

DEPARTMENT OF FORENSIC MEDICINE & TOXICOLOGY



SAHIWAL MEDICAL COLLEGE SAHIWAL



Department of Forensic Medicine & Toxicology
Sahiwal Medical College, Sahiwal



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Vision Statement

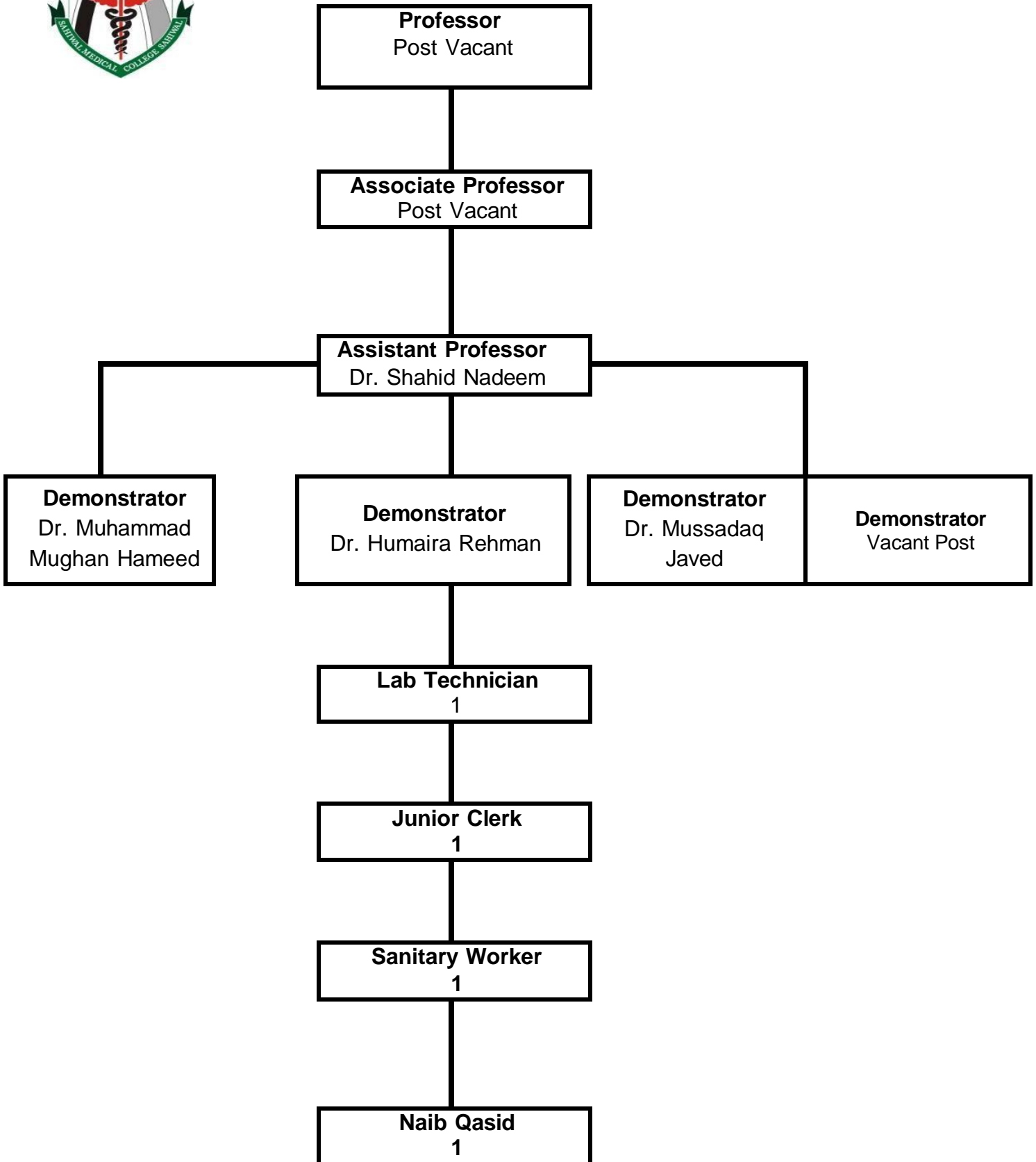
Sahiwal Medical College will be a state of the art teaching institute and center of excellence in the medical sciences. Keeping in view the values of Islam and traditions of Pakistani culture, character building and professional training of students and professionals will be at par with international standards. Serving humanity at large, by applying the best possible practices will be the aspiration of the institution.

Mission Statement

Sahiwal Medical College is committed to serve the ailing population of Sahiwal Division and adjoining areas by producing a clinically competent medical graduate of international standard, raising service delivery through best possible attainable benchmarks in medical education, indigenous research culture and excellence in-hospital care. The institution aims to inculcate leadership role in its graduates and staff. All endeavors are meant to provide a positive and meaningful influence on the public.



ORGANOGRAM



Name	Qualification	PMDC Registration	Faculty Registration
Professors		Post Vacant	
Associate Professor		Post Vacant	
Assistant Professor			
Dr. Shahid Nadeem	MBBS, DMJ	41864-P	16002/41864-P
Demonstrator			
Dr. Humaira Rehman	MBBS, MCPS	62051-P	
Dr. Mussadaq Javed	MBBS		
Dr. Muhammad Mughan Hameed	MBBS		

LABORATORY STAFF

Designation	Number
Lab Technicians	1
Computer Operator	1

BLOCK -7

Block Duration: 09 WEEKS

Number of Modules: 02

MODULE RATIONALE

This module serves as a bridge, revisiting core topics in general Pharmacology, Pathology, and Forensic medicine with an emphasis on their clinical applications. By doing so, it ensures that students develop a more comprehensive understanding, which is vital for the advanced study of organ systems in subsequent modules (e.g., CVS 2, Respiratory-2, GIT-2, Neurosciences-2, and Reproduction 2). Mastery of these topics is essential before students can effectively approach the complexities of clinical scenarios.

MODULE OUTCOMES

Apply Forensic Medicine Principles in Clinical Contexts: Demonstrate understanding of medicolegal aspects of medical practice, including documentation, consent, patient rights, and legal responsibilities. Analyze and interpret findings relevant to forensic medicine, such as injury patterns, cause of death, and toxicology, and understand their clinical significance.

BLOCK MANAGEMENT TEAM

HOD Forensic Medicine

Dr. Shahid Nadeem
Assistant Professor

Block Coordinator

Dr. Humaira Rehman

3rd Yr Team Members

Dr. Muhammad Mughan Hameed
Dr. Mussdaq Javid

FORENSIC MEDICINE

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 02	
		INTEGRATING DISCIPLINE	TOPIC
F2-For-001	Describe Forensic Medicine & its various branches.	Forensic Medicine & Jurisprudence	Introduction to the subject of Forensic Medicine
F2-For-002	Describe evidence, its types & recording of evidence	Jurisprudence	Chain of evidence
F2-For-003	Describe the importance of diagnosis of death		Introduction to Thanatology
F2-For-004	Describe the WHO format of the death certificate.		Death certificate

PRACTICAL / LAB WORK

FORENSIC MEDICINE

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 04	
		INTEGRATING DISCIPLINE	TOPIC
F2-For-009	Describe trace evidence & its types	Forensic Medicine	Trace evidence
F2-For-010	Types of fingerprints		Dactylography
	Recording of dying declaration		Recording of evidence
F2-For-011	Take written informed consent for various procedures		Consent form

MODULE 15 RATIONALE

The Forensic Medicine and Toxicology Module 1 prepares the medical graduate to handle the complexities of life and death and the medico-legal cases they encounter in their early career as doctors. The Autopsy training provides them with diagnostic skills for determining the cause of death, personal identity is essential for disaster victim identification, and medico-legal cases involving unidentified bodies. The death indicators and certification of death are important in their clinical practice. Introducing these topics in the 3rd year builds a strong foundation for handling medico-legal cases; ensuring students are ready to navigate the complexities of death-related issues in their future careers.

MODULE OUTCOMES

- Explain the concept of death and its medico-legal aspect
- Discuss the indicators of death
- Describe the inter-relationship of cause, mechanism, mode, and manner of death
- Determine the parameters of personal identification in living and dead
- Describe the types, objectives, rules, and techniques of autopsy
- Discuss the post-mortem artifacts and their medic-legal significance
- Discuss the methodologies and techniques employed for personal identification.
- Describe the methods of age certification

SUBJECTS INTEGRATED IN THE MODULE

1. Anatomy
2. Biochemistry
3. Pathology
4. Medicine

THEORY

THANATOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 05	
		INTEGRATING DISCIPLINE	TOPIC
For-Th-001	Define life and death.	Integration with Medicine	Death and life
	Describe views about death of different authorities.		
	Differentiate between somatic and molecular death.		
	Diagnose a case of death clinically.		
	Describe the legal procedure of disposal of a dead body-known /unclaimed		
	Describe brain death.		
	Explain criteria of diagnosis of brain death		
	Enlist guiding principles to diagnose a case of brain death		
	Describe the medico legal importance of brain stem death.		
	Summarize ethical, legal and moral considerations related with organ transplant and brain death		
	Differentiate between Death and Apparent/Suspended Animation		
	Describe different clinical conditions simulating with suspended animation		
For-Th-002	Classify post-mortem changes.	Forensic Medicine, Pathology & Chemical Pathology	Post-mortem changes - (Immediate early and late)
	Classify post-mortem changes.		
	Describe immediate signs of somatic death		
	Explain early eye changes after death		
	Explain Post-mortem Cooling of Dead body (Algor Mortis) and its medicolegal implications.		
	Describe methods of recording the temperature of a dead body.		

