

Annexure-I
Choice Based Credit System
M.Sc. in Criminology and Forensic Science
Revised Syllabus 2021- 2022 onwards
School of Social Work, Roshni Nilaya, Mangaluru

Introduction:

Crime is increasing manifold and has taken multi-dimension. All modern technological innovations have been misused by certain people for their criminal enterprise. Today world over security has become a casualty. Occurrences of crime like terrorism, Human Rights Violation, Cyber Atrocities, Financial Frauds, White Collar Crime etc., have become the order of the day. Simultaneously conventional crime is also increasing in an alarming rate. To counter such crimes and achieve upper hand on them, society must constantly strive to find newer methods. Enriched academic knowledge and initiation of researcher in the field would go a long way in combating crime. Hence, to cater the society's needs the college has introduced Post-Graduate Programme in Criminology and Forensic Science since 2011-2012. The subject Criminology is being taught as one of the optional subject for the undergraduate students in the college since four decades. This programme would be an option for the students to start their career in the relevant field.

Objective of the Programme:

The Programme aims to prepare the students to acquire academic and research knowledge in the area of Forensic Science, Police Science, Victimology, Criminology, Forensic Psychology, Cyber Forensics, Techniques in Investigation of various crimes, Prison Administration, Security and Vigilance, etc.

Facilitate the students to chalk out a career for themselves and to render services to the Police, Prison, Judiciary, Institutions like Bank, IT and other Industrial sectors.

To impart knowledge about newer forms of crimes, technology to combat and to endeavour justice for the needy.

Programme Contents: M.Sc Criminology and Forensic Science (CFS) is the subject containing both theory and practical papers.

First academic year of this programme (First and Second Semesters) contain common papers such as Criminalistics, Criminology, Criminal Law, Security and Vigilance, Police Administration, Crime Scene Management, Forensic Ballistics, Medico-Legal studies, Cyber Forensics, Research Methods in Criminology and Forensic Science

Second academic year of this programme (Third and Fourth Semesters) offers two specializations must opt any one.

SPECIALIZATION-I: QUESTIONED DOCUMENTS AND IMPRESSION EVIDENCES (QDIE)

OR

SPECIALIZATION-II: FORENSIC PSYCHOLOGY AND CRIMINAL JUSTICE (FPCJ)

The main contents of Specialization-I is Scientific Examination of Questioned Documents, Advances in Finger Print Analysis, Impression Evidences in Crime Detection, Instrumentation in Questioned Documents and Finger Print, Expert Testimony in Legal Process and Laboratory Management, Dissertation in Questioned Documents and Impression evidences, Field exposure in Forensic Science Laboratory and Finger Print Bureau, Expert Opinion-Analysis and reporting of Cases

The content of Specialization-II is Investigative Psychology, Psychology of Victims, Psychology of Crime and Criminal Justice, Criminal Profiling, Psychology in Correctional Administration, Dissertation in Forensic Psychology and Criminal Justice, Field Exposure to Rehabilitation and Reformation centres

CAREER OPPORTUNITIES:

- Banking and Financial Sector
- Private Detective Agencies
- Opportunities in Media
- State and Central Police Establishment
- Social Welfare Department / Prison Department
- Security and Vigilance Department in Private and Public Sector Industries
- Teaching and Research
- Forensic Science Laboratories

OUR VISION: To expertise in the field of Forensic Science and to provide quality services to the needy

OUR MISSION: To uphold Social Justice through quality education, research and proficiency in striving towards crime free society

Faculty Objective:

- To impart field based knowledge in Criminology and Forensic Science as prescribed in the syllabus
- To promote social responsibilities among the students to endeavor crime preventive programmes
- To provide platform for the students to pursue career of their interest in the relevant field.
- To develop research skills in the field by taking up projects on current issues.

Learner Objective:

- To gain in-depth knowledge in the subject to reach their preferred goal in the relevant fields.
- To actively participate in the crime prevention programmes and to create crime awareness among the public
- To learn research techniques and to adopt it by conducting researches in the specialized areas
- To acquire skills essential for the provision of expert opinion and to handle advanced instruments during forensic analysis of scientific evidences

MSc Programme Outcomes:

- Obtain knowledge on pertinent programme towards personal and civic responsibility
- Expertise in a relevant field and its application in social wellbeing
- Receptive, constructive and value oriented professional approach

Programme Specific Outcomes:

- Prepares the students to acquire academic and research knowledge in the relevant fields
- Facilitates the students to chalk out a career for themselves and to render services to the needy
- Develops skills to provide expert opinion to the Law Enforcement Agencies on the specialized fields

Summary Chart-Academic inputs 2021-2022

I SEMESTER

Paper title	Teaching Hrs per week	Credits	Exam Hrs.	Internal Assmt.	Exam	Total Marks
Hard core						
MCF 601 C-I : Criminalistics	4	4	3	30	70	100
MCF 611 C-II: Police Administration and Crime Scene Investigation	4	4	3	30	70	100
MCF 621 C-III : Criminology and Legal Science	4	4	3	30	70	100
MCF 631 C-IV: Practical: Forensic Examination of Physical evidences	6	4	4	30	70	100
MCF 641 C-V: Practical: Procedure of Crime Scene Investigation	6	4	4	30	70	100
Soft core						
MCF 651 C-VI: Security and Vigilance	4	4	3	30	70	100
Total credits	28	24				600

Hard Core = 5

Soft Core = 1

II SEMESTER

Paper title	Teaching Hrs per week	Credits	Exam Hrs.	Internal Assmt.	Exam	Total Marks
Hard core						
MCF 602 C-VII: Research Methods in Criminology and Forensic Science	4	4	3	30	70	100
MCF 612 C-VIII : Cyber Forensics	4	4	3	30	70	100
MCF 622 C-IX: Practical – Computer Usage in Crime Detection	6	4	4	30	70	100
Soft core						
MCF 632 C-X: Forensic Medicine and Toxicology	4	4	3	30	70	100
MCF 642 C-XI: Practical – Forensic Medicine and Research Techniques	6	4	4	30	70	100
*Open Elective						
OE 2.3 C-XII.3- Science of Crime in the Administration of Justice	3	3	3	30	70	100
Total credits	27	23 [20+3*]				600

