BACHELOR OF PARA MEDICAL TECHNOLOGY (BPMT)

Course Name :- Forensic Medical Science

Introduction

Forensic Medicine and Toxicology has always been an important interface between law and medicine. The important role played by forensic medicine experts in assisting law enforcement agencies and judiciary is unquestionable and indispensible. The changing socio economic dynamics of society has resulted in ever increasing incidence of crime in society. Departments of forensic medicine all over the country are increasingly overburdened by excessive medicolegal work. It is high time that the work force of these departments is supplemented by trained technicians who will assist medico legalists in their work , be it postmortem examinations , crime scene investigations , collection and preservation of evidence etc.

Goal

The bachelor of paramedical technology (BPMT) course in forensic medicine has been designed to create qualified paramedical human resource to assist forensic medicine experts in performance of their professional work in various cases and capacities. It is expected that they shall render their services in assisting various procedures , maintain medico legal records , assist in performing tests/ procedures in various matters related to forensic pathology , clinical forensic medicine, toxicology, postmortem room and cold storage management , embalming , biomedical waste management etc.

Integration

The course shall provide an integrated approach with allied disciplines like Anatomy, Microbiology , Pathology, Radiology, Forensic Science Laboratory, Medical Records, Casualty etc. to impart training regarding various medicolegal issues encountered at all levels of investigation. Integration with relevant disciplines will provide a scientific basis for the investigation of crime.

BACHELOR OF PARA MEDICAL TECHNOLOGY (BPMT)

Course Name :- Forensic Medical Science

Learning Objectives

First BPMT

By the end of first year of the course, the student should be able to:

1. Identify basic Medico legal cases
2. Describe the Medico-legal responsibilities of forensic medicine technician while rendering service.
3. Describe the basic anatomy of body
4. Describe the basic functioning of various body system
5. Describe the prerequisites of various medico legal cases (postmortem & ante mortem)
6. Describe basic formalities of dispatching and receiving various sample of medico legal importance.
7. Identify various instruments and equipments in laboratories.
8. Describe the working and maintenance of various instruments and equipments in laboratories.
9. Select the appropriate form used in examination of medico legal cases (postmortem, Injury report ,sexual assault cases etc)
10. Maintain medico legal records as per set protocol
11. Enumerate different constituents of body fluids (eg. blood, urine, CSF, etc)

BACHELOR OF PARA MEDICAL TECHNOLOGY (BPMT)

Course Name :- Forensic Medical Science

1st Year: Assessment System & Syllabus

Sr. No	Paper	Subject	Subject Code	Theory			Practical			Total Marks
				IA	Final	Total	IA	Final	Total	
1	Paper – I	Pre-clinical Sciences		30	60	90	30	80	110	200
2	Paper – II	Para-clinical Allied Sciences		30	60	90	30	80	110	200
3	Paper - III	Forensic Medicine		30	60	90	30	80	110	200

Rotational Posting First BPMT(Forensic Medical Science)

Paper No.	Subject	Coordinating department	Duration of Posting
1	Preclinical basic sciences	Forensic Medicine	Anatomy:2 weeks Physiology: 1 week Biochemistry:1 week
2	Paraclinical Allied Sciences	Forensic Medicine	Pathology, Microbiology, Pharmacology 1 week each.
3	Forensic Medicine	Forensic Medicine	Remaining duration.

Students will join the parent department (Forensic medicine) immediately after the admission. They will be posted in various preclinical and paraclinical subjects by the parent department. For rest of the period in first year the students will work in Forensic Medicine department. The theory curriculum will be completed by parent department in coordination with other departments.

Paper – I
Subject :- Pre-clinical Sciences
(Anatomy, Physiology, Biochemistry)

