

2nd Semester

**MRSPTY B.SC. (HONS.) FORENSIC SCIENCE SYLLABUS
BATCH 2021 ONWARDS (3 YEARS COURSE)**

CRIMINAL LAW

Subject Code: BHFSS1-201

**L T P C
3 1 0 4**

Duration: (60 Hrs)

Course Objectives:

- Students will be able to learn elements of Criminal Procedure Code related to forensic science and also understand different acts and provisions of the Constitution of India related to forensic science.

Course Outcomes:

- Demonstrate significant knowledge of acts governing socio-economic crimes and environmental crimes.

Unit-1

(15 Hrs)

- Classification–civil, criminal cases, Essential elements of criminal law, Constitution and hierarchy of criminal courts.
- Criminal Procedure Code. Cognizable and non-cognizable offences, Bailable and non-bailable offences.
- Sentences which the court of Chief Judicial Magistrate may pass. Summary trials–Section 260(2).

Unit-2

(15 Hrs)

- Judgements in a bridged forms – Section 355. Indian Penal Code pertaining to offences against persons–Section 121A, 299, 300, 302, 304A, 304B, 307, 309, 319, 320, 324,326, 351, 354, 359, 362. Sections 375 & 377 and their amendments.
- Indian Penal Code pertaining to offences against property Sections–378, 383, 390, 391, 405, 415, 420, 441, 463, 489A, 497, 499, 503, 511.

Unit-3

(15Hrs)

- Indian Evidence Act – Evidence and rules of relevancy in brief, Expert witness.
- Cross examination and re-examination of witnesses. Sections 32, 45, 46, 47, 57, 58, 60, 73, 135, 136, 137, 138, 141. Section 293 in the code of criminal procedure.

Unit-4

(8 Hrs)

- Preamble, Fundamental Rights, Directive Principles of State Policy. – Article 14, 15, 20, 21, 22, 51A.
- Narcotic, Drugs and Psychotropic Substances Act. Essential Commodity Act

Unit-5

(7 Hrs)

- Drugs and cosmetics Act. Explosive substances act. Armsact. Dowry prohibition act.
- Prevention of food adulteration act, Prevention of corruption act.
- Wild life protection act. I.T. Act, Environment protection act, Untouchability offences Act

Recommended Books:

- D.A.Bronstein, Law for the Expert Witness, CRC Press, Boca Raton (1999).
- Vipap.Sarathi, Law of Evidence, 6thEdition, Eastern Book Co., Lucknow (2006).
- A.S.Pillia, Criminal Law, 6thEdition, N.M. Tripathi Pvt Ltd., Mumbai (1983).

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- R.C.Nigam, Law of Crimes in India, Volume I, Asia Publishing House, New Delhi 1965.
- (Chief Justice) M.Monir, Law of Evidence ,6thEdition, Universal Law Publishing Co. Pvt. Ltd., New Delhi (2002).

FORENSIC PSYCHOLOGY

Subject Code: BHFSS1-202

L T P C

Duration: (60 Hrs)

3 1 0 4

Course Objectives:

- Student will able to understand the overview of forensic psychology and its applications, legal aspects of forensic psychology and significance of criminal profiling.

Course Outcomes:

- Demonstrate the significant knowledge of psychological assessment gauging criminal behaviour, tools and techniques required for detection of deception and critical assessment of advanced forensic techniques like polygraphy, narco analysis and brain electrical oscillation signatures.

Unit-1

(15 Hrs)

- Definition and fundamental concepts of forensic psychology and forensic psychiatry.
- Psychology and law, Ethical issues in forensic psychology.
- Assessment of mental competency, mental disorders and forensic psychology.

Unit-2

(15 Hrs)

- Psychology of evidence – eye witness testimony, confession evidence, Criminal profiling.
- Psychology in the courtroom, with special reference to Section 84 IPC. Psychopathology and personality disorder. Psychological assessment and its importance. Serial Murderers.

Unit-3

(15 Hrs)

- Psychology of terrorism. Biological factors and crime–social learning theories, psycho-social factors, abuse.
- Juvenile delinquency – theories of offending (social cognition, moral reasoning),

Unit-4

(5 Hrs)

- Child abuse (physical, sexual, emotional), juvenile sex offenders, legal controversies.
- Tools for detection of deception – interviews, non-verbal detection, statement analysis, voice stress analyzer, hypnosis.