*Non-credit subject

Hard Core = 3

Soft Core = 2

***Open Elective = 1**

Group I: Core Courses

Hard Core	Soft Core
FIRST SEMESTER	
MCF 601 C-I : Criminalistics	MCF 651 C-VI: Security and Vigilance
MCF 611 C-II: Police Administration and Crime Scene Investigation	
MCF 621 C-III : Criminology and Legal Science	
MCF 631 C-IV: Practical: Forensic Examination of Physical evidences	
MCF 641 C-V: Practical: Procedure of Crime Scene Investigation	
SECOND SEMESTER	
MCF 602 C-VII: Research Methods in Criminology and Forensic Science	MCF 632 C-X: Forensic Medicine and Toxicology
MCF 612 C-VIII : Cyber Forensics	MCF 642 C-XI: Practical – Forensic Medicine and Research Techniques
MCF 622 C-IX: Practical – Computer Usage in Crime Detection	

Group II: Open Elective Courses

II Semester
OE 2.3 C-XII.3: Science of Crime in the Administration of Justice

Choice Based Credit System

Revised Syllabus 2021- 2022 M.Sc. Criminology and Forensic Science

I SEMESTER

MCF 601 -COURSE-I: CRIMINALISTICS

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 64

Credit: 04

Objectives:

- To learn the process of scientific interpretation and evaluation of evidences.
- To understand the gap between Forensic Science and the law.
- To study the role of Forensic Science in the investigation of crime.
- To gain skills to collect and preserve various physical evidences.

Course Outcome:

- Equip technical knowledge to analyze scientific evidences.
- Learns the relevance of scientific evidences in Criminal Justice System.
- Attains information about significance of expert witness in the court of law.
- Aids practical exposure in handling physical evidence found in crime scene.

HARD CORE

UNIT-I:

18 hours

1. Introduction to Forensic Science:

- a) Definition and principles
- b) Role of Forensic Science in Crime Detection
- c) Forensic Science Lab., different branches & their functions
- d) Mobile forensic science units and its functions
- e) Legal and Ethical issues in Forensic Science

2. Dactyloscopy: Definition, Importance and History

- a) Patterns of Finger Prints
- b) Methods of taking Specimen Finger Prints of Living and Dead Person
- c) Development of Finger Prints from a Scene of Crime (Physical Method)
- d) Manual Comparison of Finger Prints

UNIT-II:

12 hours

4. Glass and Glass Fractures as Evidence in Crime Detection

5. Soil, Dirt and Dust Examination: Main Constituents and Importance of- Visual & Chemical

6. Paint Scrape Marks: Its importance and Techniques of Examination

UNIT-III:

18 hours

7. Blood: Location, Collection and Preservation of Blood.

- a) Techniques of Examination of Blood- Visual, Chemical, Blood Grouping, U.V and I.R Examinations.
 - b) Serology-Human origin and typing of Blood
 - c) Detection of different species of Animal Blood
 - d) Examination and analysis of other body fluids.
8. DNA Profile- Meaning, Structure of DNA and Medico-legal Importance:
- a) Collection and presentation of evidentiary materials for DNA analysis
 - b) Clue Materials and Technique of DNA Finger Printing, RFLP, VNTR, PCR
 - c) Application and Recent Trends in DNA Finger Printing

UNIT IV:

16 hours

9. Hair: Meaning, Importance and Morphology Location and Collection of Hair in a Crime Scene, Techniques of Hair Examination in the Laboratory: Differences between Human and Animal hair
10. Fibers in Crime Scene: Importance and Classification Evidentiary Materials and Techniques of Examination of Fibers

BIBLIOGRAPHY:

1. Amin M. G. & Singh Dr. Jai Shanker (2009) - Forensic Science in Criminal Investigation, Unique Law Publisher, Ahemadabadh
2. Dr. Nayak Akshay Kumar & Singh Dr. V. H. K. (2008) - World Encyclopedia of Forensic Science
3. Eckert & William G. (Ed. 1980) – Introduction to Forensic Sciences, The C.V. Mosby Company, London.
4. Fisher A.J. Barry - Techniques of Crime Scene Investigation, IV Ed. Elsevier Science Publication Co., Inc 655 Avenue of the American.
5. Mathiharan K. and Patnaik K. Amrit (Ed. – 2008) - Modi's Medical Jurisprudence and Toxicology (23rd Ed.), Butterworths Wadhwa, Nagpur.
6. Nabar B.S. – 2005 (3rd Ed.) Forensic Science in Crime Investigation, Asia Law House, Hyderabad.
7. Ratan Deepak & Zaidi Mohd. Hasan (2008) – Forensic Science in India and the World, Alia Law Agency, Allahabad-001.
8. Saferstein Richard – (1978) Criminalistics: Introduction to Forensic Science, Prentice Hall of India Private Ltd., New Delhi.
9. Saferstein Richard (1988) - Forensic Science Hand Book, Volume I, II, & III, Ed. Day-Star Publication, New Delhi.
10. Schultz O. Donald (1977) - Crime Scene Investigation, Prentice-Halls, New Jersey
11. Shah Giri Raj - Investigation of Crime and Criminals (Vol I & II), Anmol Publications Pvt. Ltd., New Delhi-2
12. Sharma B. R. (4th Ed. 2008) - Forensic Science in Criminal Investigation and Trial, Universal Publishers
13. Sharma B.R. - Forensic Science in Criminal Investigation, Central Law Agency, Allahabad-2.
14. Kumar Ashok, (2010), Forensic Science, Discovery Publishing House Pvt. Ltd. New Delhi.
15. Sodermann Harry – Modern Criminal Investigation
16. Swanson R. Charles Jr. and Others (1977) - Criminal Investigation, Goodyear Publishing Company. Inc., California.
17. Walls H. J. (2nd Ed. 2008) – Forensic Science: An Introduction to Scientific Crime Detection, Universal Law Publishing Co. Pvt. Ltd. New Delhi-33.
18. http://seain.org/images/meeting/030217/2017 ISEA Spring Conference/principles of structural forensic engineering_1 slide per page .pdf
19. <http://www.foundationperformance.org/pastpresentations/FowlerPresSlides-11Nov09.pdf>
20. <https://www.utm.my/dvcdev/files/2014/04/MAE1033-Overview-of-Forensic-Engineering.pdf>

