



# FORENSIC MEDICINE/TOXICOLOGY STUDY GUIDE

This Study guide of the module/course outlines the key components and areas for the facilitation of the students.

Department of Medical Education

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## Vision and Mission of KGMC

### Khyber Medical University: Vision



Khyber Medical University will be the global leader in health sciences academics and research for efficient and compassionate health care.

### Khyber Girls Medical College: Vision



Khyber Girls Medical College will promote health care leaders that are critical thinker, ethical, research oriented, culturally and professionally competent

### Khyber Girls Medical College: Mission



To develop competent health care leaders by ensuring appropriate policies, procedures which reflect ethical, cultural, community orientated and evidence based practices to achieve best possible health outcomes for society at large.

## Curriculum Committee KGMC

### Chair:

Professor Dr.Zahid Aman , Dean KGMC.

### Co-Chair:

Dr. Sabina Aziz, Associate Dean KGMC.

### Clinical Sciences:

- Dr Mohammad Noor Wazir ,Department of Medicine KGMC/HMC
- Dr. Said Amin Department of Medicine KGMC/HMC.
- Dr. Sofia Iqbal, Department of Ophthalmology KGMC/HMC.
- Dr. Ghareeb Nawaz Department of ENT KGMC/HMC.
- Dr. Bushra Rauf Department of Gynae KGMC/HMC.
- Dr. Jamshed Alam Department of Surgery KGMC/HMC.
- Dr. Ambreen Ahmad, Department of Pediatrics KGMC/HMC.
- Dr. Ain-ul-Hadi Department of Surgery KGMC/HMC.
- Dr. Fawad Rahim Department of Medicine KGMC/HMC.

### Behavioral Sciences:

- Dr. Ameer Abbas Department of Psychiatry KGMC/HMC.

### Medical Education

- Dr. Naheed Mahsood, Department of Medical Education, KGMC.

- Dr. Naveed Afzal Khan, Department of Medical Education, KGMC.
- Dr. Onaiza Nasim , Department of Medical Education, KGMC

**Basic Sciences:**

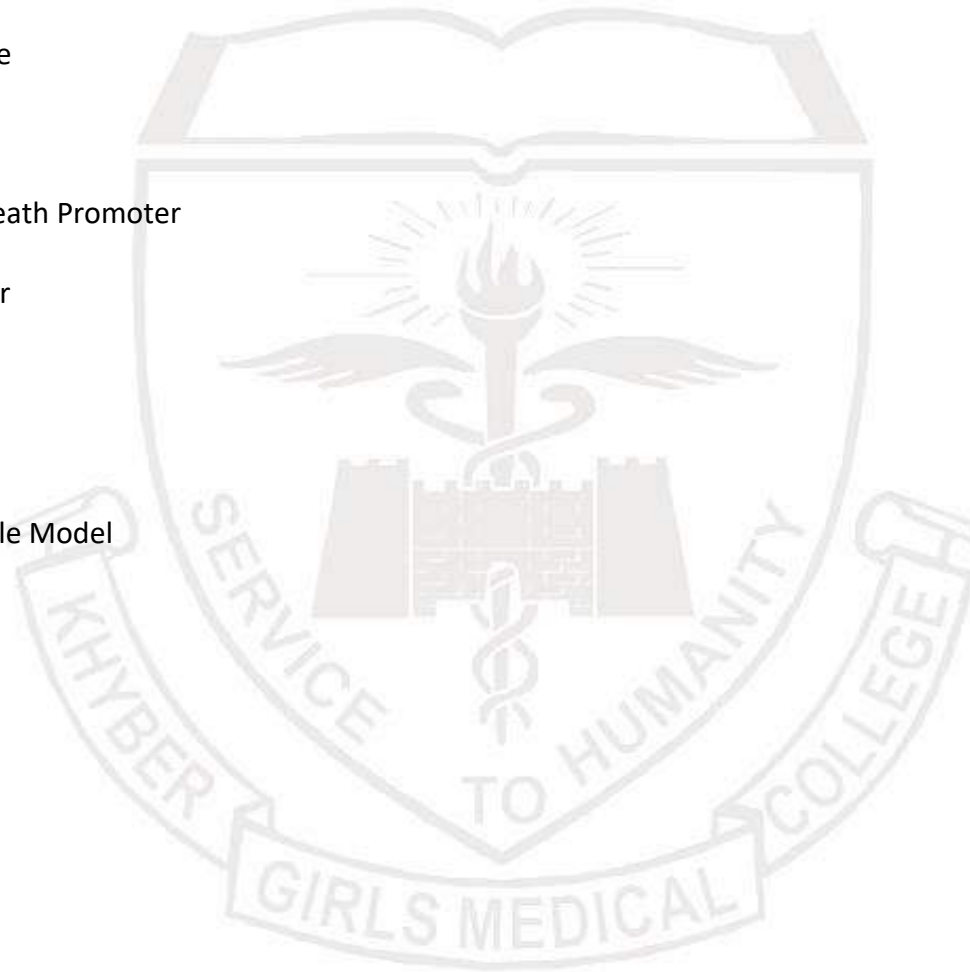
- Dr. Khalid Javed Department of Pathology, KGMC.
- Dr. Zubia Shah Department of Physiology, KGMC.
- Dr. Amin-ul-Haq Department of Biochemistry, KGMC.
- Dr. Naheed Siddique Department of Forensic Medicine, KGMC.
- Dr. Shams Suleman Department of Pharmacology, KGMC.
- Dr. Raheela Amin Department of Community Medicine, KGMC.
- Dr. Shahab-ud-Din, Department of Anatomy, KGMC.



## Outcomes of the curriculum:

The outcomes of the curriculum of MBBS According to the PMDC are as follows

- Knowledgeable
- Skilful
- Community Health Promoter
- Problem-solver
- Professional
- Researcher
- Leader and Role Model



## **KNOWLEDGE**

By the end of five year MBBS program the KGMC student should be able to;

1. Acquire a high level of clinical proficiency in history taking, physical examination, differential diagnosis, and the effective use of medicine's evolving diagnostic and procedural capabilities including therapeutic and palliative modalities
2. Manage the common prevalent diseases in community
3. Identify the common medical emergencies
4. Develop plan for prevention of common community diseases
5. Formulate a referral plan
6. Compose a prescription plan

## **PSYCHOMOTOR**

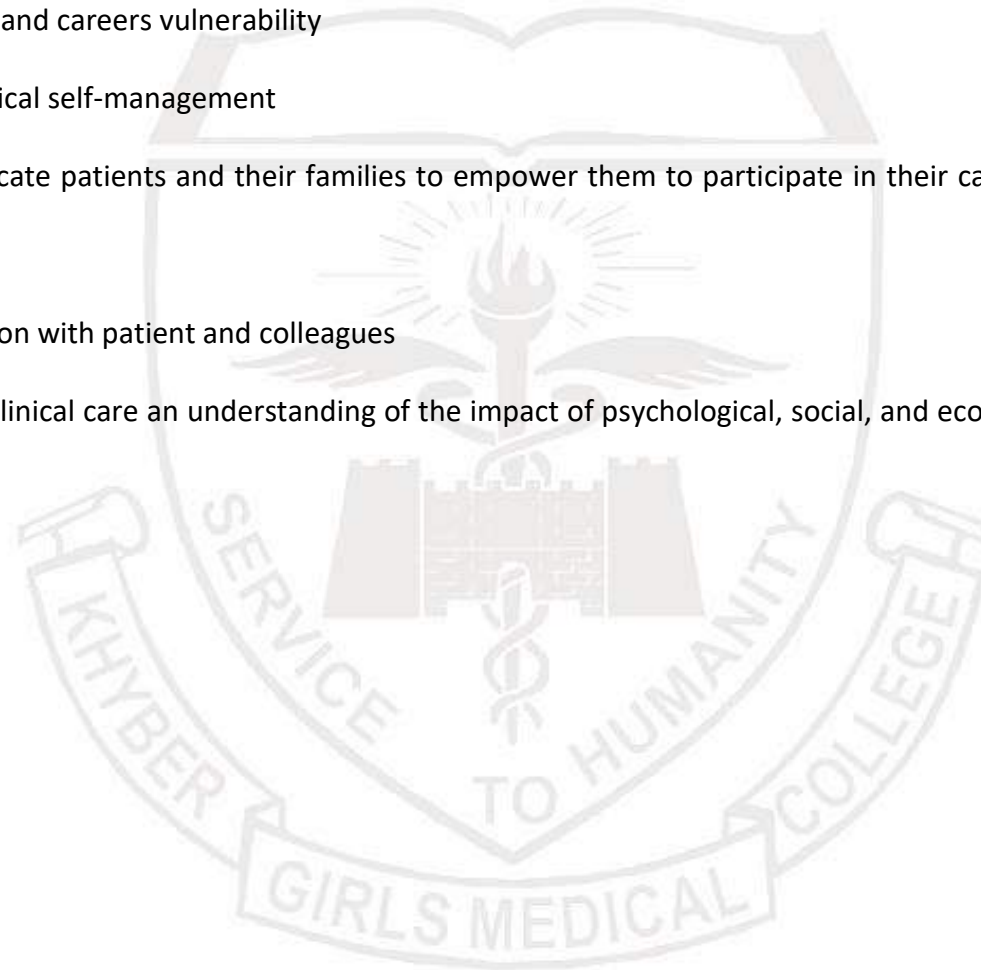
By the end of five year MBBS program the KGMC student should be able to;

