>14</b>	<b>Section -08</b>	Forensic Psychiatry	04hrs	02hrs
<b>15</b>	<b>Section -09</b>	Forensic Toxicology	20hrs	05hrs
		Total	<b>100hrs</b>	<b>45 hrs</b>
<b>16</b>	<b>Section -10</b>	Practicals (demonstration; exercise; observation; role play; problem solving)	-	<b>40hrs</b>
				<b>85hrs</b>
<b>17</b>	<b>Section -11</b>	<b>Autopsy observation at Mortuary</b>	<b>12 days</b>	
<b>18</b>	<b>Section -12</b>	<b>Court Visit; Thana visit; OCC and forensic lab visit</b>		
			<b>Grand Total :100+45+40=185 hrs + 12 days</b>	

## Item card

		Department of Forensic Medicine & Toxicology.				.....Medical college			
		Name.....				..... Roll..... Batch..... Session.....			
		First Term			Second Term				
		Item no		Date	Mark obtained	Forensic Toxicology	Item no		Date
Introduction & Recent advances	01	<ul style="list-style-type: none"> <li>Introduction to Forensic Medicine;Branches; history &amp; Scope</li> <li>Recent advance in Forensic medicine: DSD; age of child.</li> <li>Consent; Euthanasia;</li> <li>Medical records;</li> </ul>					11	<ul style="list-style-type: none"> <li>Artificial insemination; surrogate mother</li> <li>Pregnancy: MI imp, Sign, PM finding</li> <li>Delivery: MI imp, sign of recent/remote delivery in living &amp; dead; PM finding</li> <li>Abortion: Therapeutic,Justifiable &amp; Criminal abortion.</li> </ul>	
	02	<ul style="list-style-type: none"> <li>Mass disaster, DVI; Sports medicine.</li> <li>Forensic science &amp; Trace evidence: Blood stain Blood group, Hair, Semen;</li> <li>DNA Profiling</li> </ul>					12	<ul style="list-style-type: none"> <li>Forensic Psychiatry: Types of mental disorder;</li> <li>Elements/terms of psychiatry(phobia,delirium,delusion, illusion, hallucination, psychosis,neurosis, impulse etc)</li> <li>Personality disorder; agrasive behavior; true insanity</li> <li>Civil,criminal &amp; social responsibilities;Important rules</li> </ul>	
Legal aspect	03	<p>Law &amp; Legal aspect:</p> <ul style="list-style-type: none"> <li>Legal structure: courts, power &amp; function; penal code; sentence.</li> <li>Legal (court) procedure: Evidence,witness; ideal witness;summon.</li> <li>Certificate &amp; medico-legal reports</li> </ul>					13	<ul style="list-style-type: none"> <li>Principles of medical ethics; Ideal etiquette</li> <li>BMDC; right &amp; privilege of doctor/patient;</li> <li>Duties of doctor /patient;Profesional secrecy</li> <li>WMA declaration (Geneva declaration,others)</li> </ul>	
	04	<ul style="list-style-type: none"> <li>Basics of Death:definition,type, mode, manner, cause, diagnosis, declaration, somatic death, apparent death, brain death</li> <li>Changes of death: immediate,early, Late change</li> <li>Post mortem artifact</li> </ul>					14	<ul style="list-style-type: none"> <li>Doctor patient relationship(def,element,skills,model)</li> <li>Ethical malpractice(infamous conduct);</li> <li>Negligence(Malpraxis):def,element,prevention, defence</li> <li>Doctorine res Ipsa loquitur,contributory, therapeutic misadventure, corporate negligence, ethical dilemma.</li> </ul>	
