Dr. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD

CIRCULAR NO.SU/Sci. & Tech./Colleges./NEP/23/2023

It is hereby inform to all concerned that, the syllabi prepared by the Board of Studies & Ad-hoc Boards and recommended by the Dean, Faculty of Science & Technology, the Hon'ble Vice-Chancellor has accepted **the following curriculum of All Post Graduate Degree Courses as per Norms of National Education Policy – 2020 under the Faculty of Science & Technology run to the Affiliated Colleges, Dr.Babasaheb Ambedkar Marathwada University** in his emergency powers under section 12(7) of the Maharashtra Public Universities Act, 2016 on behalf of the Academic Council as appended herewith.

Sr.No.	Syllabi of Affiliated BAMU, Aurangabad.	Semester
1.	M.Sc. Biotechnology	Ist and IInd Semester
2.	M.Sc.Forensic Science.	Ist and IInd Semester
3.	M.Sc Forensic Cyber.	Ist and IInd Semester
4.	One Year PG Diploma in Forensic Sci. & Realated Law	Ist and IInd Semester
5.	One Year PG Diploma in Digital and Cyber Forensic and Related Law.	Ist and IInd Semester
6.	M.Sc.Forensic Applied Physics and Ballistics	Ist Semester
7	M.Sc.Forensic Toxicology.	Ist Semester

This is effective from the Academic Year 2023-24 and onwards.

All concerned are requested to note the contents of this circular and bring the notice to the students, teachers and staff for their information and necessary action.

University Campus,
Aurangabad-431 004.
REF.NO.SU/NEP/2023/10092-100
Date:- 16.08.2023.

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Deputy Registrar,
Academic Section

Copy forwarded with compliments to :-

1] **The Principal of all concerned affiliated Colleges, Dr. Babasaheb Ambedkar Marathwada University,.**
2] **The Director, University Network & Information Centre, UNIC, with a request to upload this Circular on University Website.**

Copy to :-

1] **The Director, Board of Examinations & Evaluation, Dr.BAMU,A'bad.**
2] The Section Officer,[M.Sc.Unit] Examination Branch,Dr.BAMU,A'bad.
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Dr. BABASAHEB AMBEDKAR MARATHWADA UNIVERSITY, AURANGABAD

NAAC Reaccredited with 'A' Grade

Faculty of Science and Technology

1 Year P.G. Diploma Programme

Forensic Science and Related Law

Course Structure and Curriculum for Affiliated Colleges
(Outcome-Based Credit System)

9/08/23.

As per National Education Policy 2020
(Effective from Academic Year -2023-24)

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Preamble

The extent and nature of crime has increased tremendously in the last few decades. The changing modus operandi of crime has become more challenging for law enforcement agencies. The program has been designed keeping in mind to give a brief idea of law and forensics to the students, which can make them suitable for the industry/law enforcement agencies. Dr. Babasaheb Ambedkar Marathwada University, Aurangabad is committed to providing a comprehensive syllabus for PG Diploma programs in Forensic Science in line with the objectives and philosophies of National Education Policy 2020.

Course Structure

The Course Structure as per the Government Resolution of the Department of Higher and Technical Education, Government of Maharashtra Dated 16/05/2023 is as follows:

Credits Distribution Structure for One Year PG Diploma Program

Faculty of Science & Technology

Year / level	Sem.	Major subject		RM	OJT /FP	RP	Credits	Degree
		DSC Core Mandatory	DSE (Elective)					
First year 6.0	I	3(4) +2=14	4	4			22	PG Diploma (After 3 years degree)
	II	3(4) +2=14	4		4 Complete during summer break		22	
Cum. Cr. For PG Diploma		28	08	4	4		44	

Abbreviations

Major: A course, which should compulsorily be studied by the student as a requirement of core or major subject is termed as a core course.

DSE: Generally, a course that can be chosen from a pool of courses that may be very specific or specialized or advanced, or supportive to the discipline/subject of study or which provides an extended scope or which enables exposure to some other discipline/subject/domain or nurtures the candidates' proficiency/skill is called as an elective course.