1. Demonstrate the ability to perform the disease specific relevant examination
2. Respond to common medical emergencies
3. Master the skill of first aid
4. Perform BLS
5. Apply the best evidenced practices for local health problems

## **AFFECTIVE**

By the end of five year MBBS program the KGMC student should be able to

1. Relate to patient and caregivers vulnerability
2. Demonstrate ethical self-management
3. Counsel and educate patients and their families to empower them to participate in their care and enable shared decision-making.
4. Display compassion with patient and colleagues
5. Demonstrate in clinical care an understanding of the impact of psychological, social, and economic factors on human health and disease

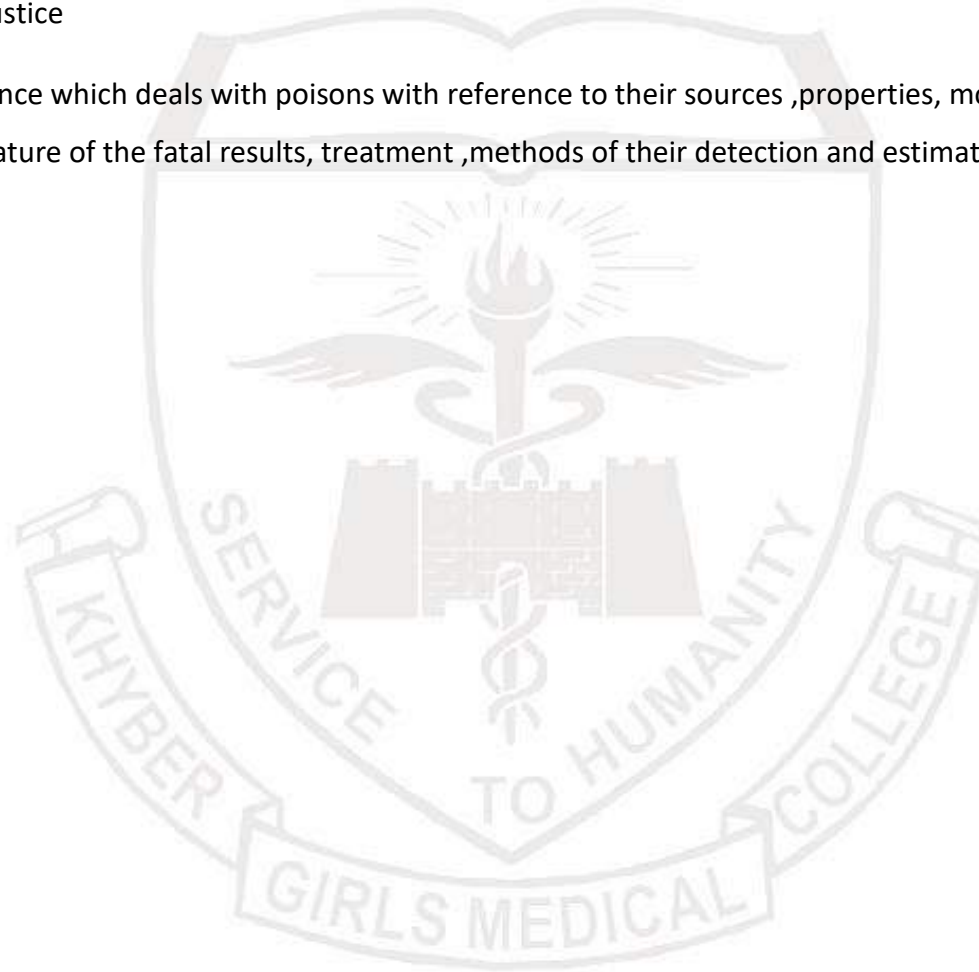




## Introduction to the Forensic medicine and Toxicology

Forensic medicine is branch of medicine which deals with the application of the principals of medical knowledge to the purpose of law and to furthering of justice

Toxicology is the science which deals with poisons with reference to their sources ,properties, mode of action ,symptoms which they produce, lethal dose, nature of the fatal results, treatment ,methods of their detection and estimation, and autopsy findings.



## General Learning Outcomes of Course

By the end of this module the students should be able to;

### Knowledge

- Describe the stages and medico legal aspects of death
- Discuss mode, manner, cause and mechanism of death
- Explain sudden death, its various causes and medico legal significance
- Describe maceration and post-mortem artefacts
- Discuss medical certification of the cause of death
- Identify the medico legal systems of the world
- Describe mechanical injuries and their medico legal aspects.
- Discuss organization of law courts and their functions
- Explain rules for doctors attending the courts
- Identify the features of International Code of Medical Ethics
- Define professional misconduct
- Discuss food poisoning and chemical poisoning

### Skills

- Identify blood stain examinations
- Compare differences between human and animal blood under microscope
- Illustrate collection and preservation and sampling of blood stains
- Examination of Semen, saliva & urinary stains
- Examination of Hair