DEPARTMENT OF FORENSIC MEDICINE & TOXICOLOG

	Explain cooling curve of a dead body.		
	State different formulas applied for calculating body temperature after death.		
	Summarize factors affecting Algor Mortis		
	Explain Postmortem Lividity and its mechanism of development.		
	Explain its Medicolegal implications.		
	Summarize factors affecting post-mortem lividity.		
	Differentiate Postmortem Lividity from Congestion and Bruise		
	Explain Rigor Mortis and its mechanism of development.		
	Describe its Medicolegal implications.		
	Summarize factors affecting Rigor Mortis		
	Summarize conditions simulating Rigor Mortis		
	Distinguish Rigor Mortis from Cadaveric Spasm and instantaneous rigor		
	Enlist late changes after death		
	Explain the process of putrefaction.		
	Describe different stages of putrefaction.		
	Summarize factors affecting putrefaction		
	Describe forensic entomology and its role in the estimation of post mortem interval		
	Summarize the procedure to collect specimens of forensic entomology		
	Draw and label graphic representation of post-mortem changes.		
	Infer the importance of putrefaction in toxicological analysis		
	Describe the process of Mummification		
	Describe the process of adiopocere formation		
For-Th-003	Summarize the biochemical changes in blood, vitreous humour and CSF after death	Biochemistry	Bio chemical changes, after death.

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	List of different parameters to determine PMI.		Estimation of
For-Th-004	Describe rate method and concurrent methods to estimate PMI.	Forensic Medicine	Post-mortem interval
For-Th-005	Define sudden death	Medicine	Sudden death
	Summarize common causes of sudden death		
For-Th-006	Differentiate between modes, manner cause and mechanism of death.		Mechanism, manner, cause, modes of death,
For-Th-007	Define and classify post mortem artefacts	Forensic medicine	Post-mortem artefacts
	Explain medico legal significance of artefacts.		
For-Th-008	Discuss the use of flow-cytometry in forensic medicine.		Flow-cytometry
For-Th-009	Define sudden infant death syndrome	Medicine	Sudden infant death syndrome (SIDS)
	Explain causes of sudden infant death syndrome and its pathological findings		

AUTOPSY

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 6	
		INTEGRATING DISCIPLINE	TOPIC
For-Au-001	Define autopsy	Forensic medicine	Autopsy, Its types and objectives.
	Summarize types of autopsies		
	Compare the differences of medical and medico legal autopsy.		
	Enlist objectives of autopsy		
	Enlist Essentials of autopsy		
For-Au-002	Compare and contrast four death investigation systems i. Coroner s system, ii. Medical examiner system, iii. Continental system, iv. Procurator fiscal system in Scotland.		Global systems of death investigations
For-Au-003	Define autopsy protocol. i. Preliminary documents required for ii. autopsy,		Autopsy Protocol

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	<ul style="list-style-type: none"> iii. Bio data. iv. Identification v. External examination vi. Internal examination vii. Conclusion. viii. Documentation. 		
	Differentiate between narrative and numerical autopsy protocol.		
For-Au-004	Describe primary autopsy incisions, secondary autopsy incisions and tertiary autopsy Incisions		Autopsy incisions
	Explain autopsy incisions to dissect neck, heart, brain, spinal cord, limb and bone marrow		
	Explain incisions to reveal pneumothorax, DVT, Fat embolism and pulmonary embolism		
For-Au-005	Describe 4 autopsy techniques- Letulle, Ghon, Virchow and Rokitansky		Autopsy techniques
For-Au-006	Describe the viscera with quantity to be taken for toxicological analysis		Collection of viscera at autopsy
	Describe the viscera with quantity to be taken for histopathological analysis.		
	Explain preservatives used for autopsy samples.		
	Demonstrate the preservation of different viscera to be sent to analyst.		
	Explain the autopsy protocol for collection/recovery, preservation, labelling and dispatch of biological and non-biological material		
For-Au-007	Describe standard autopsy suite		Essential of autopsy suite
	Summarize the requirements of autopsy room		
For-Au-008	Summarize the hazards of autopsy		Hazards of autopsy
	Define Negative autopsy		

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For-Au-009	Explain the causes of negative autopsy		Negative autopsy
For-Au-010	Define exhumation		Exhumation
	Enlist the objectives of exhumation		
	Explain the procedure of exhumation		
	Enlist the specimens collected in exhumation		
	Enlist the limitations of exhumation		
	Summarize the precautions during exhumation		
For-Au-011	Summarize the objectives of autopsy on mutilated dead body/fragmentary remains	Anatomy	Examination of fragmentary / Mutilated / Skeletal remains
PERSONAL IDENTITY			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 05	
		INTEGRATING DISCIPLINE	TOPIC
For-PI-001	Define Personal Identity	Forensic Medicine	Personal Identity
	Describe types of personal identity		
	List the purpose of identification in Living & dead		
	Briefly describe the parameters of Personal Identity in living and dead		
	Describe different methods of determining personal identity		
	Enumerate surest methods to determine personal identity for identification		
	Enlist the ages of medico-legal importance for civil & criminal responsibility		
For-PI-002	Determine the age of a living person for medico-legal Purpose		Age determination
	Determine the age of a fetus regarding its length, weight & morphological features		
	Determine the age of an examinee from appearance & union of ossification centres of different bone		

DEPARTMENT OF FORENSIC MEDICINE & TOXICOLOG

	Identify the sequence of appearance of ossification activity in intrauterine life.		
	Relate the medico-legal importance of bones in the identification		
For-PI-003	Determine the sex of an individual by carrying out anatomical, chromosomal investigations	Anatomy	Sex determination
	Diagnose the disorders of sexual development		
	Describe the Medico Legal Importance of Sex Determination		
	Enlist limitations of sex determination in Dead		
For-PI-004	Describe the process of estimation of age from primary, secondary & mixed dentition	Forensic Medicine	Forensic Odontology
	Describe different methods for age estimation from odontology		
	Enlist the information obtained from dental examination		
	Relate medico legal importance of identification with odontology		
For-PI-005	Determine Race of a person from different parameters		Race determination
For-PI-006	Determine stature of a person by different methods.		Stature estimation
For-PI-007	Describe anthropometry with reference to age Determination		Anthropometry
For-PI-008	Classify fingerprint patterns according to Galton's classification.	Forensic Medicine	Dactylography
	Explain different methods of recording fingerprints.		
	Describe the advantages & medico legal importance of Dactylography		
	Define Poroscopy / Locards method		
For-PI-009	Describe the role of DNA Fingerprinting in identification.	Pathology	DNA Profiling
	Enlist the samples required for DNA profiling in medicolegal cases		

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	Enumerate the medicolegal importance of DNA Fingerprinting		
For-PI-010	Identify different methods of identification in case of mutilated, burnt and decomposed dead bodies	Forensic Medicine	Mass Disaster Identification
	Apply the international SOP of disaster Victim Identification (DVI) in mass disaster		

PRACTICAL / LAB WORK

THANATOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 06	
		INTEGRATING DISCIPLINE	TOPIC
For-Th-010	Demonstrate the immediate, early and late changes after death in a corpse.	Forensic Medicine	Autopsy
	Calculate time since death on the basis of findings noted in the corpse		
For-Au-011	Prepare a death certificate of cause of death according to WHO guidelines	Medicine	WHO guidelines of death certificate

AUTOPSY

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 05	
		INTEGRATING DISCIPLINE	TOPIC
For-Au-012	Demonstrate correct report writing	Forensic medicine	Autopsy report
For-Au-013	Observe the procedure of autopsy examination and dissection		autopsy
For-Au-014	Demonstrate the correct method of preservation and dispatch of specimens for histopathological and toxicological analysis	Pathology	Biological material

PERSONAL IDENTITY

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 05	
		INTEGRATING DISCIPLINE	TOPIC

DEPARTMENT OF FORENSIC MEDICINE & TOXICOLOG

For-PI-011	Identify the person for different medico-legal cases (age determination, sex determination)	Forensic medicine	Personal identification
	Take fingerprints by plain and rolling method and classify according to Galton's Classification		
	Estimate & certify the age of a person for medico-legal purposes		
For-PI-012	Identify the bite marks and perform their analysis		Bite marks analysis
For-PI-013	Estimate the age of the person from the oral examination of the teeth	Forensic medicine	Age & sex determination
	Interpret the findings from x-rays of bones for appearance and union of ossification centres for age determination		
	Identify the sex and age from morphological features of different bones.		



BLOCK -8

Block Duration: 11 weeks

Number of Modules: 1

SLMC
KNOWLEDGE SERVICE EXCELLENCE

MODULE 19 RATIONALE

This module trains the 3rd year MBBS student to handle social issues like violence, and sexual exploitation, they can identify injuries and give an inference on their cause. It equips them with skills to provide accurate medical evaluation and contribute to justice.

MODULE OUTCOMES

- Explain the biomechanics of wound production
- Determine the manner of injury
- Describe the pathophysiology of injuries and their effects on the body
- Define & Explain puberty, Impotence in males, frigidity in females, Sterility and medico-legal importance.
- Reproduce different sections of law relevant to sexual offenses.