Unit-5

(10 Hrs)

- Polygraphy – operational and question formulation techniques, ethical and legal aspects, the guilty knowledge test.
- Narco analysis and brain electrical oscillation signatures– principle and theory, ethical and legal issues.

Recommended Books:

- A.A.Moenssens, J.Starrs, C.E.Henderson and F.E.Inbau, Scientific Evidence in Civil and Criminal Cases, 4thEdition, The Foundation Press, Inc. J.Niehaus, Investigative Forensic Hypnosis, CRC Press, Boca Raton (1999).
- E.Elaadin Encyclopedia of Forensic Science, Volume 2, J.A.Siegel, P.J. Saukko and G.C. Knupfer (Eds.), Academic Press, London (2000).

Subject Code: BHFSS1-203

**L T P C
3 0 0 3**

Duration: (45 Hrs)

Course Objectives:

- Students will be able to learn the different terminology and techniques which are helpful during the interview and conferences

Course Outcomes:

- Demonstrate the significance of communication and basics of non-verbal communications.

Unit-1

(5 Hrs)

- Vocabulary, Synonyms, Antonyms, Prefix and Suffix, Homonyms, Analogies and Portmanteau words.
- Active, Passive, Direct and Indirect speech, Prepositions, Conjunctions and Euphemisms.

Unit-2

(10 Hrs)

- Letter Writing, Email, Essay, Articles, Memos, one word substitutes.
- Note making and Comprehension, Writing and Reading, Summary writing, Creative writing, news paper reading

Unit-3

(10 Hrs)

- Practical Exercise, Formal speech, Phonetics, semantics and pronunciation Communication process.
- Elements of communication, Barriers of communication and how to overcome them, Nuances for communicating with patients and their attenders in hospitals

Unit-4

(10 Hrs)

- Importance of speaking efficiently, Voice culture, Preparation of speech. Secrets of good delivery, Audience psychology, handling Presentation skills.
- Individual feedback for each student, Conference/ Interview technique, Importance of listening, self assessment.
- Action plan execution, Barriers in listening, Good and persuasive listening

Unit-5

(10 Hrs)

- What is efficient and fast reading, Awareness of existing reading habits, Tested techniques for improving speed, Improving concentration and comprehension through systematic study Basics of non verbal communication.
- Rapport building skill using Neuro- linguistic Programming (NLP), Communication in Optometry practice

Recommended Books:

- Basic communication skills for Technology, Andreja. J. Ruther Ford, 2nd Edition, Pearson Education, 2011
- 2. Communication skills, Sanjay Kumar, Pushpalata, 1st Edition, Oxford Press, 2011
- Organizational Behaviour, Stephen .P. Robbins, 1st Edition, Pearson, 2013
- Brilliant- Communication skills, Gill Hasson, 1st Edition, Pearson Life, 2011

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- The Ace of Soft Skills: Attitude, Communication and Etiquette for success, GopalaSwamy Ramesh, 5thEdition, Pearson, 2013
- Developing your influencing skills, Deborah Dalley, Lois Burton, Margaret, Greenhall, 1st Edition Universe of Learning LTD, 2010
- Communication skills for professionals, Konarnira, 2ndEdition, New arrivals –PHI, 2011
- Personality development and soft skills, Barun K Mitra, 1stEdition, Oxford Press, 2011.

FORENSIC CHEMISTRY

Subject Code: BHFSS1-204

**L T P C
3 1 0 4**

Duration: (60 Hrs)

Course Objectives:

- Students will able to learn the methods of analyzing trace amounts of petroleum products in crime scene evidence and methods of analyzing contaminants in petroleum products.

Course Outcomes:

- Demonstrate the significant knowledge of classification and characteristics of the narcotics, drugs and psychotropic substances and the methods of identifying narcotics, drugs and psychotropic substances.

Unit-1

(15 Hrs)

- Distillation and fractionation of petroleum, Commercial uses of different petroleum fractions.
- Analysis of petroleum products. Analysis of traces of petroleum products in forensic exhibits. Comparison of petroleum products. Adulteration of petroleum products.