Medico legal examination of rape, sodomy victim, injured person

Finger printing

Gastric lavage

Examination of injuries and fire arm patients

Perform autopsy /post mortem

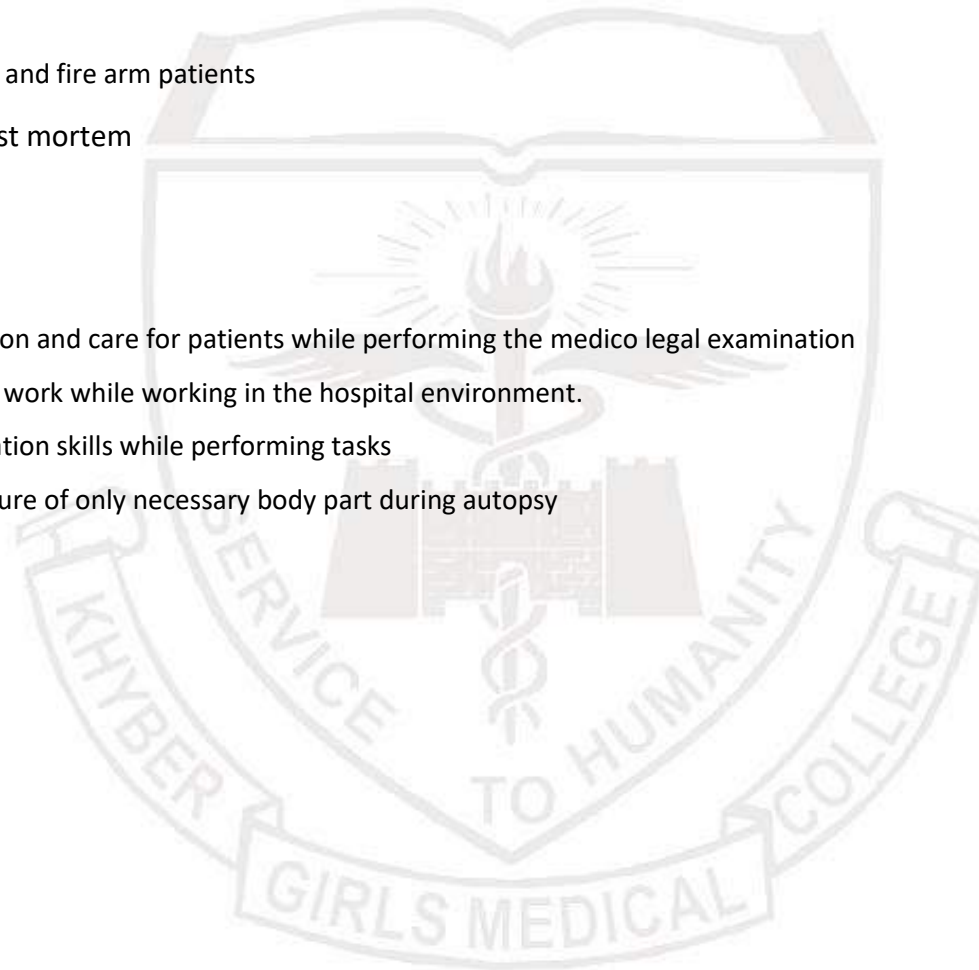
### **Attitude**

Demonstrate compassion and care for patients while performing the medico legal examination

Demonstrate the team work while working in the hospital environment.

Show good communication skills while performing tasks

Show respect by exposure of only necessary body part during autopsy



**Table of specification**

<b>SUBJECT: FORENSIC MEDICINE AND TOXICOLOGY</b>									
<b>#</b>	<b>TOPIC</b>	<b>LEARNING OBJECTIVES</b>	<b>DOMAIN *1</b>	<b>TEACHING STRATEGY</b>	<b>TEACHER</b>	<b>TIM E</b>	<b>VENUE</b>	<b>ASSESSME NT STRATEGY</b>	<b>Reference</b>
1	Death	-Define thanatology and death  -Describe the stages and medico legal aspects of death  -Discuss mode, manner, cause and mechanism of death  -Explain sudden death, its various causes and medico legal significance  -Discuss apparent death and its causes	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
2	Signs of death	-Identify Immediate, early and late signs of death  -Discuss cooling of the body	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence

		<p>after death</p> <p>-Describe postmortem lividity with reference to its usefulness in medico legal work</p>							<p>and Toxicology.</p> <p>Principles and Practice of . Forensic Medicine by Nasib R Awan</p>
3	Early changes after death	<p>-Define rigor mortis</p> <p>-Explain the circumstances which modify its onset and duration</p> <p>-Identify the conditions which simulate rigor mortis</p> <p>-Describe the changes in the eyes after death</p>	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
4	Late changes after death	<p>Define putrefaction</p> <p>Explain the mechanism of its development</p> <p>Describe in sequence the changes that occur in a dead body undergoing putrefaction</p> <p>Discuss putrefaction in</p>	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by</p>

		water							Nasib R Awan
5	Modified late changes after death	<p>Explain the process of adipocere formation</p> <p>Describe the development and medico legal significance of mummification</p> <p>Identify postmortem chemical changes in blood, vitreous humor and cerebrospinal fluid</p>	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
6	Medico-legal systems of the world	<p>Describe maceration and post-mortem artefacts</p> <p>Discuss medical certification of the cause of death</p> <p>Identify the medico legal systems of the world</p>	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
7	Mechanical injuries 1 abrasions	<p>Differentiate between hurt, injury and wound</p> <p>Classify injuries</p> <p>Define abrasions</p>	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p>

		<p>Describe various types of abrasions and its medico legal significance</p> <p>Determine the age of abrasion</p> <p>Differentiate between antemortem and postmortem abrasions</p>							Principles and Practice of Forensic Medicine by Nasib R Awan
8	Mechanical injuries 2 bruise	<p>Define and classify bruise</p> <p>Describe the characteristics and factors modifying the appearance of bruise</p> <p>Determine the age of bruise</p> <p>Differentiate between</p> <p>1) antemortem and postmortem bruise and, 2) bruise and postmortem lividity</p> <p>Explain the medicolegal aspects of bruise</p>	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
9	Mechanical	Define and classify	C	LGF	Dr Anwar Ul	1 hr.	3 <sup>rd</sup> year	MCQs,	Parikh's

	injuries 3 lacerations	lacerations  Describe their characteristics  Explain the medicolegal aspects of lacerations  Define incised wound  Describe its characteristics and medicolegal aspects			Haq		lecture theatre	SEQs, OSPE	textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
10	Mechanical injuries 4 stab wound	Explain hesitation cuts and chop wounds  Define stab wound Describe its characteristics and medicolegal significance  Discuss defense wounds, self-inflicted wounds and injury patterns	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
11	Cause of death in wounding	Explain assault, offence, homicide and suicide  Enumerate the immediate and delayed causes of death in wounds of varied	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.



		nature and  Discuss their medicolegal implications							Principles and Practice of Forensic Medicine by Nasib R Awan
12	Age of wound	Determine the age of scar and fractured bone  Describe the histochemical timing of the wounds  Differentiate between ante mortem and post mortem wounds	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
13	Law & law courts	Define law  Describe its types  Discuss organization of law courts and their functions  Explain rules for doctors attending the courts	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
14	Medical	Define evidence	C	LGF	Dr Anwar Ul	1 hr.	3 <sup>rd</sup> year	MCQs,	Parikh's

	evidence	Describe its types  Identify the stages of evidence in court  Discuss principles of evidence  Explain dying deposition and dying declaration			Haq		lecture theatre	SEQs, OSPE	textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
15	Legal procedures	Describe criminal justice  Explain general presumptions in law  Identify general exceptions in the law  Explain elements of common law torts  Define zina, zina bil jabr, sodomy & general legal definitions	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
16	Legal aspect of medicine	Recognize the systems of medical practice  Identify the statute laws of	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence

		allopathic system  Describe dangerous drug rules							and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
17	PM&DC	Explain the constitution of PM&DC  Describe functions of PM&DC  Identify the privileges and obligations of registered medical practitioner	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
18	Professional misconduct	Identify the features of International Code of Medical Ethics  Define professional misconduct  Describe the situations in which doctor may fall prey to professional misconduct Explain patient's and	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by

		<p>medical practitioner's obligations in relation to medical treatment</p> <p>Discuss the conditions necessary for valid contract</p>							Nasib R Awan
19	Medical treatment of mental illness	<p>Describe medical treatment of mental illness</p> <p>Identify the procedure for voluntary admission &amp; temporary reception of mentally ill person</p> <p>Explain reception order &amp; discharge of mentally sick</p>	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
20	Consent and negligence	<p>Determined the role of consent</p> <p>Describe various types of consent</p> <p>Explain the procedure of taking consent</p> <p>Define medical negligence &amp; Res Ipsa Loquitur</p> <p>Identify its various types</p>	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>

		Discuss the scope of medical negligence							
21	Professional secrecy & medical documentation	<p>Explain professional secrecy</p> <p>Describe privilege communication</p> <p>Identify different types of medical documents</p>	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
22	Hurt	<p>Define injury, wound and hurt</p> <p>Classify hurt according to body part involved &amp; manner of infliction of hurt</p> <p>Classify criminal abortion</p> <p>Identify various types of suicide</p>	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
23	Euthanasia	<p>Classify culpable homicide</p> <p>Describe euthanasia and its</p>	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical

		types  Identify various types of sexual indulgence  Enlist the grounds for dissolution of marriage							Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
24	Inquest procedures	Define inquest  Describe its types  Explain the procedure of police inquest  Tabulate the differences between coroner's, police and magistrate inquest	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
25	Medical Witness	Define summon, conduct money, perjury  Describe witness  Explain different kinds of witnesses and their functions  Discuss novus actus	C	LGF	Dr Anwar Ul Haq	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic

		interveniens, therapeutic misadventure and vicarious responsibility							Medicine by Nasib R Awan
26	Personal Identity	<ul style="list-style-type: none"> <li>-Define identification</li> <li>-Describe partial and complete identification</li> <li>-Appraise different methods of establishing personal identity</li> <li>-Describe medico legal significance of personal identity</li> <li>-Enumerate parameters of identification</li> </ul>	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
27	Age assessment	<ul style="list-style-type: none"> <li>-Describe determination of age for the purpose of identification</li> <li>-Describe/ assess the role of teeth and ossification centers in determining different ages</li> <li>-Describe medico legal importance of different ages</li> </ul>	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>