OJT: On-Job Training: Internship/Apprenticeship

FP: Field Project

RP: Research Project

Vision

The vision of the curriculum is as follows:

- To produce graduates with the highest skill and professional ethics competitive to the global forensic demands.

Mission

The mission of the curriculum is as follows:

- To facilitate the updated domain knowledge and skills at par with the global forensic scenario
- To inculcate professional ethics, teamwork, leadership, and value system among students
- To provide research skills among students for further learning and finding innovative solutions

Program Educational Objectives

The educational objective of the PG program in Forensic Science is as follows:

- **PEO1:** To develop scientific and technical competency among graduates leading to a successful career in forensic sciences and allied disciplines
- **PEO2:** To develop analytical and problem-solving skills among students to solve complex issues/problems related to forensic analysis in crime investigation
- **PEO3:** To inculcate professionalism, ethics, teamwork, communication, and leadership quality in the students
- **PEO4:** To make the students responsive toward the environment and society
- **PEO5:** To inculcate the practices of lifelong learning in the direction to have a successful career and responsive citizen of the globe

Program Outcomes and Program-Specific Outcomes

The university is committed to implementing a student-centric curriculum throughout its programs. Program outcomes, program-specific outcomes, and course outcomes have been defined as per Bloom's taxonomy. These are as follows:

Program Outcomes (POs): Program outcomes describe what skills, knowledge, and behaviors students acquire as they progress through the program. The program outcomes are as follows:

PO1: Basic and Discipline-specific knowledge: Apply the knowledge of basic and applied sciences, engineering, social sciences, and arts to various forensic problems.

PO2: Problem Analysis: Identify and analyze forensic problems using standard methods based on a scientific approach.

PO3: Modern tool usage: Understand, select, and apply appropriate techniques, resources, and modern scientific techniques with an understanding of their merits and limitations.

PO4: Design/ Develop research-based solutions: Design novel solutions for regular or complex problems based on research outcomes.

PO5: Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of forensic practices.

PO6: Effective Communication: Speak, read, write, and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media, and technology.

PO7: Forensic practices for society and criminal Justice setup: Understand and analyze the impact of forensic solutions to society and criminal justice setup.

PO8: Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in a multidisciplinary setting.

PO9: lifelong learning: Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of Technological change.

Program-Specific Outcomes (PSOs): Program Specific Outcomes are statements that describe what the graduates of a specific program should be able to do. The PSOs of the PGD in Forensic Science are as follows:

- **PSO1:** Understand the basic and advanced techniques in various disciplines of forensic sciences and law
- **PSO2:** Analyze the forensic samples using basic and state-of-the-art techniques of various disciplines of forensic science.
- **PSO3:** Interpret the court orders and observations for various forensic cases
- **PSO4:** Evaluate the results of various techniques and make decisions on simple or complex forensic problems.

Eligibility

A candidate who has passed the following: B.Sc. in any discipline (three-year program)/ LLB/ B.Sc. Agriculture/ BE/B Tech/ MBBS/BDS/BAMS/BHMS or equivalent degree from a recognized university with 45% marks will be eligible for getting admission to PG Diploma in Forensic Science and Related Law. Reservation policy and relaxation of marks will be as per the norms of the university and the Government of Maharashtra.

Duration

As per the guidelines of the Government of Maharashtra and the university, the PG Diploma Program will be of one-year duration. However, the students need to pass the minimum credits within four years from the date of admission.

Medium of Instruction

Presently, the medium of instruction is English. However, any change in this will be as per the guidelines of the university and the government of Maharashtra.

Attendance

Students must have a minimum of 75 % attendance in each theory and practical course for appearing in the Semester End Examination (SEE), otherwise he/she will not be strictly allowed for appearing for the SEE. However, students having 65 % attendance may request the Head of the concerned Institution for the condonation of attendance on medical grounds.