Unit-2

(15 Hrs)

- Natural and synthetic, Drug dependence, Classification of drugs of abuse–narcotics, hallucinogens, depressants, stimulants and anabolic steroids.
- Withdrawal symptoms. Tests of narcotics,

Unit-3

(15 Hrs)

- Drugs and psychotropic substances of Alcoholic and non alcoholic beverages.
- Analysis of alcoholic beverages, Detection and determination of ethanol and methanol. Licit and illicit liquors.

Unit-4

(8 Hrs)

- Classification of explosives–low explosives and high explosives.
- Homemade explosives. Military explosives. Blasting agents.

Unit-5

(7 Hrs)

- Synthesis and characteristics of TNT, PETN and RDX, Explosion process.
- Blast waves. Bomb scene management. Searching the scene of explosion.

Recommended Books:

- A.A. Moenssens, J. Starrs, C.E. Henderson and F.E. Inbau, Scientific Evidence in Civil and Criminal Cases, 4th Edition, The Foundation Press, Inc., New York(1995).
- R.Saferstein, Criminalistics, 8th Edition, Prentice Hall, New Jersey (2004).

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- W.J. Tilstone, M.L. Hastrup and C. Hald, Fisher's, Techniques of Crime Scene Investigation, CRC Press, Boca Raton (2013).
- F.G. Hofmann, A Handbook on Drug and Alcohol Abuse, 2nd Edition, Oxford University Press.

CRIMINAL LAW PRACTICAL

Subject code: BHFSS1-205

**L T P C
0 0 4 2**

(Duration: 4hrs/ week)

Course Objectives:

- This course gives idea about the Criminal justice system, Different Acts and Provision in Indian Constitution related to Forensic science, hierarchy of criminal courts. Knowledge of Various sections of Criminal Procedure code, Indian Penal Code and Indian evidence Act, Acts related to socio economic crime, environmental crime and about types of offences Provided under the Act.

Practicals

- To prepare a schedule of five cognizable and five non-cognizable offences.
- To study the powers and limitations of the Court of Judicial Magistrate of First Class.
- To prepare a schedule of the offences which may be tried under Section 260 (2) of Criminal Procedure Code.
- To study a crime case in which an accused was punished on charge of murder under Section 302.
- To study a crime case in which an accused was punished on charge of rape under Section 375.
- To cite example of a case in which the opinion of an expert was called for under Section 45 of the Indian Evidence Act.
- To cite a case where in a person was detained under Article 22(5) of the Indian Constitution. Express your views whether the rights of the person as enlisted in this Article were taken care of.
- To cite a case under Article 14 of the Constitution of India where in the Right Equality before Law was alleged violated.
- To list the restriction imposed on Right to Freedom of Worship under the Constitution of India.
- To prepare a schedule of persons convicted under Narcotics, Drugs and Psychotropic Act statistically analyze the age group to which they belonged.
- To study a case in which Drugs and Cosmetic Act was invoked.
- To study a case in which Explosive Substances Act was invoked.
- To study a case in which Arms Act was invoked.
- In light of Section 304B of the Indian Penal Code, cite a case involving dowry death.
- To study a case where in the Untouch ability Offences Act was invoked on the basis of Article 15 of the Constitution of India.

FORENSIC PSYCHOLOGY PRACTICAL

Subject Code: BHFSS1-206

L T P C

(Duration: 4hrs/ week)

0 0 4 2

Course Objectives:

- This will Provide knowledge of various aspects in cases involving Forensic Psychology, use of various inventories for assessment of criminal, study of various signatures in serial killer murder cases,

Practical:

- To cite a crime case where legal procedure spertaining to psychic behaviour had to be invoked.
- To prepare are porton relationship between mental disorders and forensic psychology.
- To review a crime case involving serial murders. Comment on the psychological traits of the accused.
- To cite a crime case involving a juvenile and argue for and against lowering the age for categorizing an individual as juvenile.
- To study a criminal case in which hypnosis was used as a means to detect deception.
- To prepare a case report on the matic appreciation test.
- To prepare a case report on Minnesota multi phasic personality inventory test.
- To prepare a case report on the matic appreciation test.
- To prepare a case report on word association test.
- To prepare a case report on Bhatia's battery of perform test of intelligence.
- To cite a criminal case in which narco analysis was used as means to detect deception.