

Peoples College of Forensic Science and Cyber Security

Aurangabad- Jalna Road, Shendra Premises, Aurangabad-431154

FACULTY: SCIENCE

B.Sc.: General

Programme Outcomes

At the end of programme, the students will be able to

PO1: Understand basic principles of science

PO2: Analyze and predict conclusion from data/information

PO3: Perform necessary arithmetic calculations

PO4: Understand various units and its conversions

PO5: Correlate various principles in science to generate new approaches

PO6: Understand steps in the operations of various equipments and instruments

PO7: Perform qualitative, quantitative analyses in science specific areas

PO8: Understand mechanism of various scientific processes

Applications: (F.Y sem 1)

Forensic Science:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Analyze the crime.	Discuss Basic of FS	Understand organization set up of forensic science laboratory.
2.	Understand victimology	Apply the various domains of FS	Observe the police and scientific expert relationship.
3.	Find the modus operandi and corpus delicti of the crime.	Deal with ethical issues	Study the criminal behavior.
4.	understand criminal and criminology	Study the function of Forensic Scientist	Analyze the role of FSL in criminal investigation.
5.	Define the hisry and development of FS	Analyze the principles of FS	Study the various criminal behavior theories.

Forensic Chemistry:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand different properties of liquid.	Understand law of kinetics.	Analyze basic knowledge of periodic table.
2.	Study application of surface tension, viscosity and refractive index.	Study concept of thermochemistry.	Study various chemical composition.
3.	Analyze Abbe's refracmeter method.	Observe simple chemical reactions.	Understand halogens.
4.	Understand the physical properties of liquid.	Remember different types of thermochemical reactions.	Analyze the chemicals for medicinal use.
5.	Observe optical activity structure of liquid.	Study different types of thermochemical equations.	analyze poison cases.
6.	Study solutions and its uses.		

Forensic Physics:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand interpretation of newn's law of motion.	Understand velocity of sound.	Analyze the lens and its combinations.
2.	Study pseudo forces.	Conclude the Sabine's formula.	Remember the applications of tal internal reflection.
3.	Understand collisions.	Introduce ultrasonic sound and their applications.	Apply the polarization effect.
4.	Understand fluid dynamics.	Observe the concept of echo.	Observe eyepieces and their comparison.
5.	Apply Bernoulli's equation.	Understand acoustics of	Understand

		building.	spectrophometer.
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Forensic biology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand the origin of life.	Study the insect and their forensic significance.	Discuss the basic instrumentation.
2.	Observe ultra- structure of prokaryotic and eukaryotic cell of plants and animal cells.	Understand the classification and taxonomy of plants.	Understand PCR techniques and determine paternity, etc.
3.	Observe evolution of life.	Study the systems of classification of angiosperm.	Discuss spectroscopy.
4.	Understand various cellular organisms.	Discuss the types of insects.	Study the applications of chromatography
5.	Study biochemistry.	Study plant anatomy.	Analyze the type of poison.

Forensic Psychology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand nature and goal of psychology.	Study the biological perspectives of behavior.	Discuss the theories of intelligence i.e. emotional intelligence helps understand individual behavior.
2.	Analyze the scientific study of psychology.	Remember the CNS and PNS.	Study the types of attention.
3.	Understand modern perspective of psychology.	Understand the brain structure and function.	Understand various psychological tests.
4.	Study the basic psychology of criminal.	Study the sensation and perception.	Discuss the theory of intelligence on criminals.
5.	Discuss psychology with science.	Discuss the individual factors in perception.	It helps study the relation between cognitive processes and intelligence.

Digital and Cyber Forensics:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study the basic parts of computer.	Study the hardware and software of computer.	Understand operating system.
2.	Discuss the input and output devices.	Understand data representation.	Study various types of software.
3.	Study various memories of computer.	Discuss the logic gates.	Analyze the various types of computer.
4.	Understand the internal and	Understand basic programming	Discuss generations of

	external storage devices.	in C language.	computer.
5.	study memory units and memory management.	understand various applications of computer.	Analyze the synchronization.