Sr. No.	Topics	No of Hours
1	Introduction to Anatomy	1 hours
2	Introduction to various body parts and systems	1 hours
3	Organization of Human body, cell	1 hours
4	Composition and functions of blood	1 hours
5	Bones and teeth (Identification with Nomenclature)	3 hours
6	Joints (Identification with Nomenclature)	2 hours
7	Introduction to principles and application of anthropometry with reference to instrument used.	3 hours
8	Anatomy & Functions of respiratory System (Organ identification with nomenclature and functions in brief)	1 hours
9	Anatomy & Functions of cardiovascular system (Organ identification with nomenclature and functions in brief)	2 hours
10	Anatomy & Functions of Abdominal Organs , GI system (Organ identification with nomenclature and functions in brief)	1 hours
11	Anatomy & Functions of Pelvic Organs and external genitalia (Organ identification with nomenclature and functions in brief)	2 hours
12	Anatomy & Functions of Nervous System (Organ identification with nomenclature and functions in brief)	1 hours
13	Anatomy & Functions of Endocrine glands (Organ identification with nomenclature and functions in brief)	1 hours
14	Introduction and scope of biochemistry	2 hours
15	Carbohydrates, proteins, lipids and nucleic acid. (only introduction, definition and classification) DNA and RNA: Structure and properties.	2 hours
16	Importance of some minerals- sodium, potassium, calcium, phosphorous, iron, copper, chloride, fluoride.	1 hours
17	Introduction to forensic medical lab technology: General introduction Role of medical lab technologists, and responsibility, safety measures and first aid.	3 hours
18	Identification, Cleaning and care of general laboratory glassware and equipment. Elementary knowledge of analytical biochemistry. Principles, functions and uses of balances, centrifuge machines, colorimeters, spectrophotometer, flame photometer, electrophoresis and chromatography.	4 hours
19	Basic Formalities of dispatching & receiving biological specimens.	2 hours
20	Principles, procedures and instruments used in examination of body fluids (semen, vitreous humour, CSF, blood, urine)	2 hours
	Total	**36 hours**

Practical Paper I
Pre-clinical Sciences

Sr. No	Practical and demonstration:	Practical Hour
1	Orientation visit to department of Anatomy	2 hours
2	Various methods of body measurements and recording of body and organ weight	2 hours
3	Identification of body parts and body cavities	3 hours
4	Identification of important organs	4 hours
5	Identification of various bones	4 hours
6	Identification and application of various instrument in anthropometry	4 hours
7	Orientation and visit to department of Physiology	2 hours
8	Introduction to Biochemistry department	2 hours
9	Practical aspect of safety measures to take in laboratory work.	4 hours
10	Identification and application of various glass ware and equipments used in biochemistry department	6 hours
11	Preparation of various stalk solution necessary for forensic medical laboratory.	6 hours
12	Preparation of various preservative solutions in relation to biological fluids.	6 hours
	Total	**45 hours**

As all these contents are of basic nature and at undergraduate level, all these lectures are to be conducted by the parent department. For practicals, help of other departments can be taken.

Paper – II
Para-clinical Allied Sciences
(Pathology, Microbiology, Pharmacology)

Sr. No.	Topics	No of Hours
1	Introduction and scope of Pathology	1 hour
2	Introduction to Pathology lab, various types of specimens received	2 hours
3	Working and maintenance of instruments in pathology department.	3 hours
4	General principles of Haematology techniques collection, preservation and processing in relation to blood grouping (antigen, antibody, ABO & Rh system).	2 hours
5	General principles of Clinical Pathology techniques sample collection, processing for routine test, normal urine & urine examination	3 hours
6	General principles of Histopathology techniques collection, fixation, processing & routine staining	5 hours
7	General principles of Autopsy & Museum	2 hours
8	Introduction to microbiology lab, various types of specimens received	1 hour
9	A knowledge of working and maintenance of the following Incubators, Refrigerators, Water baths, Ovens, Steamers, Autoclaves, Inspissator, Centrifuges, Vacuum Pumps, Water Steel. Cleaning and sterilization of syringes and needles. Sample glass wares.	2 hours
10	Sterilization: Methods of sterilization and their uses. Chemical, dry heat, steam sterilization, Tyndallisation, filtration, sterilization by ultraviolet light.	1 hour
11	Care and use of microscope. Dark ground illumination, fluorescence and microscopy.	2 hours
12	Introduction to various types of media used for culture. Common methods of inoculation and dispatch. Preparation and sterilization of media.	1 hour
13	Brief introduction to sending biological samples like pus, blood, urine, CSF, bile, pleural fluids, ascitic fluid and gastric contents for microbiological examination. With particular reference to cases like burns, septicaemia, tuberculosis, meningitis, gangrene, gastroenteritis, food poisoning, malaria, dengue.	3 hours
14	Introduction to pharmacology	1 hour
15	Roots of administration, absorption, metabolism, excretion of drugs.	1 hour
16	Adverse drug reaction (idiosyncrasy, allergy and anaphylaxis) Introduction	2 hour
17	Introduction to equipments like gas and liquid chromatography useful in drug/ toxin levels.	
18	Introduction to various drug schedules	1 hour
19	Brief introduction to ICMR guidelines and law related to drug trials.	1 hour
	Total	34 hours

