



Syllabus
Gyanmanjari Science College
Semester-6 (B.Sc)

Subject: Forensic Medicine-BSCFS16313

Type of course: Major

Prerequisite: Students should have basic knowledge of anatomy, physiology, pathology, and microbiology, along with an understanding of forensic science fundamentals and legal procedures. Good communication skills and awareness of medical ethics are essential.

Rationale: This syllabus bridges medicine and law, training students in autopsy procedures, injury analysis, and determination of death. It builds medico-legal competence, prepares them as expert witnesses, and enables scientific contribution to the justice system and public health.

Teaching and Examination Scheme:

| Teaching Scheme | | | Credits | Examination Marks | | | | | Total Marks |
|-----------------|---|---|---------|-------------------|-----------|-----|-------|-----|-------------|
| CI | T | P | | C | SEE | | CCE | | |
| | | | Theory | | Practical | MSE | LWA/V | ALA | |
| 3 | 0 | 2 | 4 | 75 | 25 | 30 | 20 | 50 | 200 |

Legends: CI-Class Room Instructions; T – Tutorial; P - Practical; C – Credit; SEE - Semester End Evaluation; MSE- Mid Semester Examination; LWA - Lab Work Assessment; V – Viva voce; CCE-Continuous and Comprehensive Evaluation; ALA- Active Learning Activities.

Course Content:

| Unit No | Course Content | Hrs | % Weightage |
|---------|---|-----|-------------|
| 1 | Medical jurisprudence Medical Jurisprudence Definition, aims, concept, fundamental aspects and scope of medical Jurisprudence, Legal procedure in criminal court, Medical evidence and medical witness, Legal aspects of medical practices, Medical negligence, Consent in medical practices. | 10 | 25% |
| 2 | Autopsy Autopsy Objectives of Autopsy, Rules for medico-legal Autopsies, Medico-legal versus Hospital Autopsy, Autopsy report, | 10 | 25% |



| | | | |
|---|---|----|-----|
| | Procedure of Autopsy: laboratory procedure, Second Autopsy, obscure Autopsy, Preservation of dead bodies, Handling of highly infected bodies, Psychological Autopsy, Artifacts. | | |
| 3 | Injuries Types and classification of injuries. Medico legal aspects of wounds: -medical and legal definition of wounds, types of mechanical and regional injuries, aging of wounds, difference between suicidal, homicidal and accidental wounds. | 12 | 25% |
| 4 | Thanatology and Signs of Death Brain/Brainstem Death, Mechanism and Manner of Death, Cause of Death, Modes of Death (Proximate Causes of Death), Anoxia, Sudden Death, Coronary Atherosclerosis, Immediate Changes (Somatic Death), Suspended Animation (Apparent Death), Early Changes (Molecular Death), Algor Mortis, Livor Mortis, Rigor Mortis, Cadaveric Spasm, Decomposition/Putrefaction, Adipocere, Mummification, TSD or Postmortem Interval. | 13 | 25% |

Continuous Assessment:

| Sr. No | Active Learning Activities | Marks |
|--------|---|-------|
| 1 | Case Study Discussions Analyze medico-legal cases related to medical negligence, consent, and courtroom procedures. | 10 |
| 2 | Autopsy Observation/Demonstration Observe or simulate medico-legal autopsy procedure (virtual or live, as per permission). | 10 |
| 3 | Injury Identification Activity Examine sample images/models of wounds and classify them (abrasion, laceration, stab, etc.). | 10 |
| 4 | Simulation Study postmortem changes such as livor mortis, rigor mortis through images/diagram. | 10 |
| 5 | Attendance | 10 |
| Total | | 50 |



List of Practical:

| Sr. No | Descriptions | Unit No | Hrs |
|--------|---|-----------|-----|
| 1 | To identify the types of injuries. | All Units | 03 |
| 2 | To study the teeth from different age group. | | 03 |
| 3 | To examine the bitemarks and their collection. | | 03 |
| 4 | Role play of doctor as medical witness and practice giving expert evidence. | | 03 |
| 5 | Identification and handling of tools used for autopsy. | | 03 |
| 6 | Practice writing of autopsy reports based on hypothetical or real case data. | | 03 |
| 7 | Study of color changes in bruises (photographs/charts) and timing of scab formation. | | 03 |
| 8 | Drawing injury diagrams and recording findings as in medico-legal case sheet. | | 03 |
| 9 | Differentiating between homicidal, suicidal, and accidental injuries through case studies. | | 03 |
| 10 | Study of Decomposition Stages – Through preserved specimens, photographs, or charts (putrefaction, adipocere, mummification). | | 03 |
| | | Total | 30 |

Suggested Specification table with Marks (Theory):75

| Distribution of Theory Marks (Revised Bloom's Taxonomy) | | | | | | |
|--|--------------------|----------------------|--------------------|----------------|-----------------|---------------|
| Level | Remembrance (R) | Understanding (U) | Application (A) | Analyze (N) | Evaluate (E) | Create (C) |
| Weightage | 30% | 40% | 30% | 00 | 00 | 00 |

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.



Course Outcome:

| | |
|---|--|
| After learning the course the students should be able to: | |
| CO1 | Explain the legal framework governing medical practice, medical evidence, and medico-legal responsibilities of practitioners. |
| CO2 | Describe and perform the systematic procedure of medico-legal autopsy, including documentation and preservation of evidence. |
| CO3 | Identify, classify, and interpret different types of injuries, and differentiate between homicidal, suicidal, and accidental wounds. |
| CO4 | Analyze postmortem changes, estimate time since death, and determine manner and cause of death scientifically. |

Instructional Method:

The course delivery method will depend upon the requirement of content and need of students. The teacher in addition to conventional teaching method by black board, may also use any of tools such as demonstration, role play, Quiz, brainstorming, MOOCs etc.

From the content 10% topics are suggested for flipped mode instruction.

Students will use supplementary resources such as online videos, NPTEL/SWAYAM videos, e-courses, Virtual Laboratory

The internal evaluation will be done on the basis of Active Learning Assignment

Practical/Viva examination will be conducted at the end of semester for evaluation of performance of students in laboratory.

Reference Books:

- [1] Apurba Nandi, Principals of forensic medicine, including toxicology, NCBA.
- [2] Parikh's textbook of medical jurisprudence, forensic medicine and toxicology, CBS, latest ED. BV Subrahmanyam .
- [3] The Essentials of Forensic Medicine & Toxicology by KS Narayan Reddy
- [4] Textbook of Forensic Medicine & Toxicology by V V Pillay.