Communication skills:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Discuss the good communication skills.	Adapt the skill of active listening.	Analyze the knowledge of grammar.
2.	Overcome the strategies of communication.	Understand the importance of effective speaking.	Discuss the knowledge of idioms.
3.	Understand critical thinking.	Develop the effective group discussion skill.	have good vocabulary.
4.	Adapt body gesture.	Develop reading and interpretation skill.	have deep knowledge of synonyms and antonyms.
5.	Study well interpersonal skills.	Adapt effective technical writing skill.	Study the knowledge about word formation just like prefix and suffix.

Indian Penal Code:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand basics of crime.	Discuss the various types of crime under IPC.	Discuss the nature of harm human body.
2.	Discuss the classification of crime.	Remember the crime against army, navy and air force.	Understand the nature of sexual offences.
3.	Observe the nature of crime.	Study the crime against state.	Study the punishment of various crimes.
4.	Understand punishments under IPC.	have good knowledge about false evidence.	Analyze the causes of miscarriage.
5.	Study the essentials of crime.	Study the various types of offences.	Discuss the reason of kidnapping.

Applications: (F.Y sem II)

Forensic Science:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand organizational setup and functioning of Government examine of question document.	Study the crime scene investigation.	follow all the rules in the process of crime scene investigation.
2.	Discuss the international agencies like Interpol.	Discuss the classification of crime scene.	The knowledge used protect crime scene.
3.	Study the working of CBI,	Study the significance of crime	Understand standard

	DRDO, IB, FBI etc.	scene.	procedure collect evidences.
4.	Maintain record of each and every agency.	Understand ethics of crime scene.	Discuss the duties of first responding officer.
5.	Follow rules for crime scene investigation.	Study facts about physical evidence.	Study photography.

Forensic chemistry:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Estimate the barium sulfate by gravimetric analysis.	Learn types of chemical bond.	Study composition and classification of petroleum product.
2.	Study different steps in gravimetric evidence.	Understand various types of hybridization.	Understand the refining of petroleum.
3.	Study different types of titration.	Study imperial and molecular formula.	Learn introduction of 5-6 membered heterocyclic.
4.	Understand definition and classification of chromatographic technique.	Learn the IUPAC nomenclature of alkanes, alkenes and alkynes.	Learn classification of dyes on the basis of mode of applications.
5.	Discuss the principle, introduction of thermal methods.	Study the mechanism of chemical reaction.	Study the introduction and types of polymers.

Forensic physics:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study LASAR and their property, applications.	Discuss the nuclear properties and composition.	Discuss the basic of circuits.
2.	Study holography and its application.	Understand radioactive decay scheme.	Study number system and codes.
3.	Study fiber optics.	Understand application of radio isopes.	Study CRO and its uses.
4.	Understand solar cell.	Study the biological effects of nuclear radiation.	Understand OPAM and its uses.
5.	Understand condition lasing action.	Study the damage caused by radiation.	Study transir and characteristics.

Forensic Biology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study the basic of biology.	Understand the basic concept of genetics.	Study human physiology.
2.	Discuss the principle and type of microscopy.	Study composition and structure of DNA and RNA.	Introduction nervous system.
3.	Understand immunity.	Study the mendelian principles.	Detailed study about blood

			and its type.
4.	Study the property and function of immunoglobulin.	Introduction recombinant DNA technology.	Introduction osteology and odontology.
5.	Study the factors influencing antigenicity.	Understand agriculture, industries and forensics.	Study dental structure of human being.

Forensic psychology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand the learning methods and its types.	Understand motivation and its type.	Study of theories of personality.
2.	Study cognitive learning theory.	Understand emotion and its theories.	Study behavioral model.
3.	Study the definition of memory and its process.	Discuss about Maslow's hierarchy of needs.	Study of psycho-analytic theory.
4.	Understand short term and long term memory.	Detailed study of James Lange's Theory of emotion.	Detailed study of Allport's theory.
5.	Know about parallel distribution processing model.	Detailed study of Cannon-Bard's theory of emotion.	Study the big five model.

Digital and cyber

Sr.No	Unit 1	Unit 2	Unit 3
1.	Know file system and networking.	Study the study cloud based applications.	Study various types of cyber crime.
2.	Learn extensions of files.	Introduction internet web.	Understand cyber crime.
3.	Study file system management.	Study the types of portals.	Have knowledge about cyber crime and digital evidence.
4.	Study basics of networking.	Study network protocols and network security.	Acquire skills while dealing with digital evidence.
5.	Discuss the types of internet connections.	Study the security plan and policies.	Understand nature of digital and physical evidence.