Practical Paper II
Subject :- Para-clinical Allied Sciences
(Pathology, Microbiology, Pharmacology)

Sr. No.	Topics	No of Hours
1	Orientation to pathology department and their working pattern	2 hours
2	Hands on experience on microscope	2 hours
3	Introduction to principles and working of various instruments in pathology department	3 hours
4	Collection, preservation and dispatch of tissues for histo-pathological examination	3 hours
5	Receiving and record preparation of tissues for histo-pathology	2 hours
6	Introduction to procedure of pathological examination of body fluid like CSF, Pleural fluid, abdominal fluid.	2 hours
7	Identification of organs having fatal systemic pathological lesions like Cerebro-	4 hours

	vascular accident, Acute myocardial infarction, T.B., Cirrhosis of liver, Ulcer, DIC, Electrocution.	
8	Orientation of Microbiology department	2 hours
9	Receiving, recording of samples and their cataloguing in microbiology department.	2 hours
10	Identification and working of instruments and equipments in microbiology department	4 hours
11	Sterilization technique	4 hours
12	Identification, use and care of microscopes.	2 hours
13	Identification of various types of media used and brief introduction to methods of inoculation.	4 hours
14	Collection and forwarding of biological sample for microbiological examination.	3 hours
15	Orientation and working of Pharmacology department.	2 hours
16	Identification of generic and brand names of drugs causing adverse drug reaction.	2 hours
17	Working and application of gas chromatography (Introduction)	2 hours
	Total	**45 hours**

These entire practicals are to be conducted by the departments of Pathology, Microbiology and Pharmacology during the rotational posting of students.

Paper – III
Forensic Medicine

Sr. No.	Topics	No of Hours
1	Introduction to Forensic Medicine & Medico legal work (Definition, Scope, Application, Importance)	2 hour
2	Duties and responsibilities in medicolegal work.	2 hour
3	Different proformas used in Medico legal cases and medicolegal Record keeping.	2 hour
4	Brief introduction to Legal procedure (court, evidence, witness)	2 hour
5	Brief introduction to Identification in living and dead	2 hour
6	Brief introduction to procedures, Documentation and Related laws in different Clinical Medico legal cases such as sexual Assault, Injuries, alcoholics, Age determination, Potency, Psychiatry, Burns, Poisoning cases	8 hours
7	Death Declaration & Certification.	2 hours
8	Medico legal Autopsy (Definition, prerequisite procedures, Related laws, protocol, Documentation)	3 hour
9	Collection, Preservation, Dispatch of the evidence material in c/o M.L. Autopsy	3 hours
10	Introduction and orientation of Autopsy Section and Casualty,	8 hours
11	Determination of blood grouping (ABO and Rh grouping)	3 hours
	Total	**37 hours**

Practical Paper III
Subject :- Forensic Medicine

Sr. No.	Topics	No of Hours
1	Orientation to Forensic Medicine Department	2 hours
2	Hand on experience in obtaining identification marks in living and dead.	2 hours
3	Hand on experience on examination, preservation and dispatch of clothes of subject.	3 hours
4	Various sample collection, preservation, sealing, labelling and handing over procedure in clinical medicolegal cases.	5 hours
5	Various sample collection, preservation, sealing, labelling and handing over procedure in medicolegal post-mortem cases.	8 hours

6	Hands on experience in medicolegal record keeping and its maintenance.	4 hours
7	Visit to casualty and observation of its working.	4 hours
8	Visit to different clinical departments which are concerned with medicolegal work such as Radiology, Gynaecology, Paediatrics, Medicine, ICU, orthopaedics and O.T.	12 hours
9	Handling of different instruments and equipments in Forensic Medicine Department	2 hours
10	Observation of working of Cold storage and its maintenance.	2 hours
11	Handling of different autopsy instrument and protective equipments.	3 hours
12	Observation of embalming procedure.	3 hours
13	Observation of biological waste management procedures.	2 hours
14	Processing of tissue for histo-pathology examination	4 hours
15	Preparation of blocks and section of tissue samples	4 hours
16	Preparation and staining of tissue slides.	4 hours
	Total	**50 hours**