28	Sex determination	<p>-Describe methods of determining sex in normal and in doubtful cases</p> <p>-Describe/ assess M/L Importance in determining sex for establishing identity</p> <p>-Enumerate intersex states</p> <p>- Differentiate between male and female skeleton</p>	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
29	Races in the world and dactylography	<p>Enumerate different races in the world and discuss their salient features</p> <p>Describe racial indices of different races</p> <p>Identify role of dactylography in establishing personal identity</p> <p>Describe different types of finger prints</p>	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
30	Identification in mass disaster	Discuss the role of DNA fingerprinting in establishing personal	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical



		<p>identity</p> <p>Identify role of foot prints, tattoo marks and scars in identification</p> <p>Describe identification in mass disaster</p> <p>Describe role of x-ray in identification</p>							<p>Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
31	Examination of Blood stains	<p>Describe and classify blood group systems</p> <p>Appraise M/L importance and application of blood group systems</p> <p>Identify blood stain examinations</p> <ul style="list-style-type: none"> <li>• Physical</li> <li>• Chemical</li> <li>• Physio-chemical</li> <li>• Microscopic</li> <li>• Spectroscopic</li> <li>• Immunological</li> <li>• Enzymatic</li> </ul> <p>Compare differences between human and animal</p>	p	SGD	Dr Faiza Nadeem	2 hrs.	Demonstration room	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>

		blood under microscope  Illustrate collection and preservation and sampling of blood stains							
32	Examination of Semen, saliva & urinary stains	Describe composition and properties of seminal fluid  Illustrate collection, preservation and sampling of seminal, salivary, urine, fecal and milk stains  Identify seminal, salivary, urine, fecal and milk stains examination: <ul style="list-style-type: none"> <li>• Physical</li> <li>• Chemical</li> <li>• Microscopic</li> <li>• Electrophoretic</li> <li>• Species origin</li> </ul>	p	SGD	Dr Faiza Nadeem	2 hrs.	Demonstration room	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
33	Examination of Hair	Discuss M/L examination of hair  Illustrate following examination of hair under microscope: <ul style="list-style-type: none"> <li>• Nature</li> <li>• Source</li> </ul>	p	SGD	Dr Faiza Nadeem	2 hrs.	3 <sup>rd</sup> year demonstration room	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and

		<ul style="list-style-type: none"> <li>• Identification</li> <li>• Human / animal</li> </ul> <p>Illustrate collection and preservation of hair sample</p>							Practice of Forensic Medicine by Nasib R Awan
34	Somniferous poisons (opioids)	<p>Explain opioids</p> <p>Describe their general characteristics</p> <p>Enumerate different forms of opioids</p> <p>Identify signs, symptoms, fatal dose, fatal period in case of poisoning</p> <p>Describe differential diagnosis of opium poisoning</p> <p>Explain opium addiction</p> <p>Describe treatment</p> <p>Identify postmortem findings and medico legal aspects of poisoning</p> <p>Discuss heroin poisoning</p>	c	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>

35	Drug dependence	<p>Define and explain</p> <ul style="list-style-type: none"> <li>• Addictive drugs</li> <li>• Drug</li> <li>• Drug abuse</li> <li>• Habituation</li> <li>• Hypnotics</li> <li>• Narcotics</li> <li>• Physical dependence</li> <li>• Psychological dependence</li> <li>• Psychotropic drugs</li> <li>• Sedatives</li> <li>• Stimulants</li> <li>• Tolerance</li> <li>• Drug abuse death</li> </ul>	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
36	CNS stimulants (amphetamine and cocaine)	<p>Define stimulants</p> <p>Classify stimulants</p> <p>Discuss mechanism of action of stimulants</p> <p>Discuss signs, symptoms fatal dose and fatal period of amphetamine poisoning</p> <p>Explain treatment of</p>	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>

		<p>amphetamine poisoning</p> <p>Illustrate treatment and M/L importance of amphetamine poisoning</p> <p>Discuss signs, symptoms, fatal dose and fatal period of cocaine poisoning</p> <p>Illustrate treatment and M/L importance of cocaine poisoning</p> <p>Explain chronic cocaine poisoning</p>							
37	Inebriant poisons 1	<p>Describe different types of alcohol</p> <p>Describe salient features of ethyl alcohol poisoning</p> <p>Illustrate treatment and postmortem appearance in case of death from ethanol poisoning</p> <p>Explain its M/L significance</p>	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>

38	Inebriant poisons 2	Describe chronic alcohol poisoning (addiction)  Define drunkenness  Illustrate lab tests for diagnosis of alcohol poisoning	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
39	Agrichemical poisons	Identify organophosphorus compounds  Describe their mechanism of action  Illustrate poisoning by these compounds  Discuss its fatal dose and fatal period  Illustrate medical treatment  Describe postmortem appearance in case of death by these compounds	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan

		Describe M/L significance							
40	Sexual jurisprudence- impotence and sterility	<p>Define</p> <ul style="list-style-type: none"> <li>• Impotence</li> <li>• Sterility</li> <li>• Fertility</li> <li>• Frigidity</li> </ul> <p>Evaluate procedure of examining and certifying cases of impotence and sterility</p> <p>Discuss causes of impotence and sterility in male</p> <p>Discuss causes of impotence and sterility in females</p> <p>Define and Discuss</p> <ul style="list-style-type: none"> <li>• sterilization</li> <li>• artificial insemination</li> <li>• test – tube baby</li> <li>• surrogate mother</li> </ul>	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
41	Sexual jurisprudence- virginity, pregnancy	<p>Describe signs of virginity</p> <p>Identify different types of hymen</p>	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence

	and delivery	<p>Categorize true and false virgins</p> <p>Define pregnancy</p> <p>Illustrate presumptive, probable and conclusive signs of pregnancy</p> <p>Identify signs of pregnancy in dead</p> <p>Explain its M/L imp</p> <p>Define delivery</p> <p>Identify signs of recent delivery in living and dead</p> <p>Identify signs of remote delivery in living and dead</p> <p>Explain M/L importance of delivery</p>							and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
42	Sexual jurisprudence - legitimacy	<p>Define legitimacy</p> <p>Describe super fecundation and superfoetation</p> <p>Identify the privileges and</p>	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.



		obligations of registered medical practitioner  Illustrate M/L imp of legitimacy							Principles and Practice of Forensic Medicine by Nasib R Awan
43	Infanticide	Define foeticide & neonaticide  Illustrate procedure of autopsy on infants and still born  Describe its M/L imp  Compare between dead born child and still born child  Reframe the criteria to establish viability of the child at postmortem  Conclude length of survival of a child after birth	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
44	Delivery medicolegal aspects and cot deaths	Describe <ul style="list-style-type: none"> <li>• Precipitate delivery</li> <li>• Pseudo precipitate delivery</li> <li>• Unconscious delivery</li> <li>• Abandoning of children</li> </ul>	C	LGF	Dr Faiza Nadeem	1 hr.	3 <sup>rd</sup> year lecture theatre	MCQs, SEQs, OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.