Criminology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Deep study about criminology.	Understand various factors of crime.	Discuss the biology and psychology of crime.
2.	Understand the concept of legal and social crime.	Study about sociology of crime and deviance.	Understand difference between heredity and crime.
3.	Discuss the schools in criminology.	Understand primary and secondary group of crime.	Study biogenic theories.
4.	Understand white collar	Discuss the socio-economic	Study conflicts and its types.

	crime.	facts and its relation with crime.	
5.	Understand various types of criminals.	Understand the cultural facts as area of crime.	Know about psychopathic personality.

IPC:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Discuss the mistake of facts and mistake of law in IPC.	Discuss the offence against property.	Understand forged documents.
2.	Understand privileged act.	Study theft with its punishment.	Deep study of forgery.
3.	Study criminal conspiracy.	study extortion with its punishment.	Know the difference between currency note and bank note.
4.	Study incapability commit the crime triviality.	study criminal breach of trust and its punishments.	Study counterfeiting currency note.
5.	Understand private defense.	study dacoity and punishment for dacoity.	Study difference between forged document and electronic record.

Application S.y. sem III:

1] Advanced forensic science:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Discuss the Crime Reconstruction	Study Questioned Document	Discuss the theories and principle of fingerprint.
2.	Understand ethics of CR.	Discuss the classification and types of document.	Study the concept of Dermaglyphics.
3.	Study methods of CR.	Analyze the principle of handwriting identification.	understand basics of FP pattern.
4.	Understand trace evidences	Understand natural variations in writing.	study classification of FP.
5.	Study the nature of CSR.	Study instruments related QD.	understand concept of latent FP.

2] Advanced forensic chemistry:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Discuss the physical chemistry and its application in forensic science.	Study Inorganic and separation techniques	Study Spectroscopy: Ultra Violet Spectroscopy- Introduction, working, principle, instrumentation, Lamberts Beer's law.
2.	Study the chemical kinetics and its application in forensic science.	Apply the Separation techniques: Introduction, types of separation.	Study absorption of U.V radiation, Electronic transition.
3.	study electro chemistry and its application in forensic science.	Discuss paper chromatography- introduction, principle, migration parameters, types of paper chromatography, procedure and applications.	Study terms used in U.V. Spectroscopy-Chromophore, Auxochrome, Bathochromic shift, hypsochromic shift, Applications of U.V. Spectroscopy.
4.	Analyze the nuclear chemistry and its application in forensic science.	Study column chromatography- Introduction, principle, working, adsorbents, solvents, factors affecting column efficiency.	Study Infra-Red Spectroscopy.
5.	Remember the radio activity and its application in forensic science.	Understand TLC (Thin Layer Chromatography)-Introduction, principle, stationary phase, mobile phase, solvent system, procedure of development, Rf value,	Study the applications and Numerical problems based on NMR.

		Applications of TLC.	
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3] Advance forensic physics:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study Instrumentation Electronics: Introduction electronic components- Passive component and Active component.	Discuss the Transducers - Electrical transducers, Strain Gauge, Resistance thermometer and its applications.	Discuss the Fundamentals of Speech Reorganization: Disciplines involved in speech recognition, Paradigm for speech recognition.
2.	Discuss the Wave form Generators- Working Principle of oscillators, Wave form generators; sine, square, triangular, saw tooth.	Study the Linear Variable Differential Transducers and applications.	Analyze the Speech production and perception in human beings, speech production process.
3.	Study Modulation and Demodulation- Introduction Fourier transform.	Analyze the Measuring devices - Construction and working principle of Anemometer	Study Auditory- based spectral analysis model. Various voice identification software.
4.	Understand the Active Filters- Low pass, High pass, Band pass, All pass filters.	Study Spectrophotometer, Rain Gauge, Metal detector, Breath Analyzer, pH meters.	Understand Signal processing and analysis methods for Speech Recognition.
5.	Study Wave Shaping Circuits- Wave Clipping, Clamping circuits and Timer circuits.	Understand Capacitive Transducers, Piezo-electric transducers.	Remember the Collection of samples and Forensic Importance of voice analysis.