SUBJECTS INTEGRATED IN THE MODULE

1. Pathology
2. Surgery
3. Gynae / Obs.

BLOCK MANAGEMENT TEAM

HOD Forensic Medicine

Dr. Shahid Nadeem
Assistant Professor

Block Coordinator

Dr. Humaira Rehman

3rd Yr Team Members

Dr. Muhammad Mughan Hameed
Dr. Musdaq Javid



THEORY			
TRAUMATOLOGY			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 03	
		INTEGRATING DISCIPLINE	TOPIC
For2-Tr-001	Define injury, wound and hurt.	Forensic Medicine	General concept
	Classify injuries on the basis of causative weapons		
	Classify injuries as per Qisas and Diyyat Act.		
For2-Tr-002	Explain mechanism of wound production with reference to subject, object and contact.		Wound production
For2-Tr-003	Define abrasions. Classify abrasion. Describe mechanism of production of abrasions. Differentiate between different types of abrasions. Explain medicolegal importance of abrasions.	Abrasion	
For2-Tr-004	Define bruises. Describe mechanism of production of bruises. Classify bruises. Explain pathophysiology of color changes in the bruise Assess the age of wound from color changes of wound. Distinguish between bruise, artificial bruise and hypostasis. Explain medico legal importance of bruises.	Bruise	

For2-Tr-005	<p>Define lacerated wound.</p> <p>Outline mechanism of production of a lacerated wound.</p> <p>Classify lacerated wounds.</p> <p>Differentiate between a lacerated wound and incised wound on gross examination.</p> <p>Explain medico legal importance.</p>		Laceration
For2-Tr-006	<p>Explain mechanism of fracture of bones/tooth.</p> <p>Discuss the mechanism of fractures/tooth.</p> <p>Describe different types of fractures of bones.</p>	Surgery/Orthopedics	Fractures
	<p>Interpret the age of fractures from radiological findings.</p> <p>Illustrate stages of healing of fractures of bones/teeth.</p> <p>Apply the nature of the fracture in the injury certificate as per Qisas and Diyat act.</p> <p>Explain medico-legal importance of fracture of bone/tooth.</p>		
For2-Tr-007	<p>Define incised/stab wounds.</p> <p>Discuss mechanism of production of an incised wound.</p> <p>Explain medico-legal significance of incised/stab wounds</p>		Incised/stab wounds

SPECIAL TRAUMATOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 12.5	
		INTEGRATING DISCIPLINE	TOPIC
For2-Tr-008	<p>Describe the pathophysiology of injuries.</p> <p>Explain effects of injuries on the body.</p>	Pathology	Pathophysiology of injuries
For2-Tr-009	<p>Elaborate different methods (naked eye examination, microscopic examination, histochemical and biochemical methods) for determination of age of wound.</p> <p>Describe different methods (naked eye examination, microscopic examination, histochemical and biochemical methods of determination of ante mortem/post mortem nature (vital reaction) of a wound.</p>	Pathology,	Timing of injury / ante mortem, post mortem nature of wound

For2-Tr-010	Link Sequelae of trauma to its original cause and search for the relationship of sequelae to pre-existing disease.	surgery, medicine & Forensic medicine	Ewing's postulates
For2-Tr-011	Give a detailed account of battered baby or Caffey syndrome from a medicolegal point of view. Diagnose a case of a battered baby on the basis of different injuries sustained by a battered baby		Battered baby syndrome
For2-Tr-012	Define torture. Explain reasons, types and complications of torture. Describe medicolegal aspects of torture.		Torture
For2-Tr-013	Examine and prepare Medico-legal report of an injured person with different etiologies in a simulated/supervised environment.		Medicolegal Certification of injury
For2-Tr-014	Define fire arms and ballistics. Classify fire arm. Explain different parts of fire arm weapons. Describe ammunition used in firearms. Explain chain of events of firing		Internal ballistics
For2-Tr-015	To explain the factors affecting the trajectory of bullet after its exit from the muzzle end.		External Ballistics
For2-Tr-016	Interpret wound complex produced by a rifled and non-rifled weapons at different ranges. Calculate the distance of fire from the wound examination. Differentiate between entry and exit wounds of fire arms. Explain medicolegal importance of fire arm injuries.		Terminal Ballistics
For2-Tr-017	Identify gun powders and ammunition used through different methods.		Gun powders
For2-Tr-018	Describe mechanics of blast injuries. Explain effects of blast injuries on human body. Describe medicolegal aspects of blast injuries		Blast injuries

<p>For2-Tr-019</p>	<p>Explain mechanism of injuries to soft and bony tissues of head, neck, chest, abdomen and limbs. Describe effects of injuries to head, neck, chest, abdomen and limbs. Describe medicolegal aspects of regional injuries</p>		<p>Regional Injuries</p>
<p>For2-Tr-020</p>	<p>Classify transport accidents. Describe different factors involved in the causation of RTA. Classify and describe different patterns of injuries sustained by pedestrians and occupants of the vehicles Explain medicolegal significance and prevention of RTA.</p>		<p>Transportation Injuries</p>
<p>For2-Tr-021</p>	<p>Define thermal injuries. Classify thermal injuries-flame burns and scalds. Describe degree of burns according to different classifications. Calculate percentage of burnt surface area and their effects on the body. Describe management of the burnt patient clinically. Appraise causes of death due to burn. Determine age of burn and ante-mortem/post mortem nature of burn. Describe autopsy findings and medico legal importance of burns.</p>		<p>Thermal Injuries / Burn</p>
<p>For2-Tr-022</p>	<p>Classify electrical injuries injuries-low voltage and high voltage Explain factors affecting electrocution. Describe mechanism and causes of death in electrocution. Interpret different patterns of electrical injuries due to low and high voltage current and lightening Describe autopsy findings and medico legal importance of electrocution</p>	<p>Surgery</p>	<p>Electrocution Lightening</p>

For2-Tr-023	<p>Explain deaths from exposure to high environmental temperature like heat stroke, heat cramps and heat exhaustion.</p> <p>Explain deaths from exposure to low environmental temperature like Frost bite, Trench foot, Immersion foot.</p> <p>Describe their mechanism of development, autopsy findings and medicolegal importance.</p> <p>Interpret Starvation, causes, clinical findings, autopsy findings and medicolegal importance</p>		Hyper / Hypothermia/ Starvation
For2-Tr-024	<p>Describe chemical burns</p> <p>Explain mechanism of development of chemical burns</p> <p>Describe autopsy findings</p>		Chemical Burns
	<p>Summarize the chemical buns as per qisas and diyat act.</p> <p>Describe medicolegal importance of chemical burns.</p>		
For2-Tr-025	<p>Define and classify drowning.</p> <p>Explain mechanism of death in wet and dry drowning.</p> <p>Describe external and internal autopsy findings in wet and dry drowning.</p> <p>Interpret biochemical and diatom tests.</p> <p>Emphasize medicolegal importance of drowning</p>		Drowning
MEDICOLEGAL ASPECTS OF SEXUAL OFFENCES			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 4.5	
		INTEGRATING DISCIPLINE	TOPIC
For2-Se-001	<p>Comprehend the terms-impotency, frigidity in females and sterility</p> <p>Explain their causes.</p> <p>Narrate their medico legal importance</p>		Impotency frigidity and sterility
For2-Se-002	<p>Explain signs of virginity and defloration.</p> <p>Interpret medico legal importance</p>		Virginity and defloration

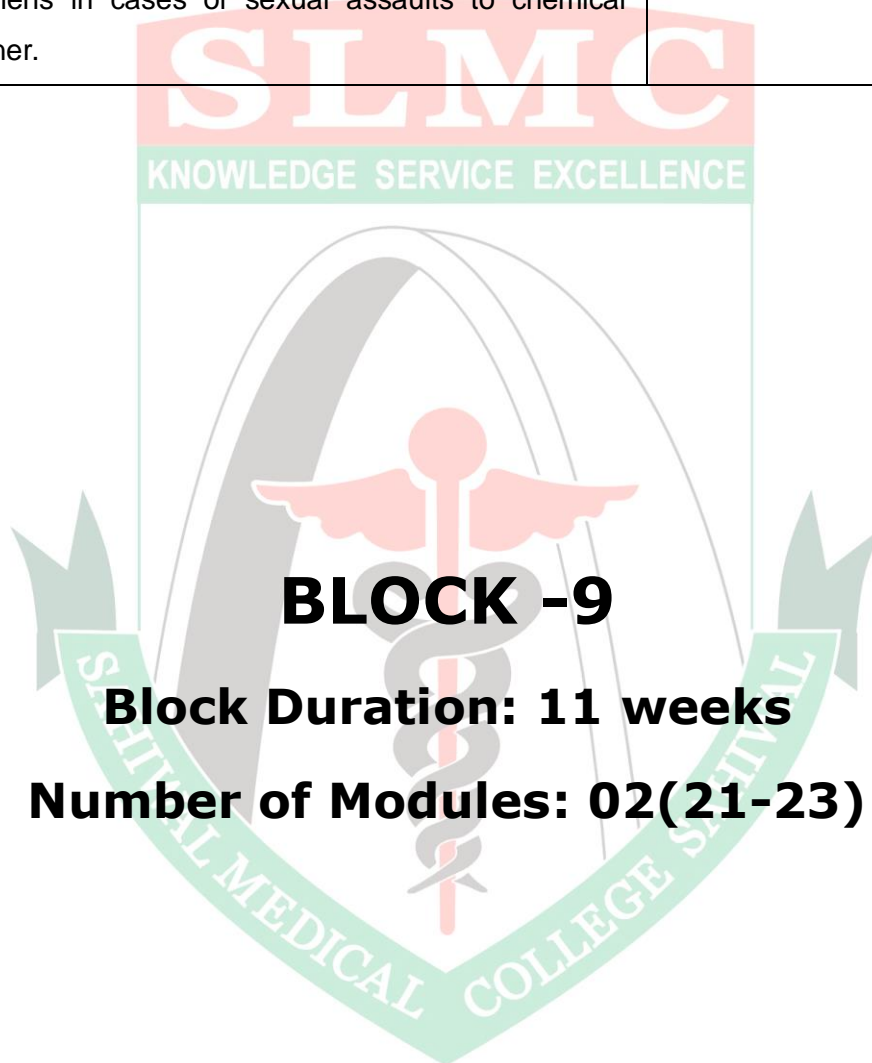
For2- Se-003	Describe presumptive, probable and sure signs of pregnancy in living and dead.	Forensic Medicine & Gyne/obs	Pregnancy
For2- Se-004	Explain recent and old signs of delivery in living and dead.		Delivery
For2- Se-005	<p>Define and classify abortions</p> <p>Explain motives for criminal abortions</p> <p>Reproduce different methods of inducing criminal abortion</p> <p>Outline complications and causes of death due to abortion.</p> <p>Describe findings in living and dead after abortion.</p> <p>Examine the aborted material to assess the age and viability</p> <p>Apply sections of Qisas and Diyat act relevant to abortion.</p>		Abortion/Miscarriage
For2- Se-006	<p>Classify sexual offenses (natural, un-natural and perversions) and explain their medico legal importance.</p> <p>Describe sexual perversions and identify the traits.</p> <p>Reproduce different sections of law relevant to sexual offenses.</p> <p>Explain Medico-legal examination of a victim of sexual assault and issue report.</p> <p>Describe Medico-legal examination of the alleged accused of rape and issue report</p> <p>Know the Medico-legal examination in unnatural sexual offence.</p> <p>Outline collection, preservation and dispatch of specimens in cases of sexual assaults to chemical examiner.</p> <p>Interpret Psycho-pathology of assailant</p> <p>Interpret Psycho-pathology of victim</p> <p>Undertake initial management & referral of victim.</p>		Sexual Offences