21. [https://the-eye.eu/DataHoarder/SIN/investigation/forensic/Forensic Engineering 2nd Edition %282001%29.pdf](https://the-eye.eu/DataHoarder/SIN/investigation/forensic/Forensic%20Engineering%202nd%20Edition%20-%202001-2004.pdf)
22. <https://www.forensiclinguistics.net/POST-PN-0509.pdf>
23. [http://www.academia.edu/31236949/Forensic linguistics 1 .pdf](http://www.academia.edu/31236949/Forensic_linguistics_1_.pdf)
24. [http://www.academia.edu/31236903/An Introduction to Forensic Linguistics.pdf](http://www.academia.edu/31236903/An_Introduction_to_Forensic_Linguistics.pdf)
25. [https://www.researchgate.net/publication/282613250 Forensic Speech and Audio Analysis Forensic Linguistics - A Review 2001-2004](https://www.researchgate.net/publication/282613250_Forensic_Speech_and_Audio_Analysis_Forensic_Linguistics_-_A_Review_2001-2004)
26. [https://gupea.ub.gu.se/bitstream/2077/52188/4/gupea 2077 52188 4.pdf](https://gupea.ub.gu.se/bitstream/2077/52188/4/gupea_2077_52188_4.pdf)
27. [http://cs.uef.fi/odyssey2014/downloads/Odyssey Keynote Campbell 20140616 final v3.pdf](http://cs.uef.fi/odyssey2014/downloads/Odyssey_Keynote_Campbell_20140616_final_v3.pdf)

MCF 611 COURSE-II: POLICE ADMINISTRATION AND CRIME SCENE INVESTIGATION

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 64

Credit: 04

Objectives:

- To attain knowledge in crime scene management.
- To study the technique of investigation of various crimes.
- To know the role of Police in prevention and detection of crime.
- To gain skills to interview and interrogate the suspects.

Course Outcome:

- Provide assistance in crime scene investigation to the law enforcement agencies.
- Attains information about the recruitment procedure of police personnel.
- Develops interviewing and interrogating techniques.
- Gains the practical knowledge on functions of police station and the duties of police personnel.

HARD CORE

UNIT I:

16 hours

1. Origin & Development of Police: Procedure of Prevention & Investigation of Crimes
2. Procedure of investigation of Cognizable and Non-Cognizable crimes.
3. Legal provisions of investigation, Police procedure of Arrest, Search and Seizure of Property,
 - a) Bail- Meaning and Types, Conditions for various kinds of bail- Bail in Non-bailable cases and Bail in petty cases

UNIT II:

18 hours

4. Establishment and Functions of a Police Station, Different Crime Control Records Maintained in Police Station
5. General Organization of Police in a State: Special Units of State Police
6. Structure and Functions of Central Police Organizations
7. Salient features of Karnataka Police Act, Law and Procedure of Domestic Enquiry

UNIT III:

16 hours

8. Crime Scene Investigation: Types of Scene of Crime, Methods of Crime scene investigation, planning for a crime scene search, Methods of sketching crime scene and Crime Scene photography
9. Handling and packing of scientific Evidences, Techniques of collecting Forensic Evidences for Expert opinion

UNIT IV:**14 hours**

10. Interrogation and Interview:
 - a) Types of Suspects and Techniques of their Interrogation
 - b) Types of Witnesses- Mahazar, Crime Scenes Witness and Techniques of their Examination
11. Inquest: Types and Procedure
12. Case studies and Researches done in the relevant fields.

BIBLIOGRAPHY:

1. Bailey B. David – Police and Political Development in India, Printed on University Press, New Jersey.
2. Bharadwaj R. K. (1978) - Indian Police Administration, National Publishing House, New Delhi-02
3. Goddard W. Goddard (1977) - Crime Scene Investigation, Reston Publishing Company, Virginia
4. Horgan J. John (1974) – Criminal Investigation, Mac Grow – Hill Book Company New York.
5. Favreau F. Donald, (1978), Modern Police Administration, Prentice Hall, Inc, U.S.A
6. J.C. Chaturvedi (Editor 2006) – Police Administration & Investigation of Crime, Isha Books, New Delhi – 33.
7. Sharma P.D. (1998), Criminal Justice Administration, Rawat Publications, Jaipur.
8. James V. (1997) – The Police, The People & Criminal Justice, APH Publishing Corp. New Delhi- 2.
9. Police Acts (Containing 6 Acts)
10. Roy Sinha S. K. (3rd Ed. 2008) - Police Diaries, Premier Publishing Co., Allahabad.
11. Saini Kamal (2007) – Police Investigation: Procedural Dimensions, Law & Methods, Deep and Deep Publications Pvt. Ltd. New Delhi-27
12. Schultz O. Schultz (1977)-Crime Scene Investigation, Prentice-Halls, New Jersey
13. Shah Raj Giri - Investigation of Crime and Criminals (Vol I & II), Anmol Publications Pvt. Ltd., New Delhi-2
14. Tadsad G. Kamalaxi, (2012), Human Rights and Police Administration, Concept Publishing Company Pvt. Ltd. New Delhi.
15. Sharma P.D.-Police and Criminal Administration, Uppal Publishing House, Delhi.
16. Shenoy S. Shenoy (2006) - Law Relating to Police and Prisons in Karnataka, Lawyers Law Book, Bangalore
17. Sodermann Harry – Modern Criminal Investigation
18. Swanson R. Charles Jr. and Others (1977) - Criminal Investigation, Goodyear Publishing Company. Inc., California.
19. Trivedi S. D. (1984) - Secret Services in Ancient India: Techniques and Operation Allied Publishers Pvt. Ltd. New Delhi
20. Vadackumchery & James (1999) - Professional Police: Witness Interviewing, APH Publishing Corp. New Delhi- 2.
21. Weston B. Paul & Wells M. Kenneth. - Criminal Investigation: Basic Perspectives, Prentice-Halls, Inc., London
22. http://shodhganga.inflibnet.ac.in/bitstream/10603/21778/16/16_chapter%205.pdf
23. http://www.undp.org/content/dam/undp/documents/about/transparencdocs/OAI_Investigations_Guidelines.pdf
24. https://www.faa.gov/airports/resources/publications/orders/media/Safety_5200_10.pdf
25. http://dgca.nic.in/manuals/Air_Safety_Procedure_Manual.PDF
26. http://dgca.nic.in/manuals/PM_Accident.pdf
27. <http://civilaviation.gov.in/sites/default/files/Current%20Procedure%20Manual%20for%20Accident%20Investigation.pdf>
28. http://civilaviation.gov.in/sites/default/files/moca_001421.pdf
29. [http://dpal.kar.nic.in/pdf_files/4%20of%201964%20\(E\).pdf](http://dpal.kar.nic.in/pdf_files/4%20of%201964%20(E).pdf)
30. <https://www.legalcrystal.com/act/61971/karnataka-police-act-1963-complete-act>
31. <https://ksp.gov.in/Page.aspx?page=Police%20Manual>

32. http://www.indianrailways.gov.in/railwayboard/uploads/directorate/security/downloads/2017/Crime_Railways_210417.pdf
33. http://www.indianrailways.gov.in/railwayboard/uploads/codesmanual/IRWM/worksmanualCh11_data.htm
34. <http://ncrb.gov.in/StatPublications/CII/CII2013/Chapters/19-Crime%20in%20Railways.pdf>

MCF 621 COURSE-III: CRIMINOLOGY AND LEGAL SCIENCE

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 64

Credit: 04

Objectives:

- To raise awareness on different types of crimes
- To obtain information about the rehabilitative methods adopted for the offenders.
- To know the importance of Indian procedural laws.
- To throw light on various factors for the causation of crime in the society

Course Outcome:

- Proficiency in assessing Criminal Behaviour and their effective reformation.
- Provides effective consultancy for legal issues.
- Understands the causes of crime and the techniques of its prevention.
- Gains deep knowledge on the legal rights of the Indian citizen

HARD CORE

UNIT-I

16 hours

1. Fundamentals of Criminology, Nature, Importance and Scope of Criminology, Pioneers contribution to Criminology.
2. Crime: Social and Legal Definitions, Characteristics, Causes, Classification of Crime and Criminals.

UNIT-II

17 hours

3. Social institutions and Crime- Family, Political, Religion, Education, Media, Economic Institutions
4. Social Deviance and Crime; Crimes against women and children, laws related to women and children, female criminality, Youth and Crime, Decriminalization

UNIT-III

17 hours

5. General Exceptions and Rights of Private Defense (Sec.76-106 IPC)
6. Offences against Human Body (Sec.299-377 IPC) - Definition and Aggravation
7. Offences against Property (Sec.378-462 IPC) - Definition and Aggravation
8. Establishment and Functions of District Criminal Courts

UNIT-IV:

14 hours

9. Salient features of Indian Evidence Act (IEA), Distinction between Admission and Confession, Provision of Confession under IEA, Types of Evidence- Expert evidence -its advantages and Limitations, Burden of Proof in Criminal Cases.
10. Environmental Crimes: Definitions, Factors and Types-Wild life crime, Illegal mining, Pollution crimes, Illegal fishing, Illegal logging, Extent of environmental crimes in India, Silent features of Environment Protection Act, 1986

BIBLIOGRAPHY:

1. Abadinsky Howard (1979) - Social Service in Criminal Justice- Prentice-Halls, Inc., London
2. Augustine T. Paul (2007) - Intellectual Property Crime, Crescent Publishing Corporation, New Delhi-02
3. Pande G.S. (2nd Ed. 1982) – The Indian Evidence Act, Allahabad Law Agency, Law Publishers, Allahabad.
4. Prevention of Damage to Public Property Act, 1984 along with West Bengal Prevention of Defacement of Property Act, 1976
5. Ratanlal & Dhirajlal (2008) - Code of Criminal Procedure (Cr.P.C), Wadhwa & Company Pvt., Limited, Nagpur.
6. Ratanlal & Dhirajlal (2008) - Indian Penal Code (IPC), Wadhwa & Company Pvt., Limited, Nagpur.
7. Rathanlal & Dhirajlal (2008) – Indian Evidence Act, Wadhwa & Company Pvt., Limited, Nagpur.
8. Terrorist Affected Areas (Special Courts) Act, 1984
9. Unlawful Activities (Prevention) Act, 1967 along with Rules, 1968 POTA, 2002 and POTA (Repeal) Act, 2004
10. Verma Preeti (Ed.)- The Terror of POTA and other Security Legislations, Human Rights Law Network, New Delhi-14.
11. Ahuja Ram, (2011), Criminology, Rawat Publications, New Delhi.
12. Paranjape N. V. (2014), Criminology and Penology with Victimology, Central Law Publications, Allahabad.
13. Sutherland E.H.(1965), Principles of Criminology, Times of India Press, Bombay.
14. Adler et al. (2001), Criminology, McGraw Hill Higher Education, New York.
15. Phillipson Michael, (1971), Sociological Aspects of Crime and Delinquency, Routeledge And Kegan Paul, London.
16. Purvi Ramakant, (2006), Handbook of Criminology, Dominant Publishers and Distributers, New Delhi.
17. Reckless C. Walter, (1967), The Crime Problem, Meridith Publishing Company, Bombay.