4] Advance forensic biology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study Forensic Biology (Introduction, History and Development).	Discuss Forensic Serology.	Study Cell division: Cell cycle, mitosis and meiosis, Structural and definitive.
2.	Analyze the evidences Biological Importance, Nature, scope and characterization.	Understand the blood circulatory systems.	Understand Human genome: genes and related sequences, non- coding sequences.
3.	Study Hair: Hair trichology – Collection, determination of origin, biochemistry and forensic examination (origin, nature, source, sex determination and DNA profiling)	Remember the Functions of blood, identification of blood, blood grouping systems (A, B, O systems, Rh factor)	Study Forensic mitochondrial analysis.
4.	Study Fiber: - Types of fiber, natural (plant animal and	Study the Serological Concepts: Antigen –	Analyze the DNA Extraction: Basic Principles,

	mineral), synthetic (nylon, polyester, terylene, carbon nanotube fiber), and blended (terrycloth, rayon).	Antibody interaction: Strength of antigen-antibody interactions, cross reactivity.	Method of DNA extraction (Physical, chemical and biological).
5.	Discuss the Leather: - Animal leather, leather from endangered species and artificial leather.	Understand immunoassay techniques Radioimmunoassay, ELISA, western blotting.	Discuss the Electrophoretic Methods – Agarose gel, SDS-PAGE, Native PAGE, Southern /Northern Blotting.

5] Advance forensic psychology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study the History, Defining', Importance of Forensic Psychology.	Understand concept Aggression and Violence.	Remember the Perspective of Criminal Behavior and Legal Proceedings.
2.	Discuss the Ethical Standards of Forensic Psychology.	Discuss the Aggression- Definition, Nature, Types of aggression.	Understand Psychological Disorder - Psychosis, Neurosis.
3.	Study Importance of statistic in Forensic Psychology.	Understand Violence- Definition, Nature of Violence-Self-directed, Interpersonal, family and community interpersonal, and Collective.	Study the Social Perceptive – Differential Association theory, Labeling theory, Critical theory, Control theory.
4.	Study Measurement of Variability, Mean deviation, Standard Deviation (SD).	Study Types of Violence- Physical, Sexual, Emotional, Psychological, Spiritual and Cultural.	The Application of Forensic Psychology in Civil and Criminal Legal Proceedings.
5.	Analyze the Simple correlation, regression, Application of t – test and Chi square test with numerical examples.	Study the Types of Domestic Violence- Reciprocal and Non-reciprocal- Physical, Sexual, Emotional, Verbal, Economic.	Discuss the Criminal Proceedings

6] Advance forensic cyber:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Introduction Cyber forensic, Cyber forensic steps.	Introduction incident response process.	Introduction cryptography.
2.	Study Cyber forensic investigation process.	Study Incident response methodology.	study Types of cryptographic algorithms.
3.	Study Use of internet, email, or PC in a non-work-related	Study Cyber forensic ols.	understand Steganography, Reversing

	manner, Theft of information.		the steganographic process.
4.	Study Establishing a basis or justification investigate.	Discuss the Volatile and non-volatile evidences collection.	study Cloaking techniques.
5.	Remember difference between Auditing V/s Cyber forensic investigations.	Conclude the File system (Details of file system, Data structure of file system, Data recovery in different file system)	study advance C programming Array, String ,Pointer ,Structure ,Union , File handling.

7] Criminal Procedure Code:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand the Inquisitorial and adversary/accusatorial.	Understand Initiation of investigation proceeding.	Discuss Jurisdiction of Courts.
2.	Study Salient features of the Criminal Procedure Code, 1973.	Explain the Search and Seizure.	Understand Exceptions the principle.
3.	The organization of police, prosecution and defense and prison authorities – duties, functions and powers.	understand the value of FIR and statements made police officer.	Study Exceptions the general principle of moving criminal courts.
4.	Remember Constitution of criminal courts and the significance.	study Arrest with and without a warrant: exercise of power and execution rules.	Analyze Inquiry proceedings before magistrates.
5.	Discuss the few Important definitions in CRPC.	study Inquest proceedings.	Understand Bail provisions.