		<ul style="list-style-type: none"> <li>Concealment of birth</li> </ul> <p>Explain sudden infant death syndrome</p> <p>Illustrate diagnosis of SIDS</p>							Principles and Practice of Forensic Medicine by Nasib R Awan
45	General Toxicology 1	<p>Define Toxicology &amp; Forensic Toxicology</p> <p>Define poison on medical and legal basis</p> <p>Describe human and cattle poisoning</p> <p>Identify routes of administration of poisons</p> <p>Explain actions of poison and factors modifying actions of poisons</p>	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	<p>Parikh's Textbook of Medical Jurisprudence and Toxicology</p> <p>Principles and Practice of Forensic Medicine by Naseeb R. Awan</p>
46	General Toxicology 2	<p>Describe fate of poisons in the body</p> <p>Explain diagnosis of poisoning in living and dead</p> <p>Discuss duties of a doctor in a case of acute poisoning</p>	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	<p>Parikh's Textbook of Medical Jurisprudence and Toxicology</p> <p>Principles and Practice of Forensic Medicine by Naseeb R. Awan</p>

47	Management of Acute Poisoning	<p>Enlist the steps in the management of a case acute poisoning</p> <p>Describe methods for removal of unabsorbed poisons</p> <p>Identify different types of emetics</p> <p>Explain the procedure of gastric lavage</p> <p>Describe the mechanism of action of different types of antidotes</p> <p>Discuss elimination of absorbed poison</p> <p>Explain treatment of general symptoms</p>	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	<p>Parikh's Textbook of Medical Jurisprudence and Toxicology</p> <p>Principles and Practice of Forensic Medicine by Naseeb R. Awan</p>
48	Corrosive Poisoning Mineral acid and caustic Alkalis	<p>Classify corrosives</p> <p>Define corrosive</p> <p>Describe mechanism of action of mineral acids</p> <p>Explain signs and symptoms and treatment of corrosive poisoning</p> <p>Discuss postmortem appearance and Medicolegal importance of mineral acid poisoning</p> <p>Describe vitriolage</p>	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	<p>Parikh's Textbook of Medical Jurisprudence and Toxicology</p> <p>Principles and Practice of Forensic Medicine by Naseeb R. Awan</p>
49	Organic	Enumerate different	C	LGF	Naheed Siddiqui	1	3 <sup>rd</sup> Year	MCQ/SEQ/	Parikh's

	acids poisoning	organic acids Describe the general characteristics, symptoms and signs of oxalic acid poisoning Discuss treatment, postmortem appearances and Medicolegal aspects of oxalic acid poisoning Explain Christenson's saying				hour	Lecture theatre	OSPE	Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
50	Carbolic acid poisoning	Explain general characteristics symptoms and signs and treatment of carbolic acid poisoning Describe post mortem appearance and Medicolegal aspects of carbolic and poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/ OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
51	Vegetable acid poisons	Describe general characters symptoms and signs and treatment of hydrocyanic acid and cyanides Discuss the postmortem appearance and Medicolegal aspects of poisoning by hydrocyanic	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/ OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of

		acid and cyanides							Forensic Medicine by Naseeb R. Awan
52	Irritant poisons Phosphorus Poisoning	Define irritant poisons Classify irritant poisons Describe general symptoms and signs and postmortem appearance of irritant poisons Discuss characteristics, symptoms, signs and treatment of phosphorus poisoning Describe post mortem appearances and Medicolegal aspects of phosphorus poisoning Explain necrobiosis of liver Discuss chronic phosphorus poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/ OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
53	Iodine Poisoning	Describe symptoms, signs and treatment of iodine poisoning Discuss Medicolegal aspects and postmortem appearances of iodine poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/ OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by

									Naseeb R. Awan
54	Metallic Poisons Arsenic Poisoning	Enumerate metallic poisons Discuss sources and various forms of arsenic Describe symptoms, signs and treatment of acute arsenic poisoning Discuss postmortem appearances of acute arsenic poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/ OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
55	Chronic arsenic poisoning	Describe the symptoms and signs of various stages of chronic arsenic poisoning Discuss treatment and postmortem appearance of chronic arsenic poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/ OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
56	Mercury Poisoning	Describe general characteristic of mercury and its sources Identify the symptoms, signs and post mortem	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/ OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology

		appearances of acute mercury poisoning Explain chronic mercury poisoning Describe Medicolegal aspects of mercury poisoning							Principles and Practice of Forensic Medicine by Naseeb R. Awan
57	Lead Poisoning	Describe general characteristic of lead Enlist sources of lead Describe the symptoms, signs, treatment and postmortem appearance of acute lead poisoning Explain chronic lead poisoning Discuss Medicolegal aspects of lead poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
58	Thallium Poisoning	Describe symptoms, signs and treatment of thallium poisoning Explain Medicolegal aspects of thallium poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan

59	Zinc Poisoning	Describe Medicolegal aspects of zinc poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
60	Vegetable irritants Poisoning	Enlist vegetable poisons Describe symptoms, signs, treatment and postmortem appearance of Ricinus communis Explain symptoms, signs, treatment and postmortem, appearance of poisoning by croton tiglium Explain Medicolegal aspects of croton tiglium poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
61	Abrus precatorius Poisoning	Describe symptoms, signs, treatment of abrus precatorius poisoning Medicolegal importance of abrus precatorius poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and



									Practice of Forensic Medicine by Naseeb R. Awan
62	Colocynth & ergot poisoning	Describe symptoms, signs, treatment and Medicolegal importance of poisoning by colocynth and ergot	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
63	Capsicum poisoning	Describe symptoms, signs and treatment and Medicolegal importance of capsicum poisoning Enlist difference between capsicum and dhatura seeds	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
64	Semecarpus anacardium	Describe symptoms, sign, treatment and Medicolegal	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture	MCQ/SEQ/OSPE	Parikh's Textbook of

	and Calotropis	aspects of semecarpus anacardium and Calotropis					theatre		Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
65	Animal Poisons	Describe symptoms, signs & treatment of poisoning by Spanish fly Discuss postmortem appearance and Medicolegal aspects of poisoning by Spanish fly	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/ OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
66	Snake bite	Classify snakes according to Medicolegal aspects Tabulate differences between poisonous and non poisonous snakes Discuss the characteristics of snake venom Discuss in detail the hall	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/ OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic

		marks of a venomous snake bite Describe the principles of treatment of venomous snake bite							Medicine by Naseeb R. Awan
67	Mechanical poisons	Describe symptoms, signs, treatment of mechanical poisons Discuss Medicolegal aspects and postmortem appearances of poisoning by powdered glass, diamond dust and chopped hair.	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
68	Food poisoning 1	Define food poisoning & poisonous foods Enumerate different types of bacterial food poisoning Discuss food poisoning by toxins	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
69	Food poisoning 2	Describe symptoms, signs and treatment of botulism	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture	MCQ/SEQ/OSPE	Parikh's Textbook of

		Discuss postmortem appearances of botulism Describe different poisonous foods and food allergy.					theatre		Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
70	Deliriant Poisons	Define delirium Enlist deliriant poisons Describe symptoms, signs & treatment of dhatura poisoning discuss postmortem appearances & medicolegal aspects of dhatura poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/ OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
71	Cannabis Indica poisoning	Describe the preparation of cannabis Discuss Cannabis Indica poisoning and its Medicolegal significance	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/ OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology Principles and Practice of Forensic Medicine by

									Naseeb R. Awan
72	Spinal poisons	Discuss various spinal poisons in relation to their sources and mechanism of actions Describe symptoms, signs and differential diagnosis of spinal poisons Discuss treatment and autopsy appearances of a case of strychnine poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
73	Peripheral nerve poisons	Discuss symptoms, signs of peripheral nerve poisons	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
74	Cardiac poisons	Enumerate cardiac poisons Describe symptoms, signs and treatment of cardiac poisons	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology

		Identify post mortem appearance and Medicolegal aspects of cardiac poisons							Principles and Practice of Forensic Medicine by Naseeb R. Awan
75	Forensic Pharmacology 1	Enlist commonly abused drugs Define street drugs and designer drugs Describe symptoms, signs & treatment of aspirin poisoning Discuss postmortem appearance and Medicolegal aspects of aspirin poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan
76	Forensic Pharmacology 2	Describe symptoms, signs & treatment of paracetamol poisoning Identify postmortem appearance and Medicolegal aspects of paracetamol poisoning Discuss anti histamine, tranquillizers and anti-depressants poisoning	C	LGF	Naheed Siddiqui	1 hour	3 <sup>rd</sup> Year Lecture theatre	MCQ/SEQ/OSPE	Parikh's Textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Naseeb R. Awan