Assessment Scheme/Scheme of Examination

The assessment scheme is as follows:

- Each course has been assigned marks equivalent to 25 marks/credit. Thus, each theory course is 75/100 marks while the practical/Laboratory course is 25/50 marks. Moreover, On-Job-Training shall be 100 marks.
- Continuous Internal assessment (CIA) will be for 40% while Semester End Examination (SEE) will be for 60%.
- It shall be mandatory for the students to pass individually for both SEE and CIA for each course to complete the program successfully.
- Passing percentage for both theory and practical shall be 40%.
- The CIA may be in terms of class tests, group, and individual assignments, and presentation. Two tests on completion of 40%, and 100% syllabus, each of 20 marks will be conducted and the average result will be reported. Presentation of 10 marks

and assignments of 10 marks will also be conducted to get an aggregate of 40% weightage.

- Changes in the examination scheme are possible as per the guidelines issued by the university from time to time.

Curriculum and Structure as per NEP 2020

As per the Government Resolution of the Department of Higher and Technical Education, Government of Maharashtra, the course structure of the PG Diploma program in Forensic Science is as follows:

Credit distribution and structure of the one-year program in PGD Forensic Science and Related Law

PG Diploma (First Semester)

Course Type	Course Code	Course Name	Teaching Scheme (Hrs./week)		Credit Assigned		Total credits
			Theory	Practical	Theory	Practical	
Major Mandatory DSC	FRL/MJ/500T	General Forensic Science	3	-	3	-	3
	FRL/MJ/501T	Physical Sciences in Forensics	3	-	3	-	3
	FRL/MJ/502T	Criminology	3	-	3	-	3
	FRL/MJ/500P	Practical based on FRL/MJ/500T	-	2	-	1	1
	FRL/MJ/501P	Practical based on FRL/MJ/501T	-	2	-	1	1
	FRL/MJ/502P	Practical based on FRL/MJ/502T	-	2	-	1	1
	FRL/MJ/503P	Skill/Practical based activity	-	4	-	2	2
DSE (Choose any one of the courses: theory and practical together makes a complete course)	FRL /DSE/504T	Criminal Justice System in India and Related Law	3	-	3	-	3
	FRL /DSE/504P	Practical based on FRL/DSE/504T	-	2	-	1	1
	FRL/DSE/505T	Cyber Laws	3	-	3	-	3
	FRL/DSE/505P	Practical based on FRL/DSE/505T	-	2	-	1	1
	FRL/DSE/506T	Courses on SWAYAM and other digital platforms	3	-	3	-	3
	FRL/DSE/506P	Practical based on FRL/DSE/506T	-	2	-	1	1
RM	FRL/RM/549	Research Methodology	4	-	4	-	4
			16	**12**	**16**	**06**	**22**

PG Diploma (Second Semester)

Course Type	Course Code	Course Name	Teaching Scheme (Hrs./week)		Credit Assigned		Total credits
			Theory	Practical*	Theory	Practical	
Major Mandatory DSC	FRL/MJ/550T	Chemical Sciences in Forensics	3	-	3	-	3
	FRL/MJ/551T	Biological Sciences in Forensics	3	-	3	-	3
	FRL/MJ/552T	Indian Penal Code	3	-	3	-	3
	FRL/MJ/550P	Practical based on FRL/MJ/550T	-	2	-	1	1
	FRL/MJ/551P	Practical based on FRL/MJ/551T	-	2	-	1	1
	FRL/MJ/552P	Practical based on FRL/MJ/552T	-	2	-	1	1
	FRL/MJ/553P	Skill/Practical based activity	-	4	-	2	2
DSE (Choose any one from the three courses)	FRL/DSE/554T	Law of Evidence and minor acts	3	-	3	-	3
	FRL/DSE/554P	Practical based on FRL/DSE/554T	-	2	-	1	1
	FRL/DSE/555T	Intellectual Property Rights	3	-	3	-	3
	FRL/DSE/555P	Practical based on FRL/DSE/555T	-	2	-	1	1
	FRL/DSE/556T	Courses on SWAYAM and other digital platforms	3	-	3	-	3
	FRL/DSE/556P	Practical based on FRL/DSE/556T	-	2	-	1	1
OJT/FP	FRL/OJT/FP/559	OJT/FP	-	8	-	4	4
			12	**20**	**12**	**10**	**22**

Detailed Curriculum of Semester-I

Discipline-Specific Core Courses

FRL/MJ/500T	General Forensic Science	Credit:03	Contact Hours:45	Marks:75

Course Overview

The course covers basic concepts of forensic science and physical evidence. It also covers crime scene investigation and reconstruction.