For2- Se-007	Define infanticide. State status of infants-still born/dead born/live born. Describe autopsy findings to determine whether live born or not, cause of death, age of new born and others	Forensic Medicine	Infanticide
PRACTICAL / LAB WORK			
TRAUMATOLOGY			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 09	
		INTEGRATING DISCIPLINE	TOPIC
For2-Tr- 026	Recognize and identify common conventional blunt objects, sharp objects, firearms, electrical instruments and chemicals and their medico-legal aspects. (lathi, knife, axe, gandasa, sickle, dagger, razor & stick, fire arms	Forensic medicine	Mechanical injuries
For2-Tr- 027	Differentiate between different types of abrasions		Abrasion
For2-Tr- 028	Assess the age of a bruise on the basis of color changes. Differentiate between a bruise and post mortem staining		Bruise
For2-Tr- 029	Differentiate between a lacerated and incised wound on naked eye examination		wound
For2-Tr- 030	Assess the age of fracture by recognition of healing stages on x rays Apply different sections of Qisas and Diyat Act from examination of fractures on x rays		Age of fracture

For2-Tr-031	<p>Identify hurt and apply relevant section of Qisas and Diyat Act for:</p> <ul style="list-style-type: none"> i. Itlaf-udw ii. Itlaf -slahiat-udw iii. Shajja iv. Jurh 	Hurt / Qisas N Diyat Act
For2-Tr-032	Demonstrate appropriate examination of an injured person and issue the report in a simulated/supervised environment correctly	Certification of injury
For2-Tr-033	<p>Identify different types of fire arm weapons</p> <p>Identify different parts of fire arm weapons</p> <p>Identify different parts of ammunition.</p>	Firearm
	<p>Determine the type of fire arm weapon from the examination of fire arm wound complex.</p> <p>Calculate the firing range of the weapon from appearance of wound.</p> <p>Identify characteristics of entry and exit fire arm wounds.</p>	
For2-Tr-034	<p>Differentiate between dry burn and wet burn.</p> <p>Calculate burnt surface area</p> <p>Determine age and nature of burn on naked eye examination</p>	Burn
	Recognize autopsy findings.	
For2-Tr-035	<p>Recognize between entry and exit wounds of electric currents on body.</p> <p>Describe different pathways of electric currents through human body.</p> <p>Recognize different patterns of electrical injuries.</p>	Electrocuted injury
For2-Tr-036	<p>Recognize different patterns of effects of high/low environmental temperature on the body.</p> <p>Appreciate clinical and autopsy findings of death due to starvation</p>	Hypo / Hypothermia / starvation
For2-Tr-037	<p>Recognize different patterns of Chemical burns over body.</p> <p>Apply relevant sections of Qisas And Diyat Act.</p>	Chemical Burns

For2-Tr-038	<p>Identify different kinds of ligature materials used for hanging</p> <p>Recognize different types of hanging</p> <p>Appreciate nonspecific and specific autopsy findings of hanging.</p> <p>Know how to remove and preserve the ligature material used.</p>	Hanging	
For2-Tr-039	<p>Differentiate between ligature marks due to hanging and strangulation.</p> <p>Appreciate nonspecific and specific autopsy findings of hanging.</p> <p>Know how to remove and preserve the ligature material used.</p>	Strangulation / Hanging	
For2-Tr-040	<p>Appreciate external and internal autopsy findings of death due to throttling.</p> <p>Determine the position of assailant and victim from external marks on neck</p>	Throttling	
For2-Tr-041	<p>Appreciate external and internal autopsy findings of death due to smothering, choking, gagging and traumatic asphyxia</p>	Smothering / Gagging	
For2-Tr-042	<p>Appreciate external and internal autopsy findings of death due to drowning.</p>	Drowning	
SEXOLOGY			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 06	
		INTEGRATING DISCIPLINE	TOPIC

<p>For2- Se-008</p>	<p>Replicate Medico-legal examination of a victim of sexual assault and issue report.</p> <p>Demonstrate Medico-legal examination of the alleged accused of rape and issue report.</p> <p>Copy the Medico-legal examination in unnatural sexual offence.</p> <p>Perform collection, preservation and dispatch of specimens in cases of sexual assaults to chemical examiner.</p>	<p>Forensic medicine</p>	<p>Sexual assault</p>
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BLOCK MANAGEMENT TEAM

HOD Forensic Medicine	Dr. Shahid Nadeem Assistant Professor
Block Coordinator	Dr. Humaira Rehman
3 rd Yr Team Members	Dr. Muhammad Mughan Hameed Dr. Musdaq Javid



FORENSIC MEDICINE			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 05	
		DISCIPLINE	TOPIC

<p>Re2-For-001</p>	<p>Define hanging Enlist types of hanging Enumerate causes of death in hanging Enlist autopsy findings in hanging. Define strangulation. Enlist its sub types Enlist autopsy findings in case of manual strangulation Enlist autopsy findings in case of ligature strangulation Differentiate between strangulation and hanging ligature mark</p>		<p>Hanging/ Strangulation</p>
<p>Re2-For-002</p>	<p>Define suffocation Enumerate deaths which are caused due to suffocation. Define smothering Enlists autopsy findings in case of death due to smothering</p>	<p>Forensic Medicine</p>	<p>Suffocation, Smothering</p>
<p>Re2-For-003</p>	<p>Define gagging Enlists autopsy findings in case of death due to gagging Define choking Enlists autopsy findings in case of death due to choking Define traumatic asphyxia Enlists autopsy findings in case of traumatic asphyxia Discuss medicolegal importance</p>		<p>Gagging, Choking Traumatic Asphyxia and Autoerotic Asphyxia</p>
<p>Re2-For-004</p>	<p>The student be able to: Enlist important Asphyxiant present in the environment Describe their Mechanism of action. Discuss effect on different body systems with increasing blood concentration Enlist sign and symptoms Enlist autopsy findings</p>		<p>Asphyxiant poisons</p>
	<p>Describe their medico legal importance Comprehend the MoA of the Asphyxiant poisons, Diagnose a case when presented to him Plan management</p>		



MODULE RATIONALE

This module prepares the 3rd year MBBS students for the real-world challenges of crime scene investigation, medico-legal frameworks of Pakistan, and dealing with cases of poisoning. This module is critical in developing a holistic understanding of the intersection of the medical profession and law.

MODULE OUTCOMES

- Describe different types of Laws
- Define legal terms relevant to medical practice and explain procedures in the courts of law
- Explain legal aspects of medical practice
- Discuss the principles and methods of crime scene investigations
- Describe different analytical techniques to diagnose the nature of poison/drugs

SUBJECTS INTEGRATED IN THE MODULE

1. Pathology
2. Pharmacology
3. Behavioral Sciences

IMPLEMENTATION TORs

- The time calculation for completion of modules and blocks is based on 35 hours per week. Total hours of teaching, learning and formative/summative internal assessment to be completed in a year are 1200.
- The hours mentioned within each module are the mandatory minimum required. The rest of the hours are left to the discretion of the institution that can be used in teaching, learning and assessment as per decision of the institutional academic council.
- The content and the intended learning outcomes written are mandatory, to be taught, at the level required, as the end year assessment will be based on these.
- However, the level of cognition can be kept at a higher level by the institution.
- The Table of Specifications provided will be used for the three papers of the first professional examination. The same table of specifications should be used for the respective three block exams for internal assessment.

THEORY			
LAW			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 05	
		INTEGRATING DISCIPLINE	TOPIC
For3-L-001	Define and describe different types of law.	Forensic Medicine	Law
For3-L-002	Describe different levels of courts of Pakistan and their judicial powers.		Hierarchy of courts and their judicial powers
For3-L-003	Define different legal terms.		Legal Terms and Procedures
	Understand legal procedures and its presentation in the courts		
For3-L-004	Define and describe types of evidence		Evidence
	Describe the stages of presentation of evidence in the court of law.		
	Explain the types of witness and its presentation in the court		
	Differentiate between dying deposition and declaration.		
For3-L-005	Describe general presumptions and exemptions in law to fix the criminal responsibility		Forensic psychiatry and Criminal Responsibility
	Define insanity, immaturity and intoxication.		
	Define illusions, delusions and hallucinations and their types and medico legal significance.		
	Differentiate between true and feigned insanity.		
	Reproduce different sections of PPC dealing with these factors.		

DEPARTMENT OF FORENSIC MEDICINE & TOXICOLOG

	Describe Mc Naughtan’s rule, Durham,s rule to test the criminal responsibility.		
	Outline the fate of criminal responsibility- Unfit to plead,		
	Diminished responsibility		
	State testamentary capacity.		
For3-L-006	Define consent; describe its types and its role in medical treatment, consent & its legal basis.	Forensic medicine & Behavioral sciences	Consent
	Differentiate between valid and invalid consent.		
	Outline standard procedure of informed consent.		
	Explain the informed consent procedure from a patient before undergoing a major surgical procedure		
	Explain the consent protocol of a minor		
	Prepare a blanket consent form		
	Apply modified procedure of consent taking in special Circumstances.		
For3-L-007	Define medical bioethics.	Forensic medicine & Behavioral sciences	Doctor patient relationship
	Describe principles of ethics.		
	Explain different codes of medical ethics		
	Reproduce duties of doctor towards patients, society and state.		
	Outline the factors responsible for the deterioration of ethical values in medical practice.		
For3-L-008	Explain professional misconduct and its different types.	Forensic medicine & Behavioral sciences	Professional misconduct
	Describe professional secrecy, privileged communication, medico legal significance of medical records.		
	Differentiate between professional misconduct and professional negligence.	Forensic medicine & Behavioral sciences	
	Describe different types of professional negligence.		