77	Asphyxia	<p>By the end of this lesson, the students shall be able to:</p> <p>Define asphyxia</p> <p>Describe the mechanism of death in asphyxia</p> <p>Enumerate different types of asphyxia</p> <p>Enlist specific and non-specific signs of asphyxia</p> <p>Describe the internal and external autopsy findings in case of asphyxia</p> <p>Define traumatic asphyxia</p> <p>Describe the autopsy findings in case of traumatic asphyxia</p> <p>Enumerate the medico legal aspects in case of traumatic asphyxia</p>	C	LGF	Dr. Hira Khurshid	1 hour	3 <sup>rd</sup> year lecture theatre	MCQs/SEQs / OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
78	Hanging	<p>By the end of this lesson, the students shall be able to:</p> <p>Define hanging</p>	C	LGF	Dr. Hira Khurshid	1 hour	3 <sup>rd</sup> year lecture theatre KGMC	MCQs/SEQs / OSPE	Parikh's textbook of Medical Jurisprudence and

		Enumerate causes of death in hanging Describe internal and external autopsy findings in case of hanging Describe medico legal aspects of hanging Enumerate different types of hanging and describe their mechanism							Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
79	Ligature Strangulation	By the end of this lesson, the students shall be able to: Define strangulation Describe its types Explain the internal and external post mortem findings in case of strangulation Describe the medico legal aspects of strangulation Define mugging, garroting and bansdola Enumerate differences between hanging and strangulation	C	LGF	Dr. Hira Khurshid	1 hour	3rd year lecture theatre	MCQs/SEQs / OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
80	Manual Strangulation	By the end of this lesson, the students shall be able to:	C	LGF	Dr. Hira Khurshid	1 hour	3 <sup>rd</sup> year lecture theatre	MCQs/SEQs / OSPE	Parikh's textbook of Medical



		<p>Define throttling</p> <p>Describe the post mortem findings in a case of throttling</p> <p>Explain the medicolegal aspects of throttling</p> <p>Define suffocation</p> <p>Describe the post mortem findings in suffocation</p> <p>Explain the medico legal aspects of suffocation</p>							<p>Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
81	Drowning 1	<p>By the end of this lesson, the students shall be able to:</p> <p>Define drowning</p> <p>Classify drowning</p> <p>Describe typical and atypical drowning</p> <p>Explain the mechanism of death in drowning</p> <p>Enumerate the causes of death in drowning</p>	C	LGF	Dr. Hira Khurshid	1 hour	3 <sup>rd</sup> year lecture theatre	MCQs/SEQs / OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
82	Drowning 2	<p>By the end of this lesson, the students shall be able to:</p> <p>Describe the internal and external autopsy findings in case of drowning</p> <p>Explain the medico legal</p>	C	LGF	Dr. Hira Khurshid	1 hour	3 <sup>rd</sup> year lecture theatre	MCQs/SEQs / OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p>

		<p>aspects of drowning</p> <p>Explain the differences between sea water and fresh water drowning</p> <p>Describe the role of diatoms in drowning</p>							Principles and Practice of Forensic Medicine by Nasib R Awan
83	Regional Injuries	<p>By the end of this lesson, the students shall be able to:</p> <p>Describe head injury and its types</p> <p>Enumerate and describe different types of skull fracture</p> <p>Describe coup and contre coup injuries</p> <p>Explain cerebral contusions. Cerebral lacerations and cerebral edema</p> <p>Describe different types of cerebral hemorrhages</p> <p>Enumerate the differences between epidural, subdural and subarachnoid hemorrhages</p> <p>Describe intra cerebral hemorrhage</p> <p>Explain concussion and compression injuries of spinal cord</p>	C	LGF	Dr. Hira Khurshid	1 hour	3rd year lecture theatre	MCQs/SEQs / OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>

84	Transportation Injuries 1	By the end of this lesson, the students shall be able to: Describe the motor vehicle ordinance Explain the mechanism of road traffic accidents Enumerate the different medical conditions in which driving is prohibited Classify transportation injuries Classify motor vehicle injuries Describe different types and features of pedestrian injuries	C	LGF	Dr. Hira Khurshid	1 hour	3 <sup>rd</sup> year lecture theatre	MCQs/SEQs / OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
85	Transportation Injuries 2	By the end of this lesson, the students shall be able to: Describe different types and features of passenger injuries Explain the role of seatbelts in motor vehicle accidents Describe the autopsy findings in case of motor vehicle accidents Explain different types of motorcycle and bicycle	C	LGF	Dr. Hira Khurshid	1 hour	3 <sup>rd</sup> year lecture theatre	MCQs/SEQs / OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan

		<p>injuries</p> <p>Explain the medico legal aspects of railway injuries</p> <p>Describe the medico legal aspects of aircraft injuries</p>							
86	Natural Sexual Offences	<p>By the end of this lesson, the students shall be able to:</p> <p>Define and classify natural sexual offences</p> <p>Define rape</p> <p>Describe the procedure of medico legal examination of a rape victim</p> <p>Explain the procedure of medico legal examination of a person accused of rape</p> <p>Define incest</p>	C	LGF	Dr. Hira Khurshid	1 hour	3 <sup>rd</sup> year lecture theatre	MCQs/SEQs / OSPE	<p>Parikh's textbook of Medical Jurisprudence and Toxicology.</p> <p>Principles and Practice of Forensic Medicine by Nasib R Awan</p>
87	Unnatural Sexual Offences & Sexual	<p>By the end of this lesson, the students shall be able to:</p> <p>Define and classify</p>	C	LGF	Dr. Hira Khurshid	1 hour	3 <sup>rd</sup> year lecture theatre	MCQs/SEQs / OSPE	<p>Parikh's textbook of Medical Jurisprudence and</p>

	Perversions	unnatural sexual offences  Define sodomy Explain the procedure of medico legal examination of the passive and active agent in case of sodomy  Define buccal coitus  Define tribadism  Define bestiality  Discuss the steps of medico legal examination in case of bestiality							Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan
88	Abortion	By the end of this lesson, the students shall be able to:  Define and classify abortion  Define and classify artificial abortion  Explain the grounds for legal/justifiable abortion  Define criminal abortion	C	LGF	Dr. Hira Khurshid	1 hour	3 <sup>rd</sup> year lecture	MCQs/SEQs / OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology.  Principles and Practice of Forensic Medicine by Nasib R Awan

		<p>Discuss the various methods used to procure criminal abortion</p> <p>Explain the steps of medico legal examination of criminal abortion in case of living and dead</p> <p>Discuss the complications of criminal abortion</p> <p>Describe the procedure of examining the aborted material</p> <p>Discuss the various stages of fetal development in the intra uterine life</p> <p>Enumerate the differences between natural and criminal abortion from medico legal point of view</p>							
89	Medico legal examinatio	By the end of discussion, students shall be able to Enumerate pre requisites of	P	SGF/ Practical	Dr Hira Khurshid	1 Hour	Tutorial Room Forensic	MCQs/ SEQs/ OSPE	Parikh's textbook of Medical

	n of rape victim/ assailant & sodomy victim	examination Describe the steps of taking history from the victim Discuss the steps of examination Explain the steps of local examination Enlist the samples to be collected during examination Identify the components required for the formulation of opinion					Medicine Deptt		Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Nasib R Awan
90	Medico legal examination of injured person	By the end of discussion students shall be able to Enumerate the pre requisites of medico legal examination of injured person Describe the steps of taking history from the injured person Discuss the steps of examination Describe the local examination of the wound Enlist the components required for the formulation of opinion Write the injury report	P	SGF/ Practical	Dr Hira Khurshid	1 Hour	Tutorial Room Forensic Medicine Deptt	MCQs/ SEQs/ OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Nasib R Awan