MCF 631 COURSE-IV: PRACTICAL: FORENSIC EXAMINATION OF PHYSICAL EVIDENCES

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 96

Credit: 04

HARD CORE

1. Procedure of recording Finger Print of living persons
2. Manual comparison of finger prints
3. Developing latent finger prints
4. Forensic analysis of soil
5. Paint scrape analysis
6. Glass Fracture analysis
7. Serological examination of blood evidences
8. Chemical test to identify suspected blood evidences
9. Identification of species origin
10. Morphological examination of hairs: Inner and Outer structure
11. Laboratory examination of disputed fiber evidences

MCF 641 COURSE-V: PRACTICAL: PROCEDURE OF CRIME SCENE INVESTIGATION

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 96

Credit: 04

HARD CORE

1. Qualitative analysis of crimes reported in newspaper
2. Procedure of writing FIR in a simulated case
3. Procedure of registration of a cognizable case
4. Procedure of sketching and photographing Indoor crime scene
5. Procedure of sketching and photographing outdoor crime scene
6. Inspection and reconstruction of scene of crime
7. Procedure of handling, packing of scientific evidences in a simulated crime scene
8. Procedure of interrogation of suspects in a simulated crime scene.
9. Procedure of interviewing witnesses in a simulated crime scene.
10. Procedure of operation and recording from video camera, Hidden camera and Pen camera
11. Procedure of operation and functions of CCTV and Metal Detector

MCF 651 COURSE-VI: SECURITY AND VIGILANCE

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 64

Credit: 04

Objectives:

- To comprehend the operational techniques of various security gadgets
- To study the utility of different kinds of security devices in prevention and detection of crime
- To obtain skills required for vigilance in private and public sectors.
- To understand the functions and security systems maintained in various fields.

Course Outcome:

- Equips with ability in handling modern security gadgets.
- Impart knowledge, skill and attitude in security managements.
- Job opportunities in vigilance division of both private and public sectors.
- Creates awareness on adoption of safety and security measures in various fields.

SOFT CORE

UNIT-I:

16 hours

1. Introduction to Principles of Security Management and Preventive System.
2. Characteristic of Security and Management System
 - a) Observation
 - b) Patrolling
 - c) Verbal and Non-Verbal Communication
 - d) Traffic Controlling
3. Dynamics of Security a) Threat Analysis b) Espionage c) Surveillance

UNIT-II:

14 hours

4. Introduction and Evolution of the CVC (Central Vigilance Commission) Act 2003 and its importance

5. Scope of Vigilance and role in Public and Private Sector
 - a) Financial institution b) Government Industries c) Public Sector
6. Preliminary inquiry/Investigation & Disciplinary Proceedings of Vigilance Unit (Departmental and Domestic Inquiry)

UNIT-III:

18 hours

7. Security Management in Industrial, Commercial, Residencies
 - a) Industrial: Gate area, Processing Unit area, Loading and Exit area
 - b) Commercial: Entry, Aisles Unit, Exit
 - c) Residencies: Outside, Terminal Building, Parking, Exit
8. Importance of Safety and Security in Political, Social, Religions Gatherings
 - a) Before b) During c) After
9. Different types of Security gadgets and Equipment to protect Man, Material and Animal

UNIT-IV:

16 hours

10. Security Methods in Airport, Railway Station, Bus station, Metro and Pipeline, Bomb Threat Contingency
11. Frisking method in the Security and Safety Management
 - a) Male b) Female c) Vehicles: Two wheeler, Three wheeler and Four wheeler
12. Private Security Agency (Regulation) Act 2005, Ethical and Legal issues in security and Vigilance

BIBLIOGRAPHY:

1. Central Vigilance Commission Act, 2003 along with Related Acts
2. National Security Act, 1980
3. National Security Guard Act, 1986
4. Private Security Agencies (Regulation) Act 2005 along with Rules, 2006
5. Sharma B. R (2008) - Bank Frauds; Prevention & Detection (3rd edition), Universal Law Publishing Co., New Delhi.
6. Skogan G. Wesley & Maxfield G. Michael (1981) - Coping with Crime: Individual and neighbourhood, Volume 124, Sage Publication, Beverly Hills, London.
7. INDUSTRIAL SECURITY MANAGEMENT by R K SINHA
8. <http://catalogue.pearsoned.co.uk/samplechapter/078973446X.pdf>
9. https://www.nr.no/~abie/RA_by_Jenkins.pdf
10. <http://www.ntu.edu.sg/home/anwitaman/TeachingMaterial/notes-riskanalysisandmanagement.pdf>
11. https://www.files.ethz.ch/isn/195675/DCAF_BG_3_The%20Security%20Sector.11.15.pdf
12. https://hsema.dc.gov/sites/default/files/dc/sites/hsema/publication/attachments/Security%20Guidance%20FINAL_0.PDF
13. <http://www.thepassionateseeker.com/security-management-of-industrial-plants/>
14. <https://science.howstuffworks.com/transport/flight/modern/airport-security1.htm>
15. <http://blog.safe-passage.com/types-of-security-screening-checkpoints-at-the-airport>
16. <http://gps-securitygroup.com/types-security-systems-used-airports/>
17. http://indianrailways.gov.in/railwayboard/uploads/directorate/stat_econ/Annualreport10-11/Security.pdf
18. <https://www.bsa.co.uk/Portals/4/Publications/231-security-searches-cop.pdf>

II SEMESTER

MCF 602 COURSE-VII: RESEARCH METHODS IN CRIMINOLOGY AND FORENSIC SCIENCE

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 64

Credit: 04

Objectives:

- To acquire skill in the identification and formulation of research problems.
- To learn the research process and Sampling techniques in criminological research
- To study the various methods of data collection applicable for the field based research
- Aims to take up Research on the current issues relating to the field of Criminology and Forensic Science.