For3-L-009	<p>Establish the extent of damage to patient in medical practice.</p> <p>Outline the laws dealing with negligence.</p>		Professional Negligence
For3-L-010	<p>Describe composition of PMDC</p> <p>Explain functions of body-supervision of standards of proficiency, maintenance of register, disciplinary powers.</p> <p>Compare composition of PMDC and PMC ACT 2020</p> <p>Describe objective of ALLOPATHIC SYSTEM 1962</p> <p>Outline Medical and Dental Degree Ordinance 1982.</p> <p>Explain relevant sections of Drug act 1976 and subsequent Amendments.</p> <p>Write Dangerous drug act 1930 and their different sections and rules.</p>	Forensic Medicine	Laws dealing with medical practice
For3-L-011	<p>Describe sections 2,4,5 and 6 of Hadood Ordinance 1979</p> <p>Explain natural & un-natural sexual offences</p> <p>Reproduce criteria of legal marriage and dissolution of marriage.</p>	Forensic Medicine	Laws dealing with sexual offences Hadood Ordinance 1979, Women Protection Act 2006 Legal aspects of marriage, Muslim family law ordinance 1961.
	Define different terms used in the Qisas and Diyat Act relevant to hurt and Qatl		

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For3-L-012	Classify hurt and its subtypes as per Qisas and Diyat Act 1997		Law relevant to Hurtand killings Qisas and Diyat Act 1997
	Classify QATL and its subtypes.		
	Describe ISQAT-E-HAML AND ISQAT-E-JANIN.		
	Understand Mental Health Act 2001		Law relevant to
For3-L-013	Describe the composition and functions of the FEDERAL MENTAL HEALTH AUTHORITY. SEC 3	Forensic Medicine	mental health
	Explain composition and functions of BOARD OF VISITORS.SEC 4		
	Reproduce duration for period of detention for assessment, treatment, urgent admission and emergency holding.SEC 9		
	Outline the procedure of admission of the patient in the psychiatric centre. SEC 10,11		
	Explain holding of mentally disordered persons wandering in public places. SECT19		
	Write the procedure of discharge from psychiatric centre SEC 20		
For3-L-014	Define child abuse		Laws relevant to Domestic violence Child abuse,
	Explain epidemiology		
	Describe clinical features		
	Diagnose a case of child abuse.		
	Reproduce medico legal significance. Apply the knowledge to relevant situation for problem-solving		
For3-L-015	Describe the provisions for medical aid and treatment of injured persons to save their lives and protect their health during emergency.	Forensic Medicine	Injured Person (Medical Aid) Act 2004
	Describe the concept of the ancient law of torts		Workman

For3-L-016	Diagnose the injuries causing disablement and percentage loss of earning capacity.		Compensation Act 1923 Employee social security ordinance 1965
For3-L-017	Discuss the Health Commission Act		Health Commission Act
For3-L-018	Describe the Consumers Protection Act in relation to Forensic Medicine		Consumers Protection Act
For3-L-019	Define and classify euthanasia.		Euthanasia
	Describe different progonist and antagonist views.		
	Reproduce global laws relevant to euthanasia.		
	Discuss ethical and moral issues.		
For3-L-020	Define and classify suicide.	Forensic Medicine	Suicide
	Describe different views about suicide in society.		
	Elaborate high risks groups.		
	Explain different methods used		
	Reproduce preventive measures.		
	Discuss moral and ethical issues.		
	Explain the psychopathology of suicide		

GENERAL TOXICOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 04	
		INTEGRATING DISCIPLINE	TOPIC
	Enlist & define various branches of Toxicology		
	Define terms like drug, poison, dose, acute and chronic poisoning.		

DEPARTMENT OF FORENSIC MEDICINE & TOXICOLOG

For3-Tox-001	Explain the therapeutic index and toxicity rating scale	Forensic Medicine & Chemical Pathology	General Toxicology
	Quote and cite characteristics of homicidal, suicidal, and accidental poisons in home and environment		
	Describe preventive measures of such poisonings		
For3-Tox-002	Differentiate between Drug and Poison		Classification of Poisons
	Classify different poisons according to their mode of action		
	Enumerate legal classification of poisons		
For3-Tox-003	Describe routes of absorption, sites of metabolism and routes of excretion of poisons	Factors affecting the absorption of poison	
	Enlist and describe different factors that modify the patient's response to a toxic agent.		
For3-Tox-004	Enlist the clinical, ethical & statutory duties of a doctor while managing a case of poisoning.	Duties of doctor	
	Collection, preservation, storage and dispatch of samples for toxicological analysis		
For3-Tox-005	Diagnose a case of poisoning in living	Diagnosis of a Poisoning case	
	Enlist various bed side tests used for diagnosis of poisoning		
	Interpret post-mortem findings in a suspected case of poisoning		

<p>For3-Tox-006</p>	<p>Apply general principles in treatment of poisoning cases</p> <p>Prescribe general treatment measures to poisoning cases</p> <p>Briefly describe the procedures to remove the unabsorbed poisons from the body</p> <p>Describe the procedure of Gastric lavage</p> <p>Enlist complications of Gastric Lavage</p> <p>Enumerate contra indications of gastric lavage procedure</p> <p>Describe the role of Activated Charcoal in poisoning patient</p> <p>Enlist indications & contraindications of administering cathartics in poisoning cases</p> <p>Classify antidotes according to their mode of action</p> <p>Define & classify Chelators</p> <p>Enlist properties of ideal chelating agents</p> <p>Enlist & briefly describe the methods of removal of absorbed poisons from the body</p>		<p>Treatment of a poisoned patient</p>
<p>For3-Tox-007</p>	<p>Enlist medico-legal implications of poisoning cases</p>		<p>Laws related to Drugs & poisons</p>
	<p>Comprehend different laws relating to poisons & drugs</p> <p>Enlist important relevant points of Rule 8, Rule 13 & Rule 14 of the Dangerous Drug Act 1930</p> <p>Enlist WHO recommendations being incorporated in the Drug act 1976</p> <p>Enlist the WHO criteria for Drug Dependence</p> <p>Define National Formulary</p>		

For3-Tox-008	<p>Explain, observe/perform the following analytical techniques:</p> <p>I. Spectrophotometric:</p> <ol style="list-style-type: none"> i. Calorimetric ii. Fluorometric iii. Automation. <p>II. Chromatographic:</p> <ol style="list-style-type: none"> i. Thin layer chromatography (TLC). ii. Gas liquid chromatography (GLC). iii. High pressure liquid chromatography (HPLC). iv. Gas liquid mass spectrometry (GL-MS). <p>III. Competitive binding assay or immunoreactive assay:</p> <ol style="list-style-type: none"> i. Radioimmunoassay (RIA). ii. Enzyme immunoassay (EIA). iii. Fluorescent Polarization immunoassay (FPIA). iv. Immunoturbidimetric assay. 	Analytical techniques
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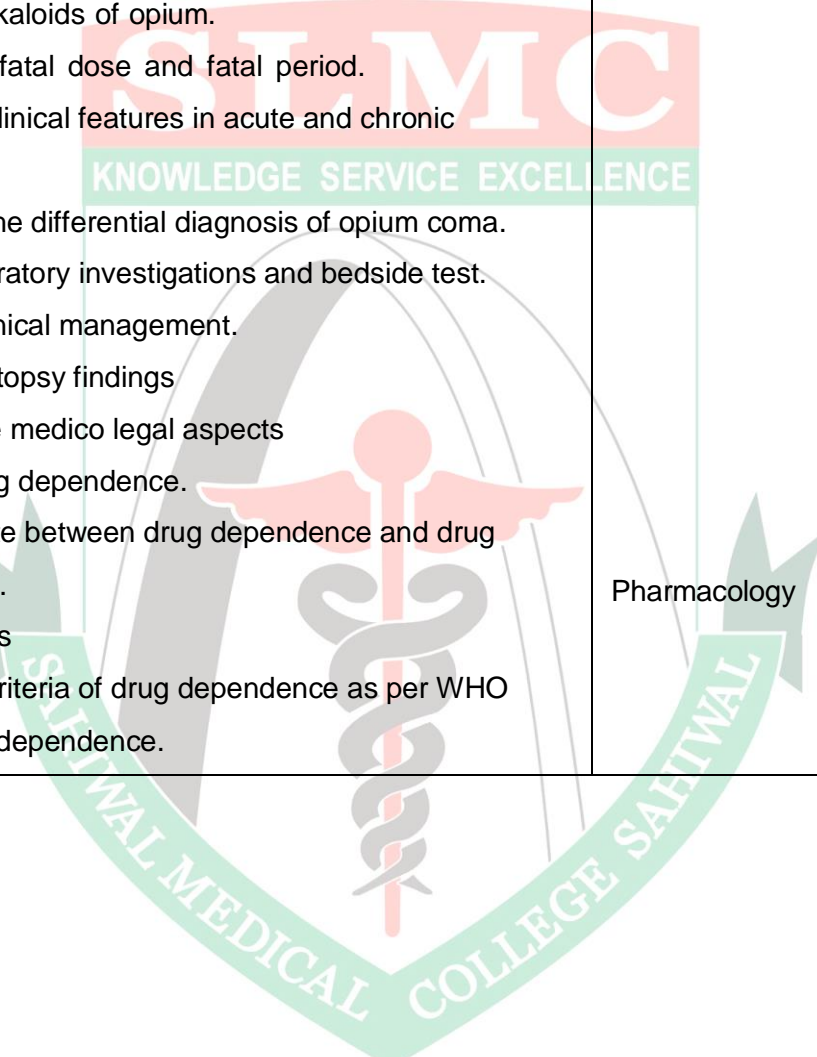
SPECIAL TOXICOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 09	
		INTEGRATING DISCIPLINE	TOPIC
For3-Tox-009	<p>Classify corrosive poisons.</p> <p>Describe sources, physical and chemical properties.</p> <p>Explain mechanism of action.</p> <p>Write the fatal dose and fatal period.</p> <p>Describe the clinical features of the poison.</p> <p>Manage the patient clinically.</p> <p>Explain the autopsy findings.</p>	Forensic medicine & medicine	<p>Corrosives</p> <p>Mineral acids-</p> <p>Sulfuric acid</p> <p>Nitric acid</p> <p>Hydrochloric acid</p> <p>Strong alkalis</p>
	<p>Describe medico-legal aspects.</p> <p>Define Vitriol age.</p> <p>Apply the relevant section of qisas and diyat act to the hurt caused by the poison.</p>		