8] Law of evidence:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study Conceptions of evidence in classical Hindu and Islamic Jurisprudence.	Study Differences between "Admission" and "Confession".	understand the concept of Dying declarations
2.	Discuss the Conceptions of evidence in classical Hindu and Islamic Jurisprudence.	Discuss the problems of non-admissibility of confessions caused by , "any inducement, threat or promises" .	study The judicial standards for appreciation of evidentiary value of dying declarations.
3.	Observe the Central conceptions in law of evidence.	Study Admissibility of "Custodial" confessions.	Conclude the difference between "Fraud" and collusion".
4.	Understand Evidence: Oral and	Study The problems with	Understand Expert, Types

	documentary and real Primary and secondary evidence.	the judicial action based on a "retracted confession".	of expert evidence
5.	study The problems of relevancy of "Otherwise" irrelevant facts.	Study Confession by co-accused	Discuss concept Oral evidence: general principles concerning Oral evidence

Application S.y. sem IV

1] Advanced forensic science:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand Theoretical and practical concept of crime scene analysis.	Discuss the methods of collection and recording of pore prints.	Discuss the Fingerprint at crime scene.
2.	Discuss the practical methodology for crime scene reconstruction.	Study Chelioscopy and its applications.	Conclude Morphology and anatomy of sweat gland.
3.	Study Bloodstain Pattern analysis crime scene reconstruction.	Study parameters in gait Examination and Determination.	Get information about DNA.
4.	Study Reconstruction of motor vehicle accident, firing, post blast cases, fire.	Discuss the Methods of collection, recording and examination of ear print.	Study Fingerprint Development- Physical Luminescent Fingerprint powders metallic.
5.	Conclude Writing of CSR reports, court room testimony.	Study Ear print (significance, morphology and anatomy of ear)	Study Legal aspects of fingerprint and Court testimony.

2] Advanced forensic chemistry:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Determination of Sulphur, Nitrogen and Halogens in the organic compound.	Study Screening, sampling-methods.	Understand the concept of Paints.
2.	Remember the estimation of the functional groups in the organic compounds – Hydroxyl.	Understand the concept of Qualitative inorganic analysis.	Introduction, classification and analysis of fertilizers.
3.	Understand difference between Oils and fats.	Study Qualitative inorganic analysis.	Study Introduction, effect of drug.
4.	Study Solvent Extraction.	Discuss Qualitative inorganic analysis.	Study Alkaloids
5.	Introduction to Principle, types of	Remember the preparation	Remember the properties

extraction.	by rotary Kiln method.	and applications of Cocaine.
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3] Advanced forensic physic:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Observe the various Fire arms.	Observe the working of Common Hand ols-Levers.	Study Aumobiles- Vehicles manufactured in India.
2.	Study Cartridge cases.	Study Crimping tools	Discuss the Components of aumobile.
3.	Discuss the Bullet and its types.	Study Marks made by hand TOOLS	Study Various identification numbers.
4.	Detail study about shotgun ammunition - shotgun slugs.	Conclude the Collection and documentation of tool marks.	Conclude Brake system and testing of brakes.
5.	Study Improvised Firearms	understand the type of crime which is committed	Study the Appliances and Equipment Failure.

1] Advanced forensic biology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Discuss the Forensic Entomology.	Study Forensic Botany.	Remember the Forensic microbiology.
2.	Discuss the Post Mortem Interval: role of entomology in determination of PMI.	Identification and examination of plant derivative.	Study Isolation of bacteria of forensic significance, sample collection, growth conditions, and identification, Preservation methods.
3.	Analyze the Microphagous Species.	Discuss Dendrography	Analyze the Biochemical methods for identification of bacteria.
4.	Study microphagous - Predaceous Species.	Understand Application of plant ecology, drugs of abuse.	Study Virology.
5.	Observe Forensic zoology.	Discuss the Limnology.	Understand the concept of Fluorescent.

1] Advanced forensic psychology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Introduction to Social Cognition, Attitude - Meaning and Nature of Attitudes- Explicit Attitudes.	Discuss the Social Influence and Legal System- Police Interrogations.	Remember behavioral abnormalities.
2.	Study Attitude Formation –	Analyze Eyewitness	Study Bullying and types of

	Based on Classical Conditioning.	Testimony.	bullying.
3.	Introduction to The Cognition Process- Systematic processing.	Study The Influence of Prejudice and Stereotypes On The Legal System.	Defining and Diagnosing Personality Disorders.
4.	Discuss Stereotyping and the Glass Ceiling.	Study Solutions for Increasing Eyewitness Accuracy.	Observe Odd-Eccentric Personality Disorders.
5.	The Origins of Prejudice – Direct Intergroup Conflict.	Discuss Lineups and Effect of Media Coverage on Perception of Defendants.	Study Anxious-Fearful Personality Disorders.