Course Objectives

The course has the following objectives:

- Students will gain an idea of forensic science and its applications
- Students will learn and analyze the various crime scenes for their reconstruction
- Students will have an understanding of various physical evidence
- Students will learn report writing and court procedures

Course Outcomes

After the completion of the course, the students will be able to do the following:

- CO1: Define and explain forensic science, crime scene, physical evidence, and related concepts.
- CO2: Apply various scientific techniques in crime scene investigation
- CO3: Analyze various physical evidence and its involvement in crime
- CO4: Compare properties of various physical evidence

Unit	Course Content	Contact Hours
Unit-I	**Introduction to Forensic Science** • Definition, significance, history & development of forensic science, Laws and principles of Forensic Science. • **Forensic Science in India:** Chemical Examiner's Laboratory, Anthropometric Bureau, Fingerprint Bureau, Department of explosives, Government Examiner of questioned documents, Central Detective Training School, National Crime Record Bureau, Bureau of Police Research and Development, Sardar Vallabhbhai Patel National Police Academy (NPA), Central and State Forensic	09

	Science Laboratories etc.	
Unit-II	**Investigation agencies** • Indian Police Service, Nature, Rank of Police, Commissionerate System of Policing, National Investigative Agency, Research and Analysis Wing, Intelligence Bureau, Narcotic Control Bureau, Central Bureau of Investigation (CBI), Criminal Investigation Department (CID), Interpol.	**09**
Unit-III	**Domains of Forensic Science** • Introduction and scope of various domains of forensic science: Forensic Physics, Ballistics, Audio-Video Forensics, Forensic Engineering, Forensic Photography, Questioned Document Examination, Fingerprints and other impressions, Digital Forensics, Forensic Psychology, Forensic Biology, Serology, Odontology, Anthropology, Entomology, Radiology, Taphonomy, DNA Forensics.	**09**
Unit-IV	**Crime Scene Investigation** • Definition, significance, nature, and classification of the crime scene, the first responding officer, primary survey, Crime scene security, crime scene searching, documentation, handling, collection, preservation, packaging, labeling, forwarding, transportation, and storage of evidence. • Physical Evidence: Definition, importance, nature, and classification of physical evidence. Tools and techniques.	**09**
Unit-V	**Crime Scene Reconstruction** • Definition, nature, classification, and protocols for	**09**

	investigation. • Crime reconstruction & crime scene reconstruction: definition, scope, protocols for reconstruction, instruments used in the reconstruction. • Forensic investigation of cases: homicide, suicide accidental and negligence death, road and vehicular accidents, sexual assault, fire/ arson, pre- and post-blast, narcotic and psychotropic substance, theft, robbery, dacoity, burglary, cybercrime, shooting. • Writing Reconstruction reports, and courtroom testimony.	

Suggested Readings/Reference Books:

1. Richard Saferstien, Forensic Science: From the Crime Scene to the Crime Lab, 4th edition, Pearson, USA.
2. Suzane Bell, Forensic Science: An Introduction to Scientific and Investigative Techniques, Fifth Edition, CRC Press.
3. Henry C Lee, Crime Scene Handbook, Academic Press
4. Ross M. Gadner and Tom Bevel, Practical Crime Scene Analysis and Reconstruction
5. Max M. Houck and Jay A. Siegel, Fundamental of Forensic Science
6. Jaqueline T fish, Larry S. Miller, Crime Scene Investigation
7. Barry A J Fisher, David R. Fisher, Technique of crime scene investigation
8. Tom Bevel, Ross Gardner, Bloodstain pattern analysis with an introduction to crime scene reconstruction. Third edition.
9. Richard Saferstein, Handbook of Forensic Science, Volume-I, II and III

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FRL/MJ/500P	Practical based on FRL/MJ/500T	Credit:01	Contact Hours:30	Marks:25

Course Overview

This is a laboratory course based on General Forensic Science (FRL/MJ/500T). The course objectives and outcomes of this laboratory course have been added to the theory course. A minimum of 10 practical has to be covered in the semester for successful completion of the course.