91	Medico legal examination of a drunken person	By the end of the discussion students shall be able to Enlist the pre requisites for medico legal examination of a drunken person Discuss the steps of taking history from the drunken person Discuss the steps of examination Enlist the tests and investigations conducted during the examination Enumerate the different pathological states simulating alcohol intoxication	P	SGF/ Practical	Dr Hira Khurshid	1 Hour	Tutorial Room Forensic Medicine Deptt	MCQs/ SEQs/ OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Nasib R Awan
92	Age estimation	By the end of discussion students shall be able to Enlist the pre requisites of the examination Describe the steps of examination Discuss the importance of secondary sexual characters Explain the importance of radiological data in age estimation Enlist the steps of formulating the medico legal opinion	P	SGF/ Practical	Dr Hira Khurshid	1 Hour	Tutorial Room Forensic Medicine Deptt	MCQs/ SEQs/ OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Nasib R Awan



93	Medico legal examination of criminal abortion	By the end of discussion, the students shall be able to Enlist the pre requisites of examination Discuss the steps of taking history in case of living Discuss the steps of examination Describe the steps of local/specific examination in the living and dead Explain the steps of examination of aborted fetus	P	SGF/ Practical	Dr Hira Khurshid	1 Hour	Tutorial Room Forensic Medicine Deptt	MCQs/ SEQs/ OSPE	Parikh's textbook of Medical Jurisprudence and Toxicology  Principles and Practice of Forensic Medicine by Nasib R Awan
94	Lecture 1 Introduction Firearm injuries	Define the following terms 1.Action, ballistics, 2. Bore, buck shot, 3.Tattooing , Yaw, 4. Firearm, Tattooing, Yaw  Discuss the following terms 1.Bullet, caliber, 2.Cartridge, Cocking, 3.Musket, Primer	C	LGF	Dr Ihsan Ullah	1 hour	3 <sup>RD</sup> YEAR lecture theatre	MCQS/SEQS /OSPE	Principle and practice of forensic medicine by Nasib R. Awan  Parikh's textbook of medical jurisprudence and toxicology
95	Lecture 2 Mechanism of firearm injuries	Describe different parts and operating principals of firearm Describe various parts of cartridge	C	LGF	Dr Ihsan Ullah	1 hour	3 <sup>RD</sup> YEAR lecture theatre	MCQS/SEQS /OSPE	Principle and practice of forensic medicine by Nasib R. Awan

		Describe 1 blank cartridge 2 baton round Classify firearm, Discuss smooth bore firearm Explain rifled firearm							Parikh's textbook of medical jurisprudence and toxicology
96	Determinati on of fire arm injuries 1	Discuss the Medicolegal importance of fire arm injuries Describe characteristic of shotgun injuries at varying ranges Explain characteristic of rifled firearm injuries at varying ranges	C	LGF	Dr Ihsan Ullah	1 hour	3 <sup>RD</sup> YEAR lecture theatre	MCQS/SEQS /OSPE	Principle and practice of forensic medicine by Nasib R. Awan  Parikh's textbook of medical jurisprudence and toxicology
97	Determinati on of fire arm injuries 2	Differentiates between the entry and exit wounds Discuss the condition which affect the appearance of firearm wounds Explain the differentiating features of suicidal , homicidal and accidental firearm injuries Describe the autopsy procedure in a case of death from firearm injuries	C	LGF	Dr Ihsan Ullah	1 hour	3 <sup>RD</sup> YEAR lecture theatre	MCQS/SEQS /OSPE	Principle and practice of forensic medicine by Nasib R. Awan  Parikh's textbook of medical jurisprudence and toxicology

98	Death due to starvation	Define starvation Enlist the sign and symptom of starvation Discuss its cause of death & fatal period Identify the postmortem findings in case of death due to starvation	C	LGF	Dr Ihsan Ullah	1 hour	3 <sup>RD</sup> YEAR lecture theatre	MCQS/SEQS /OSPE	Principle and practice of forensic medicine by Nasib R. Awan  Parikh's textbook of medical jurisprudence and toxicology
99	Thermal deaths	Describe the effect of cold on human bod Explain hypothermic deaths and paradoxical undressing Discuss the manifestation of exposure of human body to high temperature Identify the postmortem finding in case of heat stock death and its Medicolegal implication	C	LGF	Dr Ihsan Ullah	1 hour	3 <sup>RD</sup> YEAR lecture theatre	MCQS/SEQS /OSPE	Principle and practice of forensic medicine by Nasib R. Awan  Parikh's textbook of medical jurisprudence and toxicology
100	Medicolegal Autopsy 1	Define autopsy Discuss Objectives of autopsy Identify hazards of autopsy Enlist the autopsy instrument Describe incision of autopsy Discuss types of autopsy	P	SGF	Dr Ihsan Ullah	1 hour	Tutorial Room Forensic department room	MCQS/SEQS /OSPE	Principle and practice of forensic medicine by Nasib R. Awan  Parikh's textbook of

									medical jurisprudence and toxicology PARIKH
10 1	Medicolegal Autopsy 2	Discuss autopsy protocol with opening of cavities Explain Autopsy techniques and Sample collection Define negative autopsy Discuss causes of negative autopsy Define exhumation with protocol Enlist Objective of exhumation	P	SGF	Dr Ihsan Ullah	1 Hour	Tutorial Room Forensic department	MCQS/SEQS /OSPE	Principle and practice of forensic medicine by Nasib R. Awan  Parikh's textbook of medical jurisprudence and toxicology
10 2	Gastric Lavage	By the end of this lesson, the student will be able to: Define and understand Gastric Lavage/Stomach Wash/Gastric Suction Discuss Goals/Purpose of Gastric Lavage Describe Indications of Gastric Lavage Identify the contraindications of Gastric Lavage Illustrate the right way to perform Gastric Lavage in adults as well as in children Explain the complications of	P	Practical/SGD	Dr. IFTIKHAR AHMAD	1 hour	Dept. of Forensic medicine & Toxicology KGMC	MCQs/OSCE /SEQs	Principle and practice of forensic medicine by Nasib R. Awan  Parikh's textbook of medical jurisprudence and toxicology

		Gastric Lavage							
10 3	Consent Form	By the end of this lesson, the student will be able to Define Consent Describe various types of consent Explain informed & Blanket consent Recognize the Age for consent Discuss standard consent procedure Describe the situations where consent may not be obtained Identify the conditions where consent is not valid	P	Practical/ SGD	Dr. IFTIKHAR AHMAD	1 hour	Dept. of Forensic medicine KGMC	MCQS/OSC E	Principle and practice of forensic medicine by Nasib R. Awan  Parikh's textbook of medical jurisprudence and toxicology
10 4	Finger Printing	By the end of this lesson, the student will be able to: Define finger printing Explain the Principles on which finger printing system is based Explain Important features of finger prints Discuss Advantages of finger prints Identify various types of finger prints	P	Practical/ SGD	Dr. IFTIKHAR AHMAD	1 hour	Dept. of Forensic medicine KGMC	MCQS/OSC E	Principle and practice of forensic medicine by Nasib R. Awan  Parikh's textbook of medical jurisprudence and toxicology

		Discuss importance of POROSCOPY/ Locard's Method Explain the medicolegal significance of finger prints							
10 5	Death Certification	By the end of this lesson, the student will be able to: Define Death and Death Certification Discuss cause of death and the underlying cause of death Explain Design and structure of Death Certification Describe the Importance of Death Certificate Practice to fill the form of the medical certificate of the cause of death Determine the role/Duty of a Doctor Discuss MC in death due to Old age Describe the conditions When not to issue Death Certificate	P	Practical/SGD	Dr. IFTIKHAR AHMAD	1 hour	Dept. of Forensic medicine KGMC	MCQS/OSCE	Principle and practice of forensic medicine by Nasib R. Awan  Parikh's textbook of medical jurisprudence and toxicology

\*1 put (C) for COGNITIVE/ (P) for PYCHOMOTOR/ (A) for AFFECTIVE

## Teaching and learning strategies:

The following teaching / learning methods are used to promote better understanding:

- Interactive Lectures
- Hospital / Clinic visits
- Small Group Discussion
- Skills session
- Self-Directed Study



### **Interactive lectures:**

An interactive lecture is an easy way for instructors to intellectually engage and involve students as active participants in a lecture-based class of any size. Interactive lectures are classes in which the instructor breaks the lecture at least once per class to have students participate in an activity that lets them work directly with the material.