BACHELOR OF PARA MEDICAL TECHNOLOGY (BPMT)

Course Name :- Forensic Medical Science

Learning Objectives

Second Year

By the end of second year of the course, the student should be able to:

1. Describe responsibilities in criminal matters and respect for the law of the state
2. Perform collection, preservation and dispatch of various evidences collected during investigation of medico-legal case.
3. Enumerate various biochemical and others tests relevant to forensic investigation
4. Assist in conducting examination and documentation in medico-legal cases
5. Collect, preserve and dispatch relevant material for ancillary investigation.
6. Identify common medico-legal emergencies
7. Generate, maintain, preserve and retrieve medico-legal records.
8. Enumerate important laws of IPC & CR PC in relation to medico legal cases and various acts related to dead bodies, including cadaveric donation.
9. Describe the basic principles of tissue processing.
10. Describe the basic principles of analytical toxicology related to common poisons.
11. Describe the principles of preparation of dry and wet specimens, charts, models, etc for museum.

Teaching learning methods

Teaching learning methods should be lectures , tutorials , practical demonstrations. Didactic lectures should not exceed one third of the time schedule. Two thirds of the schedule should include practicals , demonstrations , group discussions , seminars and tutorials. The learning process should include hands on experiences & other case studies to initiate enquiries in criminal matters and medico legal problems.

Teaching heads	Second year	Third year
Lectures	40 hours	40 hours
Lecture cum demonstration	40 hours	40 hours
Practicals	100 hours	100 hours
Rotational postings	20 weeks	20 weeks
Any other	Project/ case study/ Postings at multi speciality Corporate hospitals-elective	Project/ case study/ Postings at multi speciality Corporate hospitals-elective

BACHELOR OF PARA MEDICAL TECHNOLOGY (BPMT)

Course Name :- Forensic Medical Science

2nd Year: Assessment System & Syllabus

Sr. No	Paper	Subject	Subject Code	Theory			Practical			Total Marks
				IA	Final	Total	IA	Final	Total	
1	Paper – I	Medico Legal Records, Identification, Autopsy - I		30	60	90	30	80	110	200
2	Paper – II	Forensic Pathology and relevant Laws - II		30	60	90	30	80	110	200
3	Paper - III	Clinical Forensic Medicine, Medical Toxicology - III		30	60	90	30	80	110	200

Paper-I

Subject: - Medico Legal Records, Identification, Autopsy - I

Sr. No.	Topics	No of Hours
1	Legal procedure and medico legal records , Duties and responsibilities	05
2	Communication, correspondence, rules, laws and regulations concerned with the same	10
3	Identification in living and dead. Principles and procedures in case of determination of age, sex, race, anthropometry, dactylography, examination of hair, DNA fingerprinting, superimposition and photography.	10
4	Autopsy and postmortem room procedures. Body donation protocol and procedures.	05
5	Introduction to Principles & Practice of cadaveric donation	02
6	Lab Management & Planning reception & recording of specimens, cataloging & indexing , maintenance of lab record (Pathology, Microbiology, Pharmacology)	03

Paper-II

Subject :- Forensic Pathology and relevant Laws – II

Sr. No.	Topics	No of Hours
1	Forensic pathology – Investigation in various unnatural deaths.	25
2	Various techniques Tissue processing for H.P. E.	05
3	Relevant laws – IPC and CRPC	05
4	Laboratory Management and Planning. The reception and recording of specimen, cataloguing and indexing maintenance of laboratory records.	03
5	Brief introduction to Systemic Pathology in relation to natural diseases (i.e. cerebro-vascular accidents, myocardial infarction, tuberculosis, pneumonia, liver cirrhosis, GI ulceration and perforation, DIC, compression of neck and electrocution)	1 hour
6	Microbiology Laboratory Management and Planning. The reception and recording of specimen, cataloguing and indexing, maintenance of laboratory records.	1 hour
7	Laws Related to Medico legal practice Mental Health Act, Organ Transplantation Act, Corneal Grafting Act, Human Rights Act, Narcotic Drugs & Psychotropic Substances Act, MTP Act, PCPNDT Act, Relevant sections of I.P.C, Cr. P.C & I.E.A.	4 hour