<p>For3-Tox-010</p>	<p>Classify corrosive poisons. Describe sources, physical and chemical properties. Explain mechanism of action. Write the fatal dose and fatal period. Describe the clinical features of the poison. Manage the patient clinically. Explain the autopsy findings. Describe medicolegal aspects.</p>		<p>Organic acid – Oxalic acid, Carbolic acid, Hydrocyanic acid</p>
<p>For3-Tox-011</p>	<p>Classify snakes Differentiate between poisonous and non-poisonous snakes. Tabulate the differences between the elapids and vipers. Discuss the characteristics of snake venom. Describe the clinical feature of venomous snake bite. Explain clinical management of venomous snake bite. Discuss post mortem features and medico legal aspects of venomous snake bite.</p>	<p>Forensic medicine & medicine</p>	<p>Irritant Poisons Snakes- Elapids Vipers Hydrophidate or sea-snakes</p>
<p>For3-Tox-012</p>	<p>Describe the sources, properties, routes of absorption of the poison. Reproduce the fatal dose, clinical features of the poison. Outline the clinical management of such case. Enlist the samples to be collected, preserved and sent to chemical examiner for its detection. State the post mortem appearances of the poison. Explain the medico legal aspects of acute poisoning of the poison.</p>	<p>Forensic medicine & medicine</p>	<p>Irritant Metallic poisons – (Inorganic metallic origin- Arsenic, Mercury, Lead, Copper Nonmetallic irritant poisons- Phosphorus</p>
	<p>Describe the clinical features of chronic poisoning of the poison. Explain the laboratory investigations to establish the</p>		

	<p>diagnosis.</p> <p>Summarize the clinical management of a case of poisoning with irritant poisons</p> <p>Describe post mortem findings.</p> <p>Describe post mortem findings.</p> <p>Discuss medico legal aspects of chronic poisoning.</p>		
For3-Tox-013	<p>Classify pesticides.</p> <p>Classify organophosphates.</p> <p>Describe the sources of exposure, mechanism of action and fatal dose and fatal period</p> <p>Explain clinical features of poisoning</p> <p>Summarize laboratory investigations and bed side test to confirm the diagnosis.</p> <p>Enlist the samples to be collected and sent to the chemical examiner.</p> <p>Know the clinical management.</p> <p>Reproduce the autopsy findings.</p> <p>Discuss the medico legal aspects.</p>		<p>Agricultural poisons – Organophosphates, Carbamates, Chlorinated Hydrocarbon, Endrin Paraquet Aluminium Phosphide</p>
For3-Tox-014	<p>Recall physical and chemical properties of the poison</p> <p>Describe different preparations of Cannabis</p> <p>Explain clinical features in acute and chronic poisoning,</p> <p>Reproduce fatal dose and fatal period.</p> <p>Know the clinical management of the poison.</p> <p>Enlist the samples to be collected and sent to the chemical examiner.</p> <p>Describe autopsy findings of the case.</p> <p>Explain the difference between the seeds of Datura and chilli.</p> <p>Outline medico legal aspects of acute and chronic poisoning.</p>	Forensic medicine & medicine	<p>Deleriant Poisons – Dhatara Canabis Sativa</p>

<p>For3- Tox-015</p>	<p>Classify barbiturates. Know fatal dose and fatal period. Describe clinical features. Explain clinical management. Describe autopsy findings. Reproduce medico legal importance.</p>		<p>Sedatives and Hypnotics – Barbiturates</p>
<p>For3- Tox-016</p>	<p>Classify alkaloids of opium. Know the fatal dose and fatal period. Describe clinical features in acute and chronic poisoning. Describe the differential diagnosis of opium coma. Know laboratory investigations and bedside test. Explain clinical management. Explain autopsy findings Reproduce medico legal aspects Define drug dependence. Differentiate between drug dependence and drug habituation. Enlist drugs Describe criteria of drug dependence as per WHO criteria. of dependence.</p>	<p>Pharmacology</p>	<p>Somniferous / Narcotics– (Opium - Morphine, Heroin) Drugs of dependence</p>



<p>For3-Tox-017</p>	<p>Define Alcohols Describe different alcohol beverages with different alcohol concentrations. Explain toxicokinetic of alcohols Reproduce clinical features of acute ethyl alcohol poison. Correlate different clinical features with different BAC. Outline clinical management of poisoning Describe the laboratory investigation and samples to be sent to the chemical examiner. Describe protocol of examination of a drunken person. Describe autopsy findings. Reproduce medicolegal aspects.</p>		<p>Inebriants – Ethyl Alcohol / Methanol,</p>
	<p>Describe clinical features of alcoholism. Explain clinical features of methanol toxicity Describe autopsy findings Reproduce medicolegal aspects of methanol poisoning.</p>		
<p>For3-Tox-018</p>	<p>Describe the sources of exposure of asphyxiant gases. State the mechanism of action. Explain clinical features of poisoning. Reproduce clinical management of cases of poisoning. Enlist samples to be collected and sent to chemical examiner. Outline autopsy features Explain medico legal aspects of acute poisoning of asphyxiants gases.</p>	<p>Forensic Medicine</p>	<p>Asphyxiant Gases - Carbon Mono oxide, Hydrogen Sulphide, Carbon Dioxide</p>

For3-Tox-019	<p>Describe source of exposure Explain methods of inhalation. Reproduce clinical features Know the diagnostic findings on X rays chest. Explain clinical management Discuss autopsy findings Outline medico legal aspects of acute poisoning.</p>		<p>CNS Stimulant – Cocaine Amphetamine Methyl phenidate (ritalin) Hallucinogens- LSD,MESCALI NE,PHEN CYCLIDINE Tricyclic anti depressants - Sheesha (Nicotine + Fruits & Herbal Flavors & Coal</p>
For3-Tox-020	<p>Describe source of exposure Explain methods of inhalation. Reproduce clinical features Know the diagnostic findings on X rays chest.</p>	Forensic Medicine	<p>Hydrocarbons-- kerosene oil, Volatile substance abuse Glue sniffing</p>
	<p>Explain clinical management Discuss autopsy findings Outline medico legal aspects of acute poisoning</p>		<p>Sniffing Huffed Bagged</p>
For3-Tox-021	<p>Describe source of exposure Reproduce clinical features Know the diagnostic findings Explain clinical management Discuss autopsy findings Outline medico legal aspects of acute poisoning.</p>		<p>Black stone Paraphenylene diamine (PPD)</p>
FORENSIC SEROLOGY			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 04	
		INTEGRATING DISCIPLINE	TOPIC

For3-FS-001	Define Forensic Serology Describe the Medico-legal importance of Forensic Serology	Forensic Medicine	Definition & medico-legal importance of Forensic Serology
For3-FS-002	Define Trace Evidence Classify Trace Evidence Describe Locard's Exchange Principle		Trace Evidence
For3-FS-003	Describe the protocol of scientific study (identification, collection, preservation, storage, labeling and transport to the concerned quarter) of trace evidentiary material.		Scientific study of trace evidentiary material
For3-FS-004	Enlist the medico-legal importance of different biological fluids & stains	Forensic Medicine	Biological fluids
For3-FS-005	Outline principles of chain of custody and its medico-legal significance		chain of custody
For3-FS-006	Briefly describe the principles of chemical & physiochemical tests to determine the presence of blood in suspected stains Interpret the physical characteristics of a blood stain	Pathology	Blood
	Describe the procedure of examination of blood stain comprising of physical, chemical, physiochemical & confirmatory tests		
	Discuss the principle & importance of spectroscopic analysis of blood in the stain		
	Briefly describe microscopic, Immunological & enzymological methods for species determination of blood stain		
	Explain different blood group systems		
	Briefly describe medico-legal importance of blood grouping		
	Interpret the phenotype & genotype of different ABO blood groups		
For3-	Briefly describe the scheme for examination of Seminal stain including physical, chemical, microscopic & serological tests including DNA Analysis.		Semen

FS-007	Briefly describe the Medico-legal importance of seminal stain	Forensic Medicine	
For3- FS-008	Briefly describe the physical, chemical, serological & microscopic examination of hair		Hair
	Compare & contrast human and animal hair & hair like Structures as fibers.		
	Enlist the Medico-legal significance of hair		
For3- FS-009	Enumerate the tests for determination of other body fluids like Milk, saliva, urine, fecal matter		Body Fluids
	Briefly describe their medico-legal significance		
For3- FS-010	Explain the Structure of DNA.		DNA
	Describe DNA fingerprinting methods		
	Outline the samples needed for DNA profiling, their collection, preservation, storage and dispatch to the analyst.		
	Explain National DNA databank (CODIS).		
	Discuss Ethical Issues relevant to DNA.		
FORENSIC SCIENCES			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 02	
		INTEGRATING DISCIPLINE	TOPIC

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For3-FSc-001	Describe search patterns of scene of crime. Photograph the area/object of interest from scene of crime. Examine, collect, preserve and dispatch trace evidence and record his findings at scene of crime. Identify the stains of different biological fluids, collect, preserve, dispatch and record his findings Explain and demonstrate screening, chemical and microscopic analysis of biological stains. Describe forensic analysis of DNA.	Forensic medicine	Principles and methods of crime scene investigation
For3-FSc-002	Describe the examination of firearm and tool mark evidence	Forensic medicine	Examination of firearm and tool mark evidence
For3-FSc-003	Explain the examination of broken glass		Examination of broken glass

PRACTICAL / LAB WORK

LAW

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 03	
		INTEGRATING DISCIPLINE	TOPIC
For3-L-021	Demonstrate legal procedures and its presentation in the courts	Forensic Medicine	Legal Terms and Procedures
For3-L-022	Demonstrate presentation of different stages of evidence in the court of law. Distinguish between different types of witness and its presentation in the court		Evidence
For3-L-023	Demonstrate the recording of dying deposition and dying declaration step wise.		Dying deposition and declaration

GENERAL TOXICOLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 03	
		INTEGRATING DISCIPLINE	TOPIC
	Assess a suspected patient of poisoning		