List of Practical

(Minimum of 10 practical has to be performed for successful completion of the course)

1. To classify the given crime scenes
2. To protect the given mock crime scene
3. To perform a preliminary survey of the given mock crime scene
4. To perform crime scene photography/videography
5. To perform crime scene sketching/note making
6. To collect various evidence from the scene of the crime
7. To investigate/reconstruct the given mock crime scenes
8. To examine given glass pieces for their (dis)similarity (color/opacity/refractive indices/density etc.)
9. To examine given soil samples for (dis) similarity (color, ignition, density gradient, weight loss etc.)
10. To examine given cloth pieces for their (dis) similarity (color, weaving pattern, microchemical test, etc.)
11. Physical examination of given paint samples
12. Study various kits required for crime scene investigation

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FRL/MJ/501T	Physical Sciences in Forensics	Credit:03	Contact Hours:45	Marks:75

Course Overview

The course covers basic concepts of physical sciences applied to forensics. The course has aimed to give an overview of the domains like fingerprint examination, document examination, examination of firearms, and crime in digital domains.

Course Objectives

The course has the following objectives:

- Students will gain an idea of fingerprints and another impression
- Students will learn and analyze various disputed documents
- Students will have an understanding of forensic ballistics
- Students will learn concepts of digital and multimedia forensics

Course Outcomes

After the completion of the course, the students will be able to do the following:

- CO1: Define and explain concepts of fingerprints, documents, ballistics, and digital forensics
- CO2: Apply various scientific techniques for the examination of trace evidence
- CO3: Analyze fingerprints and documents
- CO4: Compare fingerprints/documents from the same and different sources

Unit	Course Content	Contact Hours
Unit-I	**Fingerprints and other impressions** • Fingerprints - History and development, anatomy and morphology of friction ridges, classification of fingerprint Patterns, Types of fingerprints at crime scene (latent, patent, and plastic), Henry's classification system, extension of Henry's system, single digit classification, latent print development, collection and preservation comparison of fingerprints. • Ridgeoscopy, palm print, footprints, footwear prints and gait pattern, ear print, lip print	09
Unit-II	**Document Forensics** • Introduction to document forensics, questioned and	09

	standard documents, the significance of document examination, classification of documents, examination of charred, indented, secret writing, typewritten, printed, and photocopied documents. Handling, care, and preservation of documents. • Examination of handwriting/signature- principles of handwriting, characteristics of handwriting, types of forgeries, examination of forged/genuine handwriting/signature. Examination of disguised handwriting/signature. • Security documents- currency, bond papers, stamps, passports, traveling documents, etc.	
Unit-III	**Forensic Ballistics** • Forensic Ballistics- Introduction, terminologies (ballistics, firearm, projectile, GSR, etc.), history, mechanism of firing, classification of firearms and ammunitions, detection methods and analysis (on scene & instrumental), gunshot wounds.	**09**
Unit-IV	**Trace Evidences** • Introduction, definition, and significance of trace evidence. • Forensic examination of trace evidence: Glass, Paint, soil, hair, fiber • Forensic examination of writing materials: ink and paper	**09**
Unit-V	**Digital and Multimedia Forensics** • Introduction of digital forensics, computer-related crimes, and crime scene investigation related to digital evidence. • Introduction to disk forensics, network forensics, live	**09**

	forensics, and multimedia forensics. • Audio-Video forensics: - Introduction and scope, authentication of doctored image/video/audio, identification of source from the audio/video/image.	

Suggested Readings/Reference Books:

1. Hatcher, Jury and Weller, Firearm Investigation, Identification and Evidence, Stackpole Books
2. Brain J Heard, Handbook of Firearms and Ballistics, John Willey.
3. Hawthorne, Mark R., Fingerprints: analysis and understanding, CRC Press, 2009.
4. Henry C. Lee and R.E. Gaensslen, Advances in fingerprint technology, Second Edition, CRC Press, 2001.
5. Marzena Mulawka, Postmortem Fingerprinting, and Unidentified Human Remains, Elsevier, 2014.
6. Christophe Champod, Chris Lennard, Pierre Margot, And Milutin Stoilovic, Fingerprints, and Other Ridge Skin Impressions, CRC Press, 2004.
7. Eric H. Holder, Jr., Laurie O. Robinson, and John H. Laub, The Fingerprint Sourcebook, US Department of Justice, 2009.
8. Jan Seaman Kelly and Brian S. Lindblom, Scientific examination of questioned documents, Taylor and Francis, 2006
9. Roy A. Huber and A.M. Headrick, Handwriting Identification: facts and fundamentals, CRC Press, 1999.
10. A. S. Osborn, Questioned Documents, 6th Edition, Law and Justice Publishing Company, 2020
11. Wilson R. Harrison, Suspect Documents Their Scientific Examination, 5th Edition, Universal Law Publishing, 2011.
12. Ellen, David, The scientific examination of documents: methods and techniques, 3rd Edition, CRC Press, 2005
13. Jane A. Lewis, Forensic Document Examination, Elsevier, 2014
14. Richard Saferstein, Handbook of Forensic Science, Volume-I, II and III
15. Brain Caddy, Forensic Examination of Glass and Paint: Analysis and Interpretation, CRC Press, 2001
16. Kenneth Pye, Geological and Soil Evidence: Forensic Applications, CRC Press, 2007.

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FRL/MJ/501P	Practical based on FRL/MJ/501T	Credit:01	Contact Hours:30	Marks:25

Course Overview

This is a laboratory course based on Physical Sciences in Forensics (FRL/MJ/501T). The course objectives and outcomes of this laboratory course have been added to the theory course. A minimum of 10 practical has to be covered in the semester for successful completion of the course.

List of Practical

(Minimum of 10 practical has to be performed for successful completion of the course)

1. Recording of fingerprint
2. Identification of Fingerprint patterns
3. Determination of Ridge counting/tracing in a given fingerprint
4. Comparison of fingerprints using various methods
5. Classification of given fingerprints using Henry-FBI classification
6. Development of latent prints using the powder method
7. Development of latent prints using physical methods
8. Development of fingerprints using chemical methods
9. Study the extent of natural variations in the handwriting samples
10. Compare two sets of handwriting samples for their origin
11. Compare two sets of signature samples for their origin
12. Examination of given two glass pieces
13. Examination of given paint samples
14. Detection and decipherment of invisible writing/charred documents
15. Detection and decipherment of alterations in documents/printed documents
16. Study the firing mechanism of various firearms
17. Study bullets/pellets of the given firearms
18. Study firing range from the given ammunitions/firearms
19. Analysis of gunshot residue

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FRL/MJ/502T	Criminology	Credit:03	Contact Hours:45	Marks:75

Course Overview

The course covers basic concepts of crime and criminology

Course Objectives

The course has the following objectives:

- Students will gain an idea of crime and its types
- Students will learn the concepts of criminology
- Students will have an understanding of various schools of criminology
- Students will learn concepts of punishments

Course Outcomes

After the completion of the course, the students will be able to do the following:

- CO1: Define and explain concepts of crime and criminology
- CO2: Understand various schools of criminology
- CO3: Understand punishments and their concepts
- CO4: Compare ideas of various schools of criminology

Unit	Course Content	Contact Hours
Unit-I	**Introduction to Crime** • Crime as a legal, social, and psychological construct. Deviance and crime; Essential elements and stages of Crime, Family-cantered Crimes: Dowry, Domestic Violence, Child Abuse	09
Unit-II	**Modern Crimes** • Organized Crimes, Economic Crimes, Corruption, Corporate Crimes, Development induced Crime, Environmental Crimes, Hate Crimes, Cyber Crimes, and Cyber assisted Crimes. Terrorism and Insurgency; Crime and Politics. Media, Technology, and Crime.	09
Unit-III	**Introduction to Criminology** • Criminology: Meaning, Definition, Nature, and	09

	Scope; Criminology and other Social Sciences; Criminology vs. Criminal Justice. Role of Legislature and Law-making; Participation of Victims and Witnesses in the Criminal Justice Process, Crime Prevention: Neighbourhood Involvement.	
Unit-IV	**Schools of Criminology** • Schools of Criminology: Demonology, Classical, Neo-Classical Schools, Positivist / Positive School, Cartographic School, Biological and Constitutional School- Body Types, Hereditary Traits, Endocrine Glands; Economic Theories of Crime; Multiple Factors. Crime and Social Process: Socialization and Crime- Differential association theory, Differential reinforcement theory.	**09**
Unit-V	**Punishments** • Penology – definition, nature, and scope. Punishment in ancient, medieval, and modern times. Punishment: Significance, Concept, Aims, and Types. • Theories of Punishment. • Sentencing– Principles, Policies, and Procedures. Recent approaches to Punishment, Development of various prison systems.	**09**

Suggested Readings/Reference Books:

1. Peter Joyce and Wandy Laverick, Criminology: A Complete Introduction, 2020
2. Ram Ahuja, Criminology, Rawat Publications, 2000
3. Rob White and Fiona Haines, Crime and Criminology, Oxford University Press, 2017
4. N Prabha Unnithan, Crime and Justice in India, Sage Law, 2013

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FRL/MJ/502P	Practical based on FRL/MJ/502T	Credit:01	Contact Hours:30	Marks:25

Course Overview

This is a laboratory course based on Criminology (FRL/MJ/502T). The course objectives and outcomes of this laboratory course have been added to the theory course. A minimum of 6 practical has to be covered in the semester for successful completion of the course.

List of Practical

(Minimum of 6 practical has to be performed for successful completion of the course)

1. Study the crimes being committed in the surrounding/society and classify them into various categories of crime
2. Perform a comparative analysis of punishment of ancient, medieval, and modern times for a particular crime
3. Perform a comprehensive analysis of a particular crime committed in the last five years across the States of India using NCRB Data. **(Minimum three)**
4. Perform a comparative analysis of criminality according to various schools of criminology
5. Perform a case study on a particular crime where judgment has been pronounced (Case can be taken from any of the Civil/High/Supreme Courts) **(minimum three different types of crime).** While performing the study consider the following:
    a. Nature of crime
    b. Modus operandi
    c. Mens rea
    d. Factors that take the offender to commit the crime
    e. Provisions of punishment under the law for that crime
    f. The Punishment given to the offender

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FRL/MJ/503P	Skill/Practical-Based Activity	Credit:02	Contact Hours:60	Marks:50

Course Overview

The course has been designed to let the students acquire skills in his/her area of interest. As the aim of the course is to develop skills, the students can choose any one of the activities, which can be conducted under the guidance of a teacher. At the end, the student will submit a report on the acquired skill listing the practical work carried out throughout the semester.

List of activities

- Crime Scene Photography
- Examination of Handwriting
- Development of fingerprints on various surfaces
- Any other skill-based activities chosen by the students as per their interests

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Discipline-Specific Elective Courses

FRL/DSE/504T	Criminal Justice System in India and Related Law	Credit:03	Contact Hours:45	Marks:75

Course Overview

The course covers the criminal justice system in India, its components, functions, and related laws

Course Objectives

The course has the following objectives:

- Students will gain an idea of the criminal justice system in India
- Students will learn about investigation proceedings in India
- Students will have an understanding of trial proceedings as per Criminal Procedure Code
- Students will learn juvenile justice system in India and the concepts of probation and parole

Course Outcomes

After the completion of the course, the students will be able to do the following:

- CO1: Define and explain the components, the function of the criminal justice system in India
- CO2: Understand proceedings of investigation and trials in India
- CO3: Describe provisions of probation and parole
- CO4: Compare provisions of juvenile justice-related acts in India

Unit	Course Content	Contact Hours
Unit-I	**Indian Criminal Justice System** • Inquisitorial and Accusatorial Criminal Justice System: Meaning and differences, *Autrefois Acquit* and *Autrefois convict*: Constitutional and Statutory provisions, Important wings of the criminal justice system: Its structure, functions and authority, Constitution of Criminal Courts and their hierarchy, the role of Prosecution and defense, Functions and Powers of Police, Correctional Institutions: Prisons, Borstal Homes and Special Homes.	**09**
Unit-II	**Investigation Proceedings in India**	**09**