8	Brief introduction to systemic Pathology in relation to natural diseases (CVE, MI, TB,) Pneumonia, liver cirrhosis, GI Ulceration, DIC, Compression of neck & electrocution	1 hrs

Paper-III
Subject :- Clinical Forensic Medicine, Medical Toxicology – III

Sr. No.	Topics	No of Hours
1	Clinical Forensic Medicine – Sample preservation. Principles and protocols to be followed in cases of alcoholics, victim and accused in sexual assault cases. Investigation and referrals in cases of impotency	8 hrs
2	Toxicology – Brief introduction and procedures with protocols to be followed in qualitative and quantitative analysis of common and some important poisons	7 hrs
3	Visit to different sections of Forensic Science Laboratory	8 hrs

Practical
(Paper I, II and III)

Sr. No.	Topics	No of Hours
1	Study of medico legal cases, formats and registers	5
2	Collection, preservation and processing of material in various tests of identification.	10
3	Assistance to autopsy surgeon in collection, preservation dispatch of biological material and maintenance of record.	20
4	Assistance in noninvasive techniques like radiology and photography	
5	Assistance in various procedures related to cold storage management and embalming	10
6	Basic techniques in collection preservation and processing of human cadaveric (except poisoning) tissue and record keeping.	15
7	Principles of collection, preservation, preparation and dispatch of various body fluids in clinical forensic (like blood, semen, vaginal secretion etc)	20
8	Assisting the expert in collection, preservation and preparation for analysis of samples in various cases of poisoning in the living and dead.	20
9	Introduction to principles and practice of cadaveric donation.	02
10	Introduction to museum and specimen preparation	04
11	Gross and microscopic identification of blood and its constituents.	03
12	Gross and microscopic identification of semen and its constituents.	03
13	Gross and microscopic identification of urine and CSF and their constituents.	03
14	Principles of preparation of dry & wet specimens charts, folder etc. for museum .	02
15	Gross & microscopic identification of Blood & its constituents	02
16	Gross & microscopic identification of semen & its constituents.	02
17	Gross & microscopic identification of urine & CSF other constituents	02
18	Visit to Forensic Science Laboratory	08

BACHELOR OF PARA MEDICAL TECHNOLOGY (BPMT)

Course Name :- Forensic Medical Science

Learning Objectives

Third Year

By the end of third year of the course, the student should be able to:

1. Describe the principles of various procedures pertaining to clinical forensic medicine and medico-legal postmortem examinations.
2. Assist expert in conducting postmortem examination and related procedure (radiology, photography etc.)
3. Describe the basic principle, specifications, and features of functioning of various instruments, equipments related to medico legal autopsy procedure.
4. Describe the various procedure of preservation of dead bodies (embalming, cold storage etc.)
5. Describe the management of cold storage, its working and grades of refrigeration.
6. Collect, preserve and process tissue for histopathology
7. Describe the principles of biomedical waste management and should be able to segregate waste as per BMW management norms.
8. Prepare dry and wet specimens, charts, models, etc for museum.
9. Assist expert in collection, dispatch of evidentiary material in crime scene investigations
10. Perform embalming.
11. Perform tests for semen, saliva, urine , blood, CSF and other body fluids in medico legal cases.
12. Describe the scope of forensic medicine in disaster management.

BACHELOR OF PARA MEDICAL TECHNOLOGY (BPMT)

Course Name :- Forensic Medical Science

3rd Year : Assessment System & Syllabus

Sr. No	Paper	Subject	Subject Code	Theory			Practical			Total Marks
				IA	Final	Total	IA	Final	Total	
1	Paper – I	Laboratory Procedures in Forensic Thanatology and Laws Related to Medico Legal record Keeping, Organ Donation and Transplantations – I		30	60	90	30	80	110	200
2	Paper – II	Evidence Procedures and Laboratory Procedures in Clinical Forensic Medicine - II		30	60	90	30	80	110	200
3	Paper - III	Procedures Related to – Cold preservation, Embalming, Disposal, Waste Management, Crime Scene & Museum - III		30	60	90	30	80	110	200

Paper – I

Subject: - Laboratory Procedures in Forensic Thanatology and Laws Related to Medico Legal record Keeping, Organ Donation and Transplantations – I