- The instructor might begin the interactive segment with an engagement trigger that captures and maintains student attention.
- Then the instructor incorporates an activity that allows students to apply what they have learned or give them a context for upcoming lecture material.

- As the instructor feels more comfortable using interactive techniques he or she might begin to call upon a blend of various interactive techniques all in one class period.

#### **Hospital / Clinic visits:**

In small groups, students observe patients with signs and symptoms in hospital or clinical settings. This helps students to relate knowledge of basic and clinical sciences of the relevant module.

#### **Small group discussion (SGD):**

The shy and less articulate are more able to contribute. Students learn from each other. Everyone gets more practice at expressing their ideas. A two way discussion is almost always more creative than individual thoughts. Social skills are practiced in a 'safe' environment e.g. tolerance, cooperation. This format helps students to clarify concepts acquire skills or attitudes. Students exchange opinions and apply knowledge gained from lectures, tutorials and self-study. The facilitator role is to ask probing questions, summarize, or rephrase to help clarify concepts.

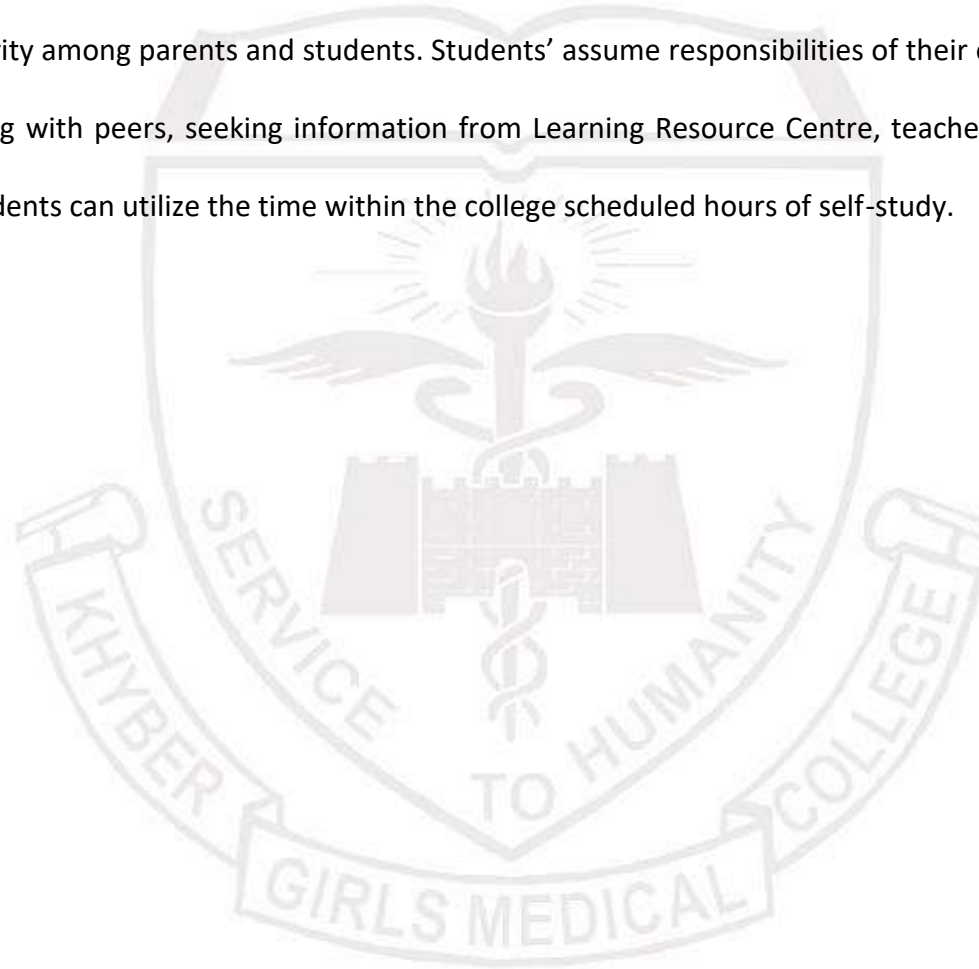
#### **Skills/Practical session:**

Skills relevant to respective module are observed and practiced where applicable in skills laboratory or Laboratories of various departments.



**Self-Directed learning (SDL):**

Self-directed learning, which involves studying without direct supervision in a classroom/Library, is a valuable way to learn and is quickly growing in popularity among parents and students. Students' assume responsibilities of their own learning through individual study, sharing and discussing with peers, seeking information from Learning Resource Centre, teachers and resource persons within and outside the college. Students can utilize the time within the college scheduled hours of self-study.



## Time tables:

The timetables for the module will be shared via Edmodo and the notice boards in advance.

## Assessment tools:

Theoretical knowledge is tested by a written examination system constituted by multiple choice questions (MCQs). The assessment of practical knowledge involves oral, spot, or objective structured practical examinations (OSPE).

### Multiple Choice Questions (MCQs):

- Multiple choice questions (MCQs) are a form of assessment for which students are asked to select the best choice from a list of answers.
- MCQ consists of a stem and a set of options. The stem is usually the first part of the assessment that presents the question as a problem to be solved; the question can be an incomplete statement which requires to be completed and can include a graph, a picture or any other relevant information. The options are the possible answers that the student can choose from, with the correct answer called the key and the incorrect answers called distractors.
- Correct answer carries one mark, and incorrect 'zero mark'. There is NO negative marking.

- Students mark their responses on specified computer-based sheet designed for the college.
- The block exam will comprise of 120 MCQs and will be compiled according to the shared blueprint.

### Short Essay Questions (SEQ)

Short answer questions generally ask for brief, text-based responses and may also be referred to as *fill-in-the-blank*; or *completion* questions.

Variations of the short answer question may request a list of terms or rules in which the order is not important, or may require a numerical or formula response.

Here is some general information about short answer questions:

- Does not measure interpretation.
- Can be used to check for preciseness such as correct spelling (good when using computer grading), proper or specific names of things, especially factual knowledge, and proper creation of formulas.
- Requires specific, definite, exact information.
- Can be used to discriminate whether errors can be detected in a diagram, for example.

### Advantages of Short Answer Questions

- Easy to write.
- Reduces possibility of guessing.
- Can have a lengthy stem such as a paragraph. (Caution: You generally should not expect an exact answer character-by-character.)
- May be easy to score if the required answer is short.

### Disadvantages of Short Answer Questions

- It can take time to create items with complex formulas.
- Can be turned into a measure of memorization ability.
- Grading can be subjective.
- Correct responses may appear incorrect due to minor errors such as misspellings, order of words, etc.
- Difficult to machine score. Much work is being conducted in this area, but it is still in early stages of development.

### Objective Structured Practical Examination (OSPE)

- The content may assess application of knowledge, or practical skills.
- Student will complete task in define time at one given station.
- All the students are assessed on the same content by the same examiner in the same allocated time.
- A structured examination will have observed, unobserved, interactive and rest stations.
- Observed and interactive stations will be assessed by internal or external examiners.
- Unobserved will be static stations in which students will have to answer the questions related to the given pictures, models or specimens the provided response sheet.
- Rest station is a station where there is no task given, and in this time student can organize his/her thoughts.
- The Block OSPE will be comprise of 18 examined station and 7 rest stations. The stations will be assigned according to the shred blueprint.

## Internal Evaluation:

Internal evaluation is a process of quality review undertaken within an institution for its own ends. 10% marks of internal evaluation will be added to final marks. This 10% will be based on

<b>Distribution of Marks for paper</b>	
Kmu (final Examination)	90
internal evaluation	10
Total	100

<b>Distribution of Marks for practical</b>	
Practical plus Notebook	70
Viva plus practical(internal evaluation)	20 + 10

## Attendance Requirement:

More than 75% attendance is mandatory to sit for the examinations.

## Learning Resources for Students

Parikh's textbook of Medical Jurisprudence and Toxicology.

Principles and Practice of Forensic Medicine by Nasir R Awan

Forensic medicine and toxicology principals and practice by Krishan Vij

Knights forensic pathology by Bernard knight, Pekka sauikko

Forensic medicine and toxicology Nagesh Kumar G rao