Clinical forensic medicine & Forensic Pathology	05	<ul style="list-style-type: none"> <li>Sudden death.</li> <li>Custodial death; Anaesthetic and operative deaths.</li> <li>Torture and neglect(BBS, Starvation)</li> </ul>					15	<ul style="list-style-type: none"> <li>General asect of poisoning:Domestic &amp; therapeutic poison.</li> <li>Poison: def,classification,factor,effect, diagnosis</li> <li>Principles of management/objectives.</li> </ul>	
	06	<ul style="list-style-type: none"> <li>Autopsy: def; type;prerequisite, procedure; laboratory procedure, report writing; Special autopsy &amp; autopsy of special situation</li> <li>Modern mortuary; Exhumation; Inquest; MI system</li> <li>Infanticide: Live born, dead born, still born</li> </ul>					16	<ul style="list-style-type: none"> <li>Corrosive poisons: strong acids and alkalis.</li> <li>Acetaminophen(paracetamol)</li> <li>Metallic: Arsenic, Copper, Mercury</li> <li>Insecticide(OPC); kerosene oil</li> </ul>	
	07	<ul style="list-style-type: none"> <li>Define injury, hurt, assault, battery, homicide</li> <li>Medicolegal aspect: grievous hurt, defence wound, cause of death.</li> <li>Mechanical wounds: Abrasion; Bruise;laceration;Incised, Stab wound</li> <li>Regional injury; Transpotation; Thermal and electrical wound</li> </ul>					17	<ul style="list-style-type: none"> <li>Delerient: Dhatura, Cannabis; cocaine</li> <li>Narcotic &amp; hypnotic: Opium; Barbiturate</li> <li>Inebriant:Alcohol, methyl alcohol</li> <li>Sbstance abuse; solvent abuse</li> </ul>	
	08	<ul style="list-style-type: none"> <li><b>Hanging</b> : Definition,type,mechanism,cause of death, postmortem finding; ML imp, difference from PM suspension.</li> <li><b>Strangulation</b>: def,type,cause of death, PM finding,ML imp,.</li> <li><b>Drowning</b>: def, type, pathophysiology; PM finding; cause of death; MI imp, diatom; lab investigation</li> <li><b>Suffocation</b> : smotherinf;chocking; gagging;</li> </ul>					18	<ul style="list-style-type: none"> <li>Cabon monoxide poisoning; war gas.</li> <li>Snake Bite.</li> <li>Food poisoning.</li> <li>Potka fish(Puffer fish)</li> <li>Yellow olander</li> </ul>	
	09	<p>Forensic aspect of sex, sexual offence</p> <ul style="list-style-type: none"> <li>Impotency,sterility; Marriage, divorce; legitimacy;paternity,maternity</li> <li>Hymen, Virginity,defloration</li> <li>Sexual offence: rape,adultery,incest</li> <li>Unnatural sexual offence: sodomy,bestiality,lesbianism</li> <li>Sexual perversion, Sexual instinct</li> </ul>					19	<ul style="list-style-type: none"> <li>Clinical toxicology; Imp &amp; forensic aspect</li> <li>Environmental toxicology;</li> <li>Occupational toxicology;</li> <li>Analytic toxicology</li> </ul>	
	10	<ul style="list-style-type: none"> <li>Identification: trait, objectives, MI imp.</li> <li>Race; Sex; age</li> <li>Dactylography,Tattoo, scar</li> <li>Modern technique, comparism data; superimposition</li> </ul>					20	<ul style="list-style-type: none"> <li>Overall conception regarding forensic medicine</li> <li>Attitude, Interpersonal skill,Extra academic skill</li> <li>Soft skill, management skill, leadership skill</li> </ul>	