Sr. No.	Topics	No of Hours
1	Various laws related to medico legal record keeping and other certificates. Retrieval of organs and Human organ transplantation act.	5
2	Counseling in various medico legal cases.	2
3	Forensic Pathology I-Basic principles, specifications and features of functioning of various instruments, equipments related to medico-legal autopsy procedure involving identification of unknown persons and preservation of viscera and other biological material.	10
4	Forensic Pathology II-Basic principles, specifications and features of functioning of various instruments, equipments related to test / investigation required in medico- legal autopsy in cases of natural and unnatural deaths.	10

Paper – II
Subject: - Evidence Procedures and Laboratory Procedures in Clinical Forensic Medicine - II

Sr. No.	Topics	No of Hours
1	Clinical Forensic- I-Preservation and dispatch of samples, and Basic principles, specifications and features of functioning of various instruments, equipments related to test / investigation done in cases of estimation of age, examination of accused and victim in a case of alleged rape, potency, drunkenness, injuries etc.	10
2	Clinical Forensic-II-Procedures related to quantitative and qualitative analysis in cases of poisoning.	10

Paper – III
Subject: - Procedures Related to – Cold preservation, Embalming, Disposal, Waste Management, Crime Scene & Museum - III

Sr. No.	Topics	No of Hours
1	Cold storage management, principles of working and types of cold storages, grades of refrigeration. Various make available, maintenance. Registers and formats required in cold preservation of dead bodies, prerequisite document required for authorized cold storage of dead bodies.	5
2	Embalming-principles and practice of embalming, various machines used in embalming. The working of various machines in embalming, make, specification and maintenance. Preparation of various stock solutions used in embalming, prerequisite documents, registers and formats used in embalming.	10
3	Biomedical Waste Management-Introduction to BMWM, various acts related to BMWM. Various methods used, waste disposal, its classification and methodology of disposal. Waste disposal in HIV cases.	5
4	Crime scene investigation- basic principles, collection, preservation and dispatch of evidentiary material.	5
5	Museum-principles of preparation of dry and wet specimens, charts , models etc.	8
6	Disaster Management (Medico legal Aspects) Definition, Scope, Formats & co-ordination	2
7	Disaster Management Scope of Forensic Medicine	2

Practical
(Paper I, II and III)

Sr. No.	Topics	No of Hours
1	Documents pertaining to police, court, clinical and autopsy	5
2	Instruments and equipment related to time since death	5
3	Equipment related to odontology, osteology, radiology, anthropometry etc.	10
4	Instruments, chemicals and disposable material used in autopsy and laboratory	10
5	Chemical test for semen, saliva, urine, blood, CSF and other body fluids as required	15
6	Serological tests	5
7	Microbiological examination of specimens	5
8	Preservation of samples for DNA profiling	5
9	Forensic Pathology-Procedures related to preservation and examination of material evidence related to unnatural deaths (weapon, ligature etc)	10
10	Clinical Forensic-Procedure related to collection , preservation and dispatch of material evidence in cases of sexual assault, potency etc.	7
11	Crime scene visit	10
12	Procedures related to cold storage preservation and dead body disposal	5
13	Embalming	5
14	Procedures related to BMWM	3
15	Determination of blood groups	3
16	Processing of Tissue for H.P.	12