Course Outcome:

- Gains knowledge on research design suitable for the relevant fields.
- Builds confidence to take up research projects sponsored by various agencies.
- Attains skills of adopting suitable statistical techniques during the data analysis.
- Provides employment opportunities in Research & Development.

HARD CORE

UNIT-I:

16 hours

1. Definition and Scope of Criminological Research
2. Problem identification and Problem formulation. (Defining and formulation of Concepts, Hypothesis)
3. Use of Variables and their Measurements.
4. Preparation of a Study proposal- steps and procedures to be followed

UNIT-II:

18 hours

5. Research Design, Typology and Procedures to be followed
6. Sample and Sampling Procedure, Types- Probability and Non- Probability
7. Data Collection: a. Sources- Primary and Secondary
b. Methods- Observation, Interview and Questionnaire
8. a) Tools of Data Collection- Preparation and their uses
b) Data Analysis- Methods and Procedures

UNIT-III:

16 hours

9. Statistics, Definition and Scope: Descriptive Statistics, Central tendency- Computation and Application of Arithmetic Mean, Median and Mode
10. Measure of Dispersion
11. Computation of Range, Quartiles, Mean Deviation and Standard Deviation

UNIT-IV:

14 hours

12. Inferential Statistics
13. Computation of Correlation, Co- efficient, T Test, and Chi- Square Test, degree of freedom, uses of SPSS
14. Ethical and Legal Issues in Forensic Science and Criminological Research

BIBLIOGRAPHY :

1. Agarwal B. C. (2006) - Basic Statistical Tests, New Age International Publishers, New Delhi
2. Ahuja Ram (2005) - Research Methods, Ravat Publication, New Delhi
3. Alasuutari, Pertti. Bickman, Leonard & Brannen, Julia (2008) – Social Research Methods - SAGE Publications Ltd.,1 Oliver’s Yard, 55 City Road, London EC1Y 1SP, United Kingdom.
4. Bachman Ronet & Schutt K Russell (2008)-Fundamentals of research in criminology and criminal justice,Sage Publication.
5. Davies, Pamela. Francis, Peter & Jupp, Victor (2nd Edition) (2011) – Doing Criminological Research - SAGE Publications Ltd.,1 Oliver’s Yard, 55 City Road, London EC1Y 1SP, United Kingdom.
6. Hart, Chris (2005) – Doing Your Masters Dissertation – Vistaar Publications, New Delhi.
7. Hartley, Richard D. (2011)- Snapshots of Research (Readings in Criminology and Criminal Justice) - SAGE Publications Ltd.,1 Oliver’s Yard, 55 City Road, London EC1Y 1SP, United Kingdom.
8. Lewins, Ann & Silver Christina (2007) – Using Softwre in Qualitative Research (A step-by-step guide) - SAGE Publications Ltd.,1 Oliver’s Yard, 55 City Road, London EC1Y 1SP, United Kingdom.
9. Salkind Neil J. (4th Edition) (2011) – Statistics for People Who (Think they) Hate Statistics - SAGE Publications Ltd.,1 Oliver’s Yard, 55 City Road, London EC1Y 1SP, United Kingdom.
10. Salkind, Neil J. (2006) – Tests and Measurement for People Who (Think They) Hate Tests & Measurement - SAGE Publications Ltd.,1 Oliver’s Yard, 55 City Road, London EC1Y 1SP, United Kingdom.
11. Singh A. K. (2006) - Tests, Measurements and Research Methods in Behavioural Science, Bharathi Bhawan Publishing Company, New Delhi
12. Willig, Carla and Stainton-Rogers, Wendy (2010) – Qualitative Research in Psychology - SAGE Publications Ltd.,1 Oliver’s Yard, 55 City Road, London EC1Y 1SP, United Kingdom.
13. C.R. Kothari ,Research Methodology-Methods and Techniques,New Age International Publishers ,(2018,2017).
14. R.S.N Pillai , Statistics-Theory and Practice ,S Chand & Co Ltd .
15. Santosh Gupta ,Research Methodology and Statical Techniques ,Deep and Deep Publications ,2002.

MCF 612 COURSE-VIII: CYBER FORENSICS

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 64

Credit: 04

Objectives:

- To Understand the Technicalities of Cyber Forensics.
- Learn to handle the digital evidences existing in the digital media.
- To be aware of various types of malwares and its implications.
- To become Cyber Security analyst in both public and private sector.

Course Outcome:

- Able to forfeit the vulnerabilities in the usage of computer devices.
- Understands the modus operandi of digital frauds and its preventive techniques.

- Utilize the skills to prevent and detect Digital Crimes.
- Assist the Law enforcement agencies in examining the Digital evidences.

HARD CORE

UNIT -1

16 hours

1. Introduction to Cyber Forensics, Nature and Characteristics of Cyber Crimes.
Role of “Mens rea” and Criminal Liability in Cyber Crime
2. Types of Cyber crimes and classifications (general, pioneers and INTERPOL)
Types of Malware: virus’s worms. Trojan Horses, Blended Attacks, Tracking Cookies, Attacker, Tools, Keystroke and Root Kits, Prevention of Malware incidents, Spy ware detection and Intrusion Prevention (firewalls Routers) Malware incident Response Process & Case studies of cybercrimes.
3. Prevention of Cyber Crimes: Cyber Security, Global, National, Industrial & Individual levels.
4. Investigation of Cyber Crimes: Collection of evidences by Police Agencies.