6] Advanced forensic cyber:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Introduction biometrics, Various types of biometric methods.	Discuss the Data transmission mode.	Introduction to multimedia.
2.	Analyze the general Biometric System (Identification and Verification).	Discuss the Network types, Network topology.	Analyze Multimedia components (text, graphics, animation, audio, video).
3.	Study the general architecture comparison of different biometric technologies.	Introduce the data processing.	Introduction to MATLAB, Features of MATLAB.
4.	Discuss the difficulties in implementation of biometrics.	Study Database model Component Of DBMS-SQL	Understanding the MATLAB Environment.
5.	Applications of biometrics.	Understand the Security plan and policies.	Discuss Conditional statements, Loops, Vectors, Matrices, Colon notation.

1] **Criminal Procedure Code:**

Sr.No	Unit 1	Unit 2	Unit 3
1.	Discuss the Concept of fair trial: Presumption of innocence, Right of silence and right speedy trial.	Discuss the Judgment: Mode and other provisions.	Understand the Concept of juvenile justice.
2.	Study limitations of bar trail.	Conclude the Transfer of criminal cases.	Study the Juvenile Justice Act, 1986.
3.	Analyze the limitations take cognizance of offences.	Study Execution, suspension, remission and commutation of sentences.	Discuss the Probation of offenders and parole.
4.	Study Evidence in inquires and trials.	Discuss the reforms in Criminal Procedure.	Understand Role of probation officers.
5.	Study Provisions as accused persons of unsound mind	Introduction to the Code of Criminal Procedure Code.	Study Concept and distinction with the probation system.

1] Law of evidence:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Discuss Documentary evidence.	Study Of Witnesses.	Discussion the Burden of proof.
2.	Analyze the difference between Public document and private document.	Study Privileges of communications: matrimonial privileges.	Discuss the General and Special Exceptions burden of proof.
3.	Discuss the General principles regarding exclusion of oral by documentary evidence.	Observe the General Principles of Examination.	Discuss presumption as dowry death.
4.	Study attested documents.	Study Hostile witness.	Conclude The Scope of the doctrine of judicial notice.
5.	Analyze the presumptions regarding documents.	Discuss the concept of Refreshing the memory.	Study Improper admission and of witness in civil and criminal cases.

B.Sc. (Forensic Science) Third Year SEMESTER SYSTEM FIFTH:

1) Applied Forensic Science:

Sr. No	Unit 1	Unit 2	Unit 3
1.	Understand Introduction and scope of Forensic Anthropology.	Introduction and scope of forensic medicine.	Study Internal audit and Laboratory Information Management Systems (LIMS).
2.	Study Human Osteology: Bone Physiology and structure, the human skeleton.	Study Violent asphyxia deaths: Hanging, Strangulation, throttling, suffocation and drowning.	Introduction and requirements of quality management systems for forensic science laboratories.
3.	study Personal Identification from skeletal remains.	Definition and types, modes of death.	Study Proficiency testing. Measurement of uncertainty.
4.	Study Forensic Dentistry.	Study the changes after death.	Discuss Expert testimony.
5.	Discuss the Bite mark impressions and its Forensic significance.	Understand Legal aspects in view of forensic medicine.	Study the writing report and presentation of evidence in court of law.

2) Applied Forensic chemistry:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study Gas chromatography.	Understand the concept of Forensic toxicology.	Discuss Polymers.
2.	Discuss the HPLC.	Discuss Scope and application forensic toxicology.	Study Plastics- Classification of plastics, application of plastics.
3.	Study Atomic Absorption Spectroscopy.	Study General classification of poisons.	Study Rubber- types of rubber, vulcanization of rubber, synthetic rubbers.
4.	Study Flame spectrometry.	Study Plant, Animal Poison, Metallic Poison, types of poisoning.	Discuss Fibers.
5.	Study Thermal methods.	Understand the concept of terpenoids.	Discuss the Explosive Substances Act 1908.

3) Applied Forensic physics:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study Forensic Photography.	Understand Road Terminologies.	Discuss Energy considerations.