ROTATIONAL POSTINGS

Sr. No.	Subjects	Assignment	Duration	
			II Year	III Year
1	Anatomy	1) Specimen mounting 2) Rules for body donation & its record keeping 3) Embalming procedures, fluids, equipment, & embalming of HIV positive body. 4) Procedural aspects of examination of skeleton 5) Genetic lab & karyotyping procedures 6) Different aspects of body preservation. 7) Awareness of important dissection instruments. 8) Anthropometry &relevant embryology. 9) Hands on experience of optometric board\Any other relevant areas.	2 wk	1wk
2	Physiology	1) Basic practicals of normal Physiology 2) Instruments & equipments used	4 days	4 days
3	Biochemistry	1) Introduction to working of instruments like electrophoresis, spectrophotometer, distillation apparatus, chromatography, flame photometer 2) Procedural aspects of blood &urine glucose estimation. Estimation of sodium, potassium, chlorides from vitreous humor, CSF & blood. 3) Basic procedures of chromatography. 4) Any other relevant areas.	1 wk	1wk
4	Microbiology	1) Glass wares & inoculation methods & various culture medias particularly in relation to urine, blood, CSF, plural fluid, peritoneal fluid, pus. 2) Routine urine & blood tests. 3) Routine methods of sterilization & BMW 4) Segregation of BMW & disposal rules 5) Any other relevant areas.	1 wk	1 wk
5	Pathology	1) Histopathology block preparation 2) Slide preparation &common staining techniques. 3) Hands on experience of using different types of microscopes. 4) Clinical autopsy procedures. 5) Record maintenance 6) Specimen mounting 7) Routine blood &urine tests. 8) Methods of sample collection 9) Any other relevant areas.	2 wk	2 wk
6	Ob.& Gy	1) Sample collection in sexual assault cases 2) Rules for MTP 3) Any other relevant areas	1 wk	1 wk
7	CCL		2 wk	
8	MRD	1) Record keeping 2) Rules for disposal 3) Use of computers & related soft wears 4) Any other relevant areas.	1 wk	1 wk
9	Radiology	1)Positioning of patient for x-ray, sonography, CT-scan, MRI 2) Film development techniques (basic) 3) Bone injuries 4) Hands on exp digital radiography procedure 5) Record keeping 6) Any other relevant areas.	1 wk	1 wk
10	FSL	Introduction to Various sections of forensic science laboratory setup & instrumentation. Awareness	2 wks	1 w

		regarding important qualitative & quantitative toxicological analytical techniques, relevant aspects of ballistics, serology & chemistry division and advanced identification techniques		k
11	Casualty	1) Various medico legal cases 2) Record maintenance 3) First aid 4) Sample preservation 5) Any other relevant areas.	2wks	2 wks
12	Sterilization and BMW	1) Methods of sterilization. 2) Procedures of BMW	1 wk	1 wk
13	Blood Bank	1) Method of collection, storage 2) Different blood groups 3) Precautions, labeling & distribution. 4) Any other relevant areas.	2 wk	1 wk
14	Mukadam/ death information centre	1) Record keeping 2) Method of death certification 3) Post death procedure documentation in wards. 4) EPR 5) Any other relevant areas	4 days	1 wk
15	Dental	1) Radiological positions in dentistry. 2) Age determination from dental status	1 wk	1 wk

8. LOG BOOK/ JOURNAL (For 2nd and 3rd year)

Log Book/Journal format

1. Certificate
2. Index
3. Legal procedures - Presence during inquest
4. Forensic Pathology - Tissue processing
5. Clinical Forensic Medicine
6. Toxicology
7. Rotational Postings
8. Museum specimens mounting
9. Assisting PMS
10. Specimen presentations

BACHELOR OF PARA MEDICAL TECHNOLOGY (BPMT)

Course Name :- Forensic Medical Science

List of Suggested Books for reading

BOOKS RECOMMENDED

1. The Synopsis of Forensic Medicine and Toxicology by K.S. Narayan Reddy
2. Principles of Forensic Medicine – Bardale
3. Forensic Toxicology : A Comparative Approach - Vipul Ambade
4. Modi's textbook of medical jurisprudence and toxicology.
5. Principles of Forensic medicine_- A. Nandy
6. Textbook of Anatomy & Physiology for Nurses –P R Ashalatha,G Deepa
7. Textbook of Microbiology for Nursing _ Dr C P Baweja
8. Pharmacology for Nurses – Udaykumar Padmaja.
9. Biochemistry for Dental students
10. Medical Biochemistry : a Comprehensive Clinical Approach With Theory & Practicals – Praful Godkar

Reference books

1. Russell S. Fisher & Charles S.Petty: Forensic Pathology
2. Kieth Simpson: Forensic Medicine
3. Atlas of Legal Medicine
4. Sptiz,W.U. & Fisher R.S.: Medicolegal investigation of death
5. Taylors principles and practice of Medical Jurisprudence.
6. Ratanlal & Dhirajlal, Combined acts
7. Bernard Knight: Forensic Pathology
9. FE Camps, JM Cameroon, and David Lanham: Practical Forensic Medicine
10. V.V. Pillay: Modern Medical Toxicology.
11. Hospital Administration Manual- Govt. of Maharashtra