## Academic Schedule for Forensic Medicine & Toxicology

## 01. Postmortem report form: Students has to prepare 10 PM report

বাংলাদেশ কর্ম নং- ৫৩৭২

স্টেশন.....

মাসের..... তারিখ.....

### মরণ তন্ত্রের রিপোর্ট

(পি,আর,বি ফরম নং ৫৫, ২৮৪ নিয়ম দ্রষ্টব্য)

নাম, পিপ্র, বয়স ও গোত্র	কোথা হইতে আনা হইয়াছে - আম ও ধানা।	যে কন্ট্যাবল কর্তৃক আনা হইয়াছে তাহার নাম এবং সংস্থা আসা আবশ্যিক - প্রজননের নামসমূহ।	জ্বরশের দিন ও ক্ষণ।	লাশ কাটা মর্গে আনয়নের দিন ও ক্ষণ	পরীক্ষার দিন ও ক্ষণ	পুলিশ কর্তৃক প্রদত্ত তথ্য	যে ব্যক্তি মেডিক্যাল অফিসারের সামনে সনাক্ত করিয়াছেন।	
বিশেষ দ্রষ্টব্য ১- যাবতীয় অঙ্গ-প্রত্যাসের অবস্থা সক্ষ্য কর্মন এবং কোন রোগ অথবা যথমের চিহ্ন না পাইলে খাল্কান লিখুন।								
১	১ - ব্যক্তির অবস্থা - বলবান, শীর্ষ, গলিত ইত্যাদি	২- যথম - অবস্থান, আকার ও ধরণ	৩ - আঘাত - অবস্থান, আকার ও ধরণ	৪ - গলা ব্যবচেদের সময় প্রাপ্ত পর্যায় চিহ্ন, ইত্যাদি				
২	১ - মাথার বহিবারণ - মাথার খুলি এবং মেরুদণ্ডের অঙ্গ খনসমূহ	২ - ঝিল্টী	৩ - মণ্ডিক এবং মেরুদণ্ড রক্ত (যদি কোন রোগ অথবা যথমের নির্দর্শন না ধাকে তাহা হইলে মেরুদণ্ডের নল পরীক্ষার দরকার নাই।)					
৩	১ - প্রকার - পাজর এবং কোমলাহিসমূহ।	২ - ফুসফুস আবরণী	৩ - বাগয়ত্র ও শ্বাসনালী	৪ - ডান ফুসকফুস	৫ - বাম ফুসকফুস	৬ - হকরা ঝিল্টী	৭ - হৃত্পিণ্ড	৮ - রক্ত মালী
৪	১ - প্রকারসমূহ	২ - উদরের উপরের ঝিল্টী	৩ - মুখ, শ্বাসনালী এবং অন্দনালী	৪ - পাকফলী এবং উহার অভ্যন্তরীন বক্সসমূহ।	৫ - স্ফুরাজ ও উহার অভ্যন্তরীন বক্সসমূহ।	৬ - বৃদ্ধাজ্ঞ ও উহার অভ্যন্তরীন বক্সসমূহ।		
৫	৭ - যকৃত	৮ - পৌষ্টি	৯ - মূত্রাশয়সমূহ	১০ - মূত্রালী	১১ - প্রজনন অসম্ভব, বাহিরের এবং ভিতরের।			
৬	১ - যথম	২ - রোগ অথবা বিবরণতা	৩ - অঙ্গিত্র	৪ - হানচুক্তি				
৭	মৃত্যুর কারণ সম্পর্কে মেডিক্যাল অফিসারের মতামত			সিডিস সার্জনের মন্তব্য				
বিঃ দ্রঃ - যথমের ক্ষেত্রে, যথমে হাতার, তআআহত্যার বা অন্য কিছুর আলামত আছে কিনা তাহা লিখুন।				১৯..... সনের ..... মাসের ..... তারিখ				
..... সহকারী সার্জন				..... সিডিস সার্জন				

## 02. Students has to write 6 death certificates according to this form(ICD-10)

Directorate General of Health Services  
International Form of Medical Certificate of Cause of Death