For3-Tox-022	Collect, preserve & dispatch the routine viscera of a suspected poisoning case sent to chemical examiner	Forensic Medicine	Poisoning
	Demonstrate the procedure of gastric lavage on a mannequin		
SPECIAL TOXICOLOGY			
CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 04	
		INTEGRATING DISCIPLINE	TOPIC
For3-Tox-023	Identify corrosive poisons. Describe identifying features. Recognize Autopsy features of H ₂ SO ₄ and HNO ₃ Apply the relevant section of qisas and diyat act to the hurt caused by the poison	Forensic Medicine	Mineral acids- Sulfuric acid Nitric acid Hydrochloric acid Strong alkalis
For3-Tox-024	Identify organic acid corrosive poisons Describe identifying features. Explain laboratory investigations Recognize autopsy findings.	Forensic Medicine	Organic acid – Oxalic acid, Carbolic acid, Hydrocyanic acid
For3-Tox-025	Label salient differentiating features of poisonous and non-snakes. Identify snake bite wound. Apply the tourniquet above the site of bite of a patient.	Forensic Medicine	Irritant Animal Poisons (Snakes- Elapids Vipers Hydrophidate or sea-snakes
For3-Tox-026	Identify poison. Describe identifying features. Identify features of chronic arsenic poisoning Identify chronic lead poisoning on x rays Identify chronic lead poisoning (basophilic stippling) on blood cell slide.	Forensic Medicine	Irritant Metallic poisons – (Inorganic metallic origin- Arsenic, Mercury, Lead, Copper

DEPARTMENT OF FORENSIC MEDICINE & TOXICOLOG

	Collect samples to be sent to the chemical examiner.		Nonmetallic irritant poisons- Phosphorus
For3-Tox-027	<p>Diagnose a case of insecticide poisoning</p> <p>Explain laboratory investigations</p> <p>Manage a case of insecticide poisoning</p> <p>Recognize autopsy features</p> <p>Collect, preserve and dispatch the specimens to chemical examiner</p> <p>Perform bedside test for certain pesticides (aluminium phosphide)</p>	Forensic Medicine	<p>Agricultural poisons – Organophosphates, Carbamates Chlorinated Hydrocarbon, Endrin Paraquet Aluminum Phosphide</p>
For3-Tox-028	<p>Identify the poison</p> <p>Describe identifying features</p> <p>Diagnose a case of deliriant poisoning</p> <p>Explain lab investigation</p> <p>Manage the case</p> <p>Recognize autopsy features</p> <p>Collect, preserve and dispatch the specimens to chemical examiner</p>	Forensic Medicine	<p>Deliriant Poisons – Datura Cannabis Sativa</p>
For3-Tox-029	<p>Diagnose a case of sedatives / hypnotic's toxicity</p> <p>Explain lab investigation</p> <p>Manage the case</p> <p>Recognize autopsy features</p> <p>Collect, preserve and dispatch the specimens to chemical examiner</p>	Forensic Medicine	<p>Sedatives and Hypnotics – Barbiturates</p>
For3-Tox-030	<p>Identify the poison (Opium / Poppy capsule)</p> <p>Describe identifying features</p> <p>Diagnose a case of narcotic poisoning</p> <p>Perform bedside test</p> <p>Explain lab investigations</p> <p>Recognize autopsy features</p> <p>Collect, preserve and dispatch the specimens to chemical examiner</p>	Forensic Medicine	<p>Somniferous / Narcotics– (Opium - Morphine, Heroin) Drugs of dependence</p>

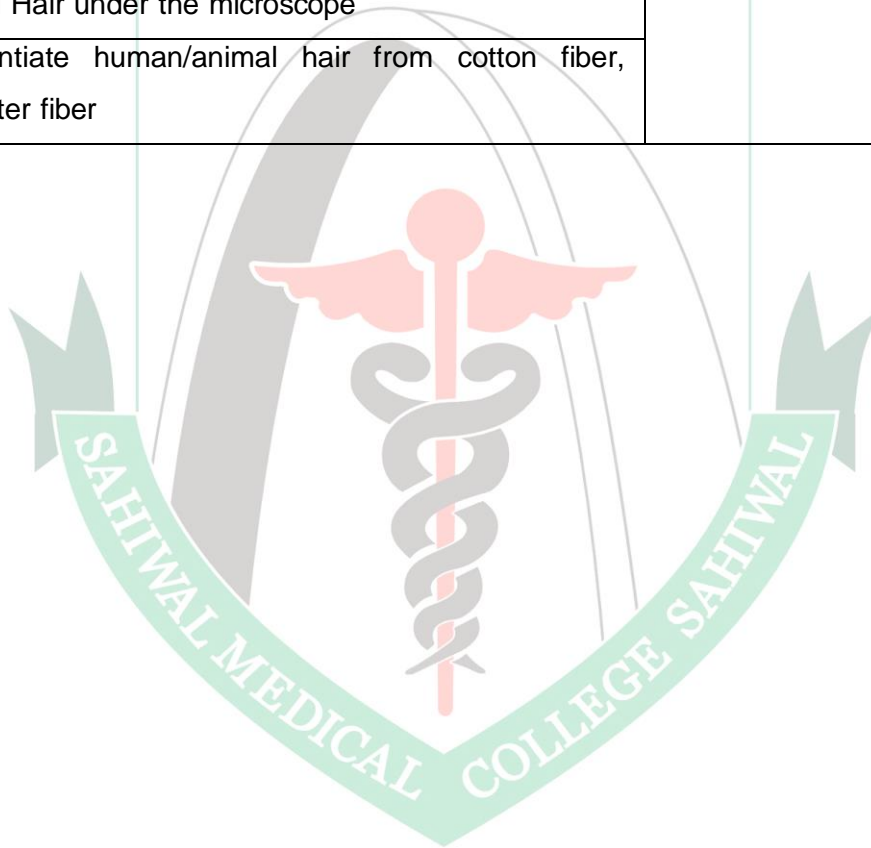
<p>For3-Tox-031</p>	<p>Diagnose a case of Acute alcohol Toxicity (Ethanol / Methanol) Explain lab investigations Manage the case Conduct examination of a case of ethyl alcohol toxicity and certify findings with opinion Collect appropriate samples Recognize autopsy features Collect, preserve and dispatch the specimens to chemical examiner</p>	<p>Forensic Medicine</p>	<p>Inebriants – Ethyl Alcohol / Methanol,</p>
<p>For3-Tox-032</p>	<p>Diagnose a case of Asphyxiant gases Explain lab investigations Manage the case Recognize autopsy features Collect, preserve and dispatch the specimens to chemical examiner</p>	<p>Forensic Medicine</p>	<p>Asphyxiant Gases - Carbon Mono oxide, Hydrogen Sulphide, Carbon Dioxide</p>
<p>For3-Tox-033</p>	<p>Identify the poison Describe identifying features Diagnose the case Explain lab investigation Manage the case Recognize autopsy features Collect, preserve and dispatch the specimens to chemical examiner</p>	<p>Forensic Medicine</p>	<p>CNS Stimulant – Cocaine Amphetamine Methyl phenidate (ritalin) Hallucinogens- LSD, MESCALINE, PHEN CYCLIDINE Tricyclic anti depressants - Sheesha (Nicotine + Fruits & Herbal Flavors & Coal)</p>

For3-Tox-034	Identify the poison Diagnose the case Explain lab investigation	Forensic Medicine	Hydrocarbons-- -- kerosene oil - Volatile
	Manage the case Recognize autopsy features Collect, preserve, and dispatch the specimens to the chemical examiner		substance abuse - Glue sniffing - Sniffing - Huffed - Bagged
For3-Tox-035	Identify the poison Diagnose the case Explain lab investigation Manage the case Recognize autopsy features Collect, preserve, and dispatch the specimens to the chemical examiner	Forensic Medicine	Black stone Paraphenylene diamine (PPD)

FORENSIC SEROLOGY

CODE	SPECIFIC LEARNING OUTCOMES	TOTAL HOURS = 06	
		INTEGRATING DISCIPLINE	TOPIC
For3-FS-011	Categorize different trace evidence to Biological & Non-biological sources	Forensic Medicine	Trace evidence
For3-FS-012	Identify, collect, preserve, label and dispatch trace evidentiary material to the concerned quarters.		The scientific study of trace evidentiary material
For3-FS-013	Interpret the physical characteristic of a suspected blood stain with naked eye & under UV lamp		Bloodstain
For3-FS-014	Preserve & seal the clothes with suspected blood/seminal stain	Forensic Medicine	Cloth examination
For3-FS-015	Perform Screening tests (Benzedine & Phenolphethein/Kastle Mayer) on suspected blood stain Identify the Takayama (Haemochromogen) & Teichmann (Haemin) Crystals under the microscope		Blood stain

	Identify different absorption bands of hemoglobin & its derivatives with spectroscope		
	Perform forward & reverse blood grouping techniques & interpret the results		
	Differentiate various species (human, hen, goat and camel) with the help of microscopic examination of RBCs		
For3- FS-016	Identify & confirm the presence of semen with the help of microscopic examination		Semen
For3- FS-017	Prepare the slide of hair & Differentiate Human & Animal Hair under the microscope		Hair
	Differentiate human/animal hair from cotton fiber, polyester fiber		



MBBS YEAR-3

Subject	Theory		Practical			Total
BLOCK 7 Modules (Foundation-II + Hematopoietic, Immunity & Implant + General & Clinical Pharmacology + Forensic Medicine & Toxicology-I)	Part I MCQs (140)	140 Marks	Practical / Clinical Examination	11 OSPE 01 OSCE 03 OSVE	Marks 88 10 42	350
	Internal Assessment 10%	35 Marks	Internal Assessment 10%	35 Marks		
	Total	175	Total	175		
BLOCK 8 Modules (Neoplasia + Infectious Diseases + Musculoskeletal & Locomotion-II + Forensic Medicine & Toxicology- II)	Part I MCQs (90)	90 Marks	Practical / Clinical Examination	11 OSPE 01 OSCE 03 OSVE	Marks 88 10 42	350
	Internal Assessment 10%	35 Marks	Internal Assessment 10%	35 Marks		
	Total	175	Total	175		
BLOCK 9 Modules (Cardiovascular-II + Respiratory II + Community Medicine & Public Health + Family Medicine I + Forensic Medicine & Toxicology- III)	Part I MCQs (140)	140 Marks	Practical / Clinical Examination	11 OSPE 01 OSCE 03 OSVE	Marks 88 10 42	350
	Internal Assessment 10%	35 Marks	Internal Assessment 10%	35 Marks		
	Total	175	Total	175		
Total Marks:						1050

Note:

- Time for 140 MCQs will be 2 Hours 30 mins
- Time for each OSPE, OSCE and OSVE station will be eight (08) minutes.
- No grace marks shall be allowed in any examination or practical under any guise or name.