2.	Introduction of Magnetic Measurements.	Discuss Vehicular accidents.	Analyze the barrel pressure and its determination.
3.	Study Electrical Measurements.	Understand Brake system and Steering failure.	Understand Exterior Ballistics.
4.	Study Radiation Detection and measurements.	Study Rail Accidents.	Study Experimental determination and shape of trajectory.
5.	Discuss the X-Ray measurements.	Understand the Investigation of rail crash.	Study Shotgun Ballistics.

4) Applied Forensic biology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study Forensic serology.	Study Wild life forensic.	Development of forensic microbiology.
2.	study Immuno Electrophoretic and Immunodiffusion techniques.	Study forensic ornithology.	study mode of action of Anthrax, botulinum and ricin toxin, fungal toxin with special reference Aflatoxin.
3.	Discuss the Blood group Typing.	Study Identification of wild life materials by conventional and Modern methods.	Understanding Bioterrorism.
4.	Study of protein profiling.	Study Genetic methodologies in wildlife investigation.	Study pollen grains.
5.	study Biochemistry and genetics of ABO, Rh, MN systems.	Study Feather Structure and pography.	Study Epidemiology of Bioterrorism, Punishments for Bioterrorism act Under Prevention of Terrorism Act, 2002.

5) Applied Forensic psychology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Discuss Criminal Psychological Profiling.	Introduction to Major Disorders and its Symptoms and Features.	Study Models of Rehabilitation.
2.	Analyze the Psychological Investigative tools- Mental Status Examination, Psychological Testing.	Study Cognitive Behavior Therapy- REBT Model, Aron Beck's Cognitive Therapy.	Study Rehabilitation of Prisoners, Rehabilitating victims of crime, Techniques & Skills in rehabilitation.
3.	Discuss the Polygraph Testing.	Study Psychoanalytic Therapy.	Discuss the Characteristic of Counselor, Type of counseling.
4.	Study Psychological Autopsy.	Study Behavior	Remember the Counseling-

		Therapy.	Definition, Nature of Counseling.
5.	Understand Modus Operandi.	Discuss Biofeedback.	Discuss the Levels of Counseling Techniques.

6) Applied Forensic Cyber:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand HTML: Introduction, Basic Tags.	Study PHP: Introduction, Environment, and Syntax.	Introduction multimedia forensics.
2.	Study Embed Multimedia, Marquees, Headers.	Understand php Decision Making, Loop, Arrays.	Discuss Shannon's sampling theorem and nyquist frequency.
3.	Study CSS: Introduction, Content and Style.	Study php Methods, File System, Functions.	Study Various recording devices and its characteristics.
4.	Study Linking Style Sheets HTML.	Study MySql: Introduction, Installation, and Syntax.	Study nature and types of forgery related multimedia.
5.	Study JavaScript: Introduction, Syntax.	Study SQL statements (DDL and DML).	Study Investigation of crime scene in reference multimedia evidences.

B.Sc. (Forensic Science) Third Year SEMESTER SYSTEM SIXTH:

Applied Forensic Science:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand Introduction and scope of forensic speaker identification.	Study Introduction and objectives, rules for medico legal autopsy, external and internal examination of body.	Understand Emerging trends in Forensic Science.
2.	Study production and description of speech sound.	Introduction and classification of injury.	Study Introduction, scope and importance of emerging forensic disciplines: Forensic Engineering, Forensic Radiology.
3.	Study International Phonetics Alphabets (IPA) and its symbolic representation.	Discuss Thermal injuries: Burn and scalds, Lightning, Electricity and Explosions.	study Forensic Accounting, Forensic Nursing, Forensic Nanotechnology.
4.	Study examination and formation of opinion in terms of probability scale.	Study Infanticide: Introduction, definition and types.	Study Forensic Archaeology, Forensic Arts, Computational Forensics, Nuclear Forensics.
5.	Understand text dependent and text Independent approach.	Study Forensic Psychiatry: Introduction and medico legal aspects.	Study Forensic Journalism, Environmental Forensics, Forensic Pharmacology.