Hospital Name: _____		Admission Reg. No: _____																
Hospital Code No: _____		Name: _____																
Name: _____		Father's Name: _____																
Mother's Name: _____		Address: _____																
House/Road (Name/No.) _____		Village/Area/Town: _____																
Post Office: _____		Post Code: _____																
Upazila/Thana: _____		Union/Ward: _____																
Sex: <input type="checkbox"/> Female <input type="checkbox"/> Male <input type="checkbox"/> Third gender		Religion: <input type="checkbox"/> Islam <input type="checkbox"/> Hindu <input type="checkbox"/> Buddha <input type="checkbox"/> Christian <input type="checkbox"/> Other																
Occupation: <input type="checkbox"/> Service <input type="checkbox"/> Business <input type="checkbox"/> Govt. Service		<input type="checkbox"/> Student <input type="checkbox"/> Housewife <input type="checkbox"/> Retired <input type="checkbox"/> Other																
Date of Birth: _____		Age if DoB is not available: _____																
Date of admission: _____		Time of Admission: _____																
Date of Death: _____		Time of Death: _____																
NID of Deceased/Spouse/Parents NID (< 18 years): _____		<input type="checkbox"/> Deceased <input type="checkbox"/> Spouse <input type="checkbox"/> Parents																
Family Cell Phone number (if available): _____																		
Frame A: Medical data: Part 1 and 2																		
1 Report disease or condition directly leading to death on line a Report chain of events in due to order (if applicable) State the underlying cause on the lowest used line		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2">Cause of death</th> <th>Time interval from onset to death</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">a</td> <td colspan="2">_____</td> </tr> <tr> <td style="text-align: center;">b</td> <td colspan="2">_____</td> </tr> <tr> <td style="text-align: center;">c</td> <td colspan="2">_____</td> </tr> <tr> <td style="text-align: center;">d</td> <td colspan="2">_____</td> </tr> </tbody> </table>		Cause of death		Time interval from onset to death	a	_____		b	_____		c	_____		d	_____	
Cause of death		Time interval from onset to death																
a	_____																	
b	_____																	
c	_____																	
d	_____																	
2 Other significant conditions contributing to death (time intervals can be included in brackets after the condition): _____																		
Frame B: Other medical data																		
Was surgery performed within the last 4 weeks? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown. If yes please specify date of surgery: <input type="checkbox"/> d <input type="checkbox"/> a <input type="checkbox"/> m <input type="checkbox"/> m <input type="checkbox"/> y <input type="checkbox"/> y <input type="checkbox"/> y <input type="checkbox"/> y																		
If yes please specify reason for surgery (disease or condition): _____																		
Was an autopsy requested? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown. If yes were the findings used in the certification? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown.																		
Manner of death: <input type="checkbox"/> Disease <input type="checkbox"/> Assault <input type="checkbox"/> Could not be determined <input type="checkbox"/> Accident <input type="checkbox"/> Legal intervention <input type="checkbox"/> Pending investigation <input type="checkbox"/> Intentional self harm <input type="checkbox"/> War <input type="checkbox"/> Unknown. If external cause or poisoning: <input type="checkbox"/> Date of injury: <input type="checkbox"/> d <input type="checkbox"/> a <input type="checkbox"/> m <input type="checkbox"/> m <input type="checkbox"/> y <input type="checkbox"/> y <input type="checkbox"/> y <input type="checkbox"/> y																		
Please describe how external cause occurred (If poisoning please specify poisoning agent): _____																		
Place of Occurrence of the external cause: <input type="checkbox"/> At home <input type="checkbox"/> Residential <input type="checkbox"/> School, other institution, public administrative area <input type="checkbox"/> Sports and athletics area <input type="checkbox"/> Street and highway <input type="checkbox"/> Trade and service area <input type="checkbox"/> Industrial and construction area <input type="checkbox"/> Farm <input type="checkbox"/> Other place (please specify): <input type="checkbox"/> Unknown.																		
Fetal or Infant Death Multiple pregnancy <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown; Stillborn? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																		
If death within 24h specify number of hours survived: <input type="checkbox"/> h <input type="checkbox"/> h																		
Birth weight (in grams): <input type="checkbox"/> g <input type="checkbox"/> g <input type="checkbox"/> g <input type="checkbox"/> g																		
Number of completed weeks of pregnancy: <input type="checkbox"/> d <input type="checkbox"/> d																		
Age of mother (years): <input type="checkbox"/> y <input type="checkbox"/> y																		
If death was perinatal, please state conditions of mother that affected the fetus and newborn: _____																		
For women of reproductive age Was the deceased pregnant within past year? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																		
If yes, was she pregnant? <input type="checkbox"/> Within the 42 days preceding her death <input type="checkbox"/> Within 43 days up to 1 year preceding her death <input type="checkbox"/> Exact pregnancy timing unknown																		
When she died <input type="checkbox"/> Did the pregnancy contribute to the death? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown																		
Date: <input type="checkbox"/> d <input type="checkbox"/> d <input type="checkbox"/> m <input type="checkbox"/> m <input type="checkbox"/> y <input type="checkbox"/> y <input type="checkbox"/> y <input type="checkbox"/> y		Designated Signature: _____																

- **Hours of Teaching:**

- **Large group**
  - \* Lecture - 100 hours.
- **Small group**
  - \* Practical - 40 hours.
  - \* Tutorial - 45 hours.
  - \* Integrated teaching/ Assignment - 10 hours.

**Total = 195 hours.**

### **Summary of the Forensic Medicine Academic Programme**

	<b>1st Term</b>	<b>2<sup>nd</sup> Term</b>	<b>Total</b>
Lecture/Revision	71 hrs	29 hrs	100 hrs
Practical/ Demonstration/ exercise	27 hrs	13 hrs	40 hrs
Tutorial	35 hrs	10 hrs	45 hrs
Integrated Teaching/ Assignment	5 hrs	5 hrs	10 hrs
8 days for attending mortuary for observation of medico-legal autopsy. 4 days for court visit; PS (Thana), OCC, DNA lab and Forensic lab visit			12days
<b>Total</b>	-----	-----	<b>195 hrs + 12days</b>