Time Tables



SAHIWAL MEDICAL COLLEGE, SAHIWAL

TIME TABLE FOR 3RD YEAR MBBS (S-14) BLOCK 7 2026

No. Pharma/SLMC/SWL 41 24 March to 15 May

Dated: 16/03/2026

DAYS	08:00 AM to 09:00 AM	09:00 AM to 10:00 AM	10:00 AM to 11:00 AM	11:00 AM to 11:15 AM	11:15 AM TO 12:15 PM			12:15 PM to 2:00 PM	
MONDAY	Forensic Medicine	Pharmacology	Pathology	B R E A K	Pharmacology Practical-A	Pathology Practical-B	Forensic Medicine Practical-C	Clinical Wards	
TUESDAY	Pathology	Forensic Medicine	Pharmacology		Pharmacology Practical-B	Pathology Practical-C	Forensic Medicine Practical-A	Clinical Wards	
WEDNESDAY	Pharmacology	Pathology	B. Sciences		Pharmacology Practical-C	Pathology Practical-A	Forensic Medicine Practical-B	Clinical Wards	
THURSDAY	Pathology	Pharmacology	Pharmacology		Pharmacology SGD/Practical-A	Pathology SGD/Practical-B	Forensic Medicine SGD/Practical-C	Clinical Wards	
FRIDAY	Forensic Medicine	Pathology	10:00 AM to 11:30 AM		JUMMA BREAK				
			Pharmacology SGD/Practical-B	Pathology SGD/Practical-C	F. Medicine SGD/Practical-A				
DAYS	08:00 AM to 09:00 AM	09:00 AM to 10:00 AM	10:00 AM to 11:00 AM	11:00 AM to 11:15 AM	11:15 AM TO 12:15 PM			12:15 PM to 01 PM	01 PM to 02:00 PM
Saturday	Pharmacology/SDL	PERLS	Surgery/Medicine (Alternative week)	BREAK	Pharmacology SGD/Practical-C	Pathology SGD/Practical-A	Forensic Medicine SGD/Practical-B	Biochemistry /Anatomy/Physiology (3 week each)	C. Medicine

Prof. Dr. Asad Mahmood
HOD Pharmacology

Prof. Dr. Raees Abbas
HOD Pathology

Dr. Shahid Nadeem
HOD F. Medicine

Dr. Mumtazir Mehdi
HOD B. Sciences

Prof. Dr. Muhammad Anjum
Professor of Surgery
STH / Sahiwal Medical College
Sahiwal

Dr. Rizwan Ishaque
HOD Medicine

Dr. Fariha Muzammil
Director Students Affairs

CC:

1. The Principal Sahiwal Medical College
2. The Director DME





DEPARTMENT OF MEDICAL EDUCATION

**SAHIWAL MEDICAL COLLEGE, SAHIWAL TEACHING HOSPITAL, Sahiwal – 57000,
Pakistan Ph. #: 040-4502470**

No. 631/DME/SLMC/SWL

Dated: 04-06-2025

TIME TABLE FOR 3RD YEAR MBBS SESSION 2025 BLOCK 08

DAYS	08:00 AM to 09:00 AM	09:00 AM to 10:00 AM	10:00 AM to 11:00 AM	11:00 AM to 11:15 AM	11:15 AM TO 12:15 PM			12:15 PM to 02:00 PM	
MONDAY	Forensic Medicine	Pharmacology	Pathology	B R E A K	Pharmacology Practical -A	Pathology Practical -B	Forensic Medicine Practical-C	Clinical Wards	
TUESDAY	Pathology	Pharmacology	B. Sciences		Pharmacology Practical -B	Pathology Practical -C	Forensic Medicine Practical-A	Clinical Wards	
WEDNESDAY	Pharmacology	Pathology	Forensic Medicine		Pharmacology Practical -C	Pathology Practical -A	Forensic Medicine Practical-B	Clinical Wards	
THURSDAY	Surgery	Pharmacology	Pathology		Pharmacology Practical -A	Pathology Practical -B	Forensic Medicine Practical-C	Clinical Wards	
FRIDAY	Pharmacology	Pathology	11:00 AM to 12:00 PM			JUMMA BREAK			
			Pharmacology Practical -B	Pathology Practical -C	F. Medicine Practical-A				
DAYS	08:00 AM to 09:00 AM	09:00 AM to 10:00 AM	10:00 AM to 11:00 AM	11:00 AM to 11:15 AM	11:15 AM TO 12:15 PM			12:15 PM to 01:15 PM	01:15 PM to 02:00 PM
Saturday	Forensic Medicine	PERLs	Medicine	BREAK	Pharmacology Practical -C	Pathology Practical -A	Forensic Medicine Practical -B	Pharmacology	C. Medicine

Msham
Dr. Ahmad Zeeshan

**Director DME
Sahiwal Medical College, Sahiwal**

cc.

1. The Principal Sahiwal Medical College, Sahiwal
2. The Director Student affairs SLMC, Sahiwal
3. The Director Admin & Co SLMC, Sahiwal
4. All Basic & Clinical HODs, SLMC, Sahiwal.
5. Office Copy





DEPARTMENT OF MEDICAL EDUCATION

SAHIWAL MEDICAL COLLEGE, SAHIWAL TEACHING HOSPITAL, Sahiwal – 57000,
Pakistan Ph. #: 040-4502470

No. 692/DME/SLMC/SWL

Dated: 01-10-2025

TIME TABLE FOR 3RD YEAR MBBS SESSION 2025 BLOCK 09

DAYS	08:00 AM to 09:00 AM	09:00 AM to 10:00 AM	10:00 AM to 11:00 AM	11:00 AM to 11:15 AM	11:15 AM TO 12:15 PM			12:15 PM to 02:00 PM	
MONDAY	Forensic Medicine	Pharmacology	Pathology	B R E A K	Pharmacology Practical -A	Pathology Practical -B	Forensic Medicine Practical-C	Clinical Wards	
TUESDAY	Medicine	Pharmacology	C. Medicine		Pharmacology Practical -B	Pathology Practical -C	Forensic Medicine Practical-A	Clinical Wards	
WEDNESDAY	Pharmacology	Pathology	Forensic Medicine		Pharmacology Practical -C	Pathology Practical -A	Forensic Medicine Practical -B	Clinical Wards	
THURSDAY	Surgery	Pharmacology	Pathology		Pharmacology Practical -A	Pathology Practical -B	Forensic Medicine Practical -C	Clinical Wards	
FRIDAY	Pharmacology	Pathology	11:00 AM to 12:00 PM			JUMMA BREAK			
			Pharmacology Practical -B	Pathology Practical -C	F. Medicine Practical-A				
DAYS	08:00 AM to 09:00 AM	09:00 AM to 10:00 AM	10:00 AM to 11:00 AM	11:00 AM to 11:15 AM	11:15 AM TO 12:15 PM			12:15 PM to 01:15 PM	01:15 PM to 02:00 PM
Saturday	Forensic Medicine	PERLs	Medicine	BREAK	Pharmacology Practical-C	Pathology Practical -A	Forensic Medicine Practical-B	Pharmacology	B. Sciences

M. Shauq
Dr. Ahmad Zeeshan

Director DME
Sahiwal Medical College, Sahiwal

cc.

1. The Principal Sahiwal Medical College, Sahiwal
2. The Director Student affairs SLMC, Sahiwal
3. The Director Admin & Co SLMC, Sahiwal
4. All Basic & Clinical HODs, SLMC, Sahiwal.
5. Office Copy



Third Year MBBS		
Sr.	Event	Timeline
1.	Commencement of Classes	16 March 2026
2.	Coursework for Block-7 (09 weeks)	16 th March 2026 to 22 nd May 2026
3.	Block-7 Exam & submission of Internal Assessment	25 th May 2026 to 5 th June 2026
4.	Coursework for Block-8 (11 weeks)	8 th June 2026 to 14 th June 2026
5.	Summer Vacation	15 th June 2026 to 12 th July 2026
6.	Coursework for Block-8 (continuation)	13 th July 2026 to 19 th September 2026
7.	Block-8 Exam & submission of Internal Assessment	21 st September 2026 to 26 th September 2026
8.	Coursework for Block-9 (11 weeks)	28 th September 2026 to 4 th October 2026
9.	Extracurricular/Sports Week *With conduct of Classes/academic activities in morning	5 th October 2026 to 10 th October 2026
10.	Coursework of Block-9 (Continuation)	12 th October 2026 to 12 th December 2026
11.	Block-9 Exam & submission of Internal Assessment	15 th December 2026 to 24 th December 2026
12.	Preparation Leaves	28 th December 2026 to last week January 2027
13.	Commencement of Professional Examination	1 st Week of February 2027



TEXTBOOKS AND REFERENCES

- Knight's Forensic Pathology by Barnard Knight 3rd edition
- G. Principles and Practice of Forensic Medicine by Prof. NasibR. Awan,2nd edition
- Forensic DNA Typing – 2nd Edition, Author: John M. Butler
- Parikh's Text book of Medical Jurisprudence, Forensic Medicine and Toxicology by C.K. Parikh 6th Ed., CBS Publisher.
- Gun Shot Wounds 2nd edition by V.J.Deimaio
- Knight B. Simpson's Forensic Medicine.
- Knight and Pekka. Principles of Forensic Medicine