Applied Forensic chemistry:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study Narcotic Drug and Psychotropic Substances.	study Classification of explosive, types of chemical explosive.	Discuss Arson.
2.	Study Classification of Narcotics and other drugs.	study TATB (1,3,5-Triamino-2,4,6-trinitrobenzene), HNS (Hexanitrostilbene).	Study Food adulteration.
3.	Study Types of Pharma drugs, Steroids.	Study Dyes.	Analyze the Pesticides.
4.	Study pathways of drug metabolism.	Study Anthracene.	Study Narcotic Drugs & Psychotropic Substances Act 1985.
5.	Study Characterization and synthesis of nicotine, cocaine and their derivatives.	study physical, chemical properties and uses of Anthraquinone and Alizarine.	Study Prevention of Illicit Trafficking in NDPS Act 1985.

Applied Forensic physics:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study Footwear Impressions.	Study Forensic Microscopy.	Understand Forensic Applications in Trace Analysis.
2.	Introduction and importance of casting.	Discuss Scanning Electron Microscope (SEM), Transmission Electron Microscope (TEM).	Study Physical properties of materials.
3.	Study Methods of casting with dental stone.	Study Stereomicroscope.	Study Composition of glass.
4.	Study Treatment of 2-D Footwear Impressions.	Study Environmental Scanning Electron Microscope (ESEM).	Study Forensic examination of soil.
5.	Study Enhancement of Footwear Impressions.	Study Atomic Force and Tunneling Scanning Microscope.	Study the concept of fiber, paint, plastics and its application in forensic science.

Applied Forensic Biology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study DNA profiling and its forensic significance.	Study Carbohydrate metabolism: Diabetes mellitus, glycogen storage disease.	Study Introduction & History of forensic entomology.
2.	Study Human genetics.	Study Lipids: Hypercholesterolemia.	Study Identification of insects.
3.	Study Forensic Application of recombinant DNA technology/ Forensic Biotechnology.	Study Blood: Thalassemia, sickle cell anemia.	study Determination of displacement and Disturbance of the body.
4.	study Polymorphism in DNA system – DNA markers RFLP, RAPD, VNTRs, SNP, Autosomal – STR, Y-STR, Mitochondrial DNA.	Discuss Amino acids: phenylketonuria, alcapnuria, tyrosinemia.	study Presence and Position of wounds, Drugs consumption, Human & Animal neglect or abuse.
5.	study New and future technologies: DNA chips, SNPs and limitations of DNA profiling.	Study Purine and pyrimidine: Lesch-Nyhan syndrome, Gout diseases, SCID.	study Collection of entomological evidence, Challenges encountered in Entomology.

Applied Forensic Psychology:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Study Stress- Definition,	Study Psychology of crime &	study Mc Naughten rule,

	Nature, Models of stress.	Delinquency, Juvenile Delinquency.	Insanity – Nature of Insanity, Insanity Assessment, Personality Assessment of Offender.
2.	study The Stress Response: A Psychophysiological Perspective.	Study The Developmental perspectives in delinquent behavior.	study Competency stand trial, Risk Assessment, Sentencing Evaluation, The mentally ill in Court.
3.	study Consequences of Stress-Physiological, Psychological, Behavioural.	study Individual-intelligence, language development, Selfregulation skills & Excutive functions.	study Legal aspect- Mental Health Act, 1987.
4.	study Police psychology- Nature, Psychological testing & selection of police officer.	study Family-Family pattern, Rejection in family, Family Conflicts, Family Relationships, Emotional Deprivation.	study Medical Termination of Pregnancy Act.
5.	study Police psychology- Nature, Psychological testing & selection of police officer.	study Juvenile Psychopathy, Prevention and Control of Juvenile Delinquency.	Study Pre Natal Diagnostic Technique Act.

Applied Forensic Cyber:

Sr.No	Unit 1	Unit 2	Unit 3
1.	Understand Cyber Forensics Investigation.	Study Challenges digital forensic evidences.	Study Information Technology Act (IT Act 2000) Introduction.
2.	Study Incident response and Forensic analysis.	Study Digital Evidence on Operating systems (Window/Unix).	Study Certifying Authorities and Controller.
3.	Study E-Mail Tracking, IP Tracking, And E-Mail Recovery.	Study Computer Ethics and Cyber Ethical Values for Digital Frontier.	Study Offences as per IT Act.
4.	Introduction Forensic tool Kit (FTK).	Study Recovery of Swap Files/Temporary Files/Cache Files.	Study Special provision in Indian Evidence Act regarding Admissibility of electronic records.
5.	Study hardware tool Sololmage Master.	Understand Transport of evidence.	study Authentication of electronic Records.