UNIT -II

16 hours

5. Electronic Banking and E-Payments
6. E- Banking Frauds: Characteristics and Types
7. Credit card Frauds; Types, Investigation and Prevention
8. Challenges to Digital Forensic Evidence: Internet Crimes against children

UNIT - III

16 hours

9. Image analysis, Email tracing tool, Hash Calculator, Cryptography, Computer forensics investigation process, safety precautions in a computer crime scenario, Copying and imaging, extracting information from hard disk, searching for information relating to a particular case, report writing for a computer crime scenario
10. Types of Email, Instant Messenger, Social Networking Sites, Search Engines. World Wide Web Technology, Management of IP address, location of source and destination of email.
11. Generations of Mobile Communication. SMS, MMS, GSM, CDMA and Bluetooth. Android and IOS. Concepts of Cellular Phone communication

UNIT-IV:

16 hours

12. Laws relating to cyber Crime Salient features of IT Act -2000, with emphasis on aspects relating to offenses, punishments, Investigative powers and regulations, Amendments arising due to enactment of IT Act 2000 in IPC, Cr. P.C, I. E. A Copy Right Act
13. Future Perspectives of cybercrimes: Cyber Terrorism and Security Concern
14. Case Laws on cybercrimes, Legal and Ethical issues in Cyber Forensics,

BIBLIOGRAPHY

1. Gupta Sen Mohan (2013), Cyber Crime, Centrum Press, New Delhi
2. Kaushik Anjali(2013), Sailing safe in cyberspace, SAGE Publication India private limited, New Delhi.
3. Gautam Anju, (2014), Cyber Intelligence, Dominant Publishers and Distributors Pvt. Ltd., New Delhi.
4. Bhardwaj Varun, (2014), Global Society and Cyber Crimes, Neel Prakashan, Jaipur.
5. Tewari R.k , Sastry P.k ,Ravi kumar K.V ,Computer Crime and Computer Forensics ,Select Publications ,New delhi ,2003.

6. Deepthi Chopra and Keith Merrill ,Cyber cops ,Cyber Criminals and Internet ,Ilk International ,New delhi ,2002.
7. Dudeja .D ,Cyber Crimes and laws Volume 2,Common wealth publication 2002.
8. Bernd Jahne ,Digital image processing ,Springer verlag,1993.
9. John C Russ, Image Processing , CRC Press, 1999.
10. John R Vacca ,Computer Forensics , Firewall Media Publications ,New Delhi ,2002.
11. Albert J Marcell ,Robert S.Green Field ;Cyber Crime, A Field Manual For Collecting ,Examining and Preserving Evidence of Computer Crime ,CRC Press ,2002.
12. Eoghan Corey ,Computer Crime Investigations ,Academic Press ,2002.
13. David Icove ,Karl seger and William Vonstorch ,Computer Crime ,O'Reilly and Amocialcis Inc. ,1995.

MCF 622 COURSE-IX: PRACTICAL – COMPUTER USAGE IN CRIME DETECTION

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 96

Credit: 04

HARD CORE

1. Safety Precautions in Computer Forensics
2. Seizing the hard disk from computer
3. Data acquisition-copying and imaging
4. Searching for files in the software using the image.
5. Recovering deleted files
6. Steganography –hiding and un hiding (detection)
7. Password cracking of protected files
8. Hashing-checking integrity
9. Email tracing
10. Working with BIOS, changing boot order to USB (boot priority)
11. File signature verification.

MCF 632 COURSE-X: FORENSIC MEDICINE AND TOXICOLOGY

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 64

Credit: 04

Objectives:

- To acquire the knowledge about various types of mechanical injuries and the weapon used to cause the injuries.
- To study the various factors to identify the missing person.
- To gain knowledge about the different sources of poisons and its forensic analysis.
- To know the various causative factors for Unnatural death.

Course Outcome:

- Placement opportunities as Crime Scene Officer at public sectors.
- Gains knowledge to identify the weapon used to cause injuries
- Job opportunities in Toxicology and Biology division of Forensic Science Laboratory.
- Helps to obtain information about Medico-Legal Procedures.

SOFT CORE

UNIT-I

16 hours

1. Forensic Medicine: Definition, scope, Medical evidences and Medical witnesses, Legal and ethical aspects of Medical practice
2. Injuries: Meaning, Definition and Classifications-
 - a) Nature and Medico Legal Importance of Thermal, Chemical and Injuries due to Electricity, lightening and X- rays.
 - b) Mechanical Injuries: i) Abrasion, ii) Contusion, iii) Punctured Wound, iv) Incised Wound v) Gun-Shot Wounds.

UNIT-II

16 hours

3. Personal Identification: Identification of Living Person and Medico-legal importance Identification of dead persons, skeletal remains and Medico legal importance
4. Forensic Anthropology:
 - a) Identification of Skeletal remains
 - b) Skull identification and suture comparison
 - c) Determination of time since Death
 - d) Techniques for recovering Skeletonized human remains,
 - e) Sex determination

UNIT-III

16 hours

5. Thanatology: Meaning, Definition & Causes of Death- Natural & Unnatural
 - a) Types of Death- Definition of Somatic/Clinical and Molecular/Cellular
 - b) Post Mortem Changes and Determination of Time of Death- Cooling of the body, Post Mortem Lividity, Rigor Mortis, Putrefaction, Adipocere & Mummification
 - c) Types and Medico-legal Aspects of Asphyxia, Deaths- Hanging, Strangulation, Suffocation, Smothering and Drowning – Diatom test
6. Forensic Entomology: Insects of Forensic Importance, Estimating the Postmortem interval, Forensic Entomologist as Experts.

UNIT-IV

16 hours

7. Toxicology:
 - a) Definitions and Classifications of Poisons
 - b) Medico-legal Importance of Poisons.
 - c) Extraction and sample preparation: Preliminary screening test, spot test and instrumental methods of analysis.
8. Analysis of Poisons: Meaning of Inorganic poisons
 - a) Inorganic poisons (Cations and Anions) & Miscellaneous poisons
 - b) Analysis of Plant Poisons (non-volatile organic)
 - c) Food Poison: Meaning and Causes- Bacterial Food poisoning, Volatile Organic poisons and Poisonous Food (Mushrooms etc)

BIBLIOGRAPHY

1. Rao G Nagesh Kumar(2010), Textbook of forensic medicine and toxicology, Jaypee brothers medical publishers(P) LTD ,Benguluru.
2. Pillay V. V. (2011), Textbook of Forensic Medicine and Toxicology, Paras Medical Publisher, New Delhi.

3. Jauhari B.C. & Gaur S.N. (Revised 2008) – Firearms : Forensic Ballistics, Forensic Chemistry and Criminal Jurisprudence, Delhi Law House, New Delhi – 54 (India).
4. Dr. K.S Narayan Reddy ,Dr. O.P Murthy ,Forensic Medicine & Toxicology ,Jaypee Brother Medical Publishers,2017.
5. Pillay V.V, Handbook of Forensic Medicine and Toxicology 12 edition , Paras Medical Publisher,2001, New Delhi.
6. Ratan Deepak & Zaidi Mohd. Hasan (2008) – Forensic Science in India and the World, Alia Law Agency, Alahabad-211 001.
7. Saferstein Richard – (1978) Criminalistics: Introduction to Forensic Science, Prentice Hall of India Private Ltd., New Delhi.
8. Sharma B. R. (4th Ed. 2008) - Forensic Science in Criminal Investigation and Trial, Universal Publishers .
9. Encyclopedia of Forensic Science , Elsevier Publications .
10. Vincent J.M DiMaio, Gunshot Wounds Second Edition ,1998 , CRC Press.

MCF 642 COURSE-XI: PRACTICAL – FORENSIC MEDICINE AND RESEARCH TECHNIQUES

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 96

Credit: 04

SOFT CORE

1. Study proposal on the criminological/Forensic relevance
2. Submission of minor Research project and assessment
3. Field Placement in Police Station to learn its functions and evaluation of reports
4. Identification of Age and Sex from the Skeletal remains
5. Identification and Forensic Analysis of simulated Mechanical injuries such as:
 - a. Abrasion b. Bruise c. Laceration d. Stab Wound e. Incised wound f. Gunshot wound
6. Identification of Organic Poisons and its medico-legal Importance
7. Forensic examination of Drugs and Psychotropic substances
8. Diatom Test
9. Preliminary Screening Test, Spot test and Instrumental methods of analysis
10. Exposure to Forensic Medicine department and assessment of reports

OE 2.3 COURSE-XII.3 –SCIENCE OF CRIME IN THE ADMINISTRATION OF JUSTICE

Maximum Marks: 70 + 30 = 100

Maximum Teaching Hours: 48

Credit: 03

Objectives:

- To impart knowledge about the various crimes and its preventive techniques.
- To study the types of female criminality and related laws.
- To obtain information about the functions of police station and their role in the society
- To throw light on the legal proceedings of Criminal Justice System.

Course Outcome:

- To become a responsible citizen in creating a healthy police-public relation.
- Appear for the competitive examination to get employed in the Police Department.

- Acquires information about legal procedures of law enforcement agencies
- Helps to spread the awareness regarding crime prevention and to strive for the crime free society

OPEN ELECTIVE

UNIT-I:

14 hours

1. Understanding Criminology- a) Concept of Crime and Criminal Behaviour
2. Social institutions and Crime- Family, Political, Education, Media, Economic Institutions and Crime

UNIT-II:

10 hours

3. Cyber Crime: Definition, Types, Causes, Prevention and Law relating to Cyber crime
4. Crime against Women: Factors, Prevention and laws related to crime on women

UNIT-III:

14 hours

5. Police Station: Meaning, Structures and Functions of Police stations
6. Organization of Police in State, Functions of Special Units of Police- Criminal Investigation Departments, Police Dog Squad, State Special Branch, Karnataka State Reserve Police
7. Recruitment for the Police job- Constables, Police Sub-Inspector and Gazetted officers

UNIT-IV:

10 hours

8. Procedure of investigation of a Cognizable and Non cognizable crime
9. Legal procedure of arrest, Summons, Warrant, Search and Seizure of property
10. Procedure of retrieval of stolen property from the court/law enforcing agency

BIBLIOGRAPHY :

1. Abadinsky Howard (1979) - Social Service in Criminal Justice- Prentice-Halls, Inc., London
2. Acharya N.K. – Protection of Women from Domestic Violence Act, 2005 (2nd Edition) Asia Law House, Hyderabad.
3. Bharadwaj R. K. (1978) - Indian Police Administration, National Publishing House, New Delhi-02
4. McDonald F. William (Ed. 1976)-Criminal Justice & Victim, Sage Publication, London
5. Ratanlal & Dhirajlal (2008) - Code of Criminal Procedure (Cr.P.C), Wadhwa & Company Pvt., Limited, Nagpur
6. Ratanlal & Dhirajlal (2008) - Indian Penal Code (IPC), Wadhwa & Company Pvt., Limited, Nagpur.
7. Sharma Vinay (2007) - Dowry Death: Legal Provisions and Judicial Interpretation, Deep and Deep Publications Pvt. Ltd. New Delhi-27
8. Shenoy S. Ganesh (2006) - Law Relating to Police and Prisons in Karnataka, Lawyers Law Book, Bangalore
9. Nabar B.S. – 2005 (3rd Ed.) Forensic Science in Crime Investigation, Asia Law House, Hyderabad
10. Sharma B.R. - Forensic Science in Criminal Investigation, Central Law Agency, Allahabad-2
11. Karnataka Police Manual

12. Ahuja Ram, (2011), Criminology, Rawat Publications, New Delhi.
13. Paranjape N. V. (2014), Criminology and Penology with Victimology, Central Law Publications, Allahabad.
14. Sutherland E.H.(1965), Principles of Criminology, Times of India Press, Bombay.