	• Police Investigation: Initiation of investigation proceedings- FIR, arrest, confession of the accused and statements of the witnesses, witness protection, search and seizures. Reforms in Criminal Justice System- Justice Malimath Committee Recommendations, Cr. P.C amendment in 2005. • Reforms as proposed in Bharatiya Nagarik Suraksha Sanhita Bill	
Unit-III	**Trial Proceedings under Cr. P. C.** • Sessions Trials, Warrant Trials- On initiation of the Police report and otherwise than on police Report, Trial in Summons cases, and Summary Trials. • Reforms as proposed in Bharatiya Nagarik Suraksha Sanhita Bill	**09**
Unit-IV	**Juvenile Justice System in India** • The Juvenile Justice Act, 1986- Important provisions • The Juvenile Justice (Care & Protection of Children Act), 2000 and The Juvenile Justice (Care & Protection of Children Act), 2015- Important provisions	**09**
Unit-V	**Provision of Parole and Probation** • The Probation of Offenders Act, 1958- important provisions • Parole provisions.	**09**

Suggested Readings/Reference Books:

1. Criminal Justice System by Y.P Bhagat & Mohmmad Sharif, 2019
2. IGNOU MLE 11 Study Material & Book: Criminal Justice System
3. The Criminal Justice System in India by H R Bharadwaj, 2019
4. Criminal Justice System in India: Need for Systemic Change by Dr. Anand Kumar Tripathi, Dr Dimple T. Raval, Ashutosh Pande, 2017

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FRL/DSE/504P	Practical based on FRL/DSE/504T	Credit:01	Contact Hours:30	Marks:25

Course Overview

This is a laboratory course based on Criminal Justice System in India and Related Law (FRL/DSE/504T). The course objectives and outcomes of this laboratory course have been added to the theory course. A minimum of 6 practical has to be covered in the semester for successful completion of the course.

List of Practical

(Minimum of 6 practical has to be performed for successful completion of the course)

1. Perform a comparative study on the criminal justice system in India and USA
2. Perform a comparative study on the criminal justice system in India and UK
3. Perform a comparative study on the criminal justice system in India and China
4. Perform a comparative study on the criminal justice system in India and Japan
5. Perform a comparative study on the criminal justice system in India and France
6. Perform a case study on the judgment on the juvenile justice acts (Case can be taken from any of the Civil/High/Supreme Courts) **(minimum three different types of crime).** While performing the study consider the following:
    a. Nature of crime
    b. Modus operandi
    c. Mens rea
    d. Factors that take the offender to commit the crime
    e. Provisions of punishment under the law for that crime
    f. The Punishment given to the offender
7. Visit of police stations/courts/prisons etc.

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FRL/DSE/505T	Cyber Laws	Credit:03	Contact Hours:45	Marks:75

Course Overview

The course covers the cyber laws in India especially as per the provisions of the Information Technology Act.

Course Objectives

The course has the following objectives:

- Students will gain an idea of Cyber laws in India
- Students will learn about e-governance and e-commerce
- Students will have an understanding of the admissibility of electronic records
- Students will learn about cyber offenses and the penalties

Course Outcomes

After the completion of the course, the students will be able to do the following:

- CO1: Define and explain the provisions of cyber law in India
- CO2: Understand the procedure of e-governance in India
- CO3: Describe cyber offenses and their penalty
- CO4: Compare punishment over the severity of the crime

Unit	Course Content	Contact Hours
Unit-I	**Introduction to Cyber Laws** • Introduction to cyberspace, Jurisprudence of Cyber Law, Scope of Cyber Law, Cyber law in India with special reference to Information Technology Act, 2000 (as amended) and Information Technology Act, 2008	09
Unit-II	**E-governance and E-commerce** • Electronic Governance, Procedures in India, Essentials & System of Digital Signatures, The Role and Function of Certifying Authorities, Subscriber and controller, Digital contracts, UNCITRAL Model Law on Electronic Commerce, Cryptography – Encryption and decryption.	09
Unit-III	**Legal Recognition of Electronic Records**	09

	• Electronic record as per IT Act, Securing Electronic records and secure digital signatures, Admissibility of electronic record (Section 65 A and Section 65 B of IEA), Conditions of admissibility of electronic record, Supreme Court Judgments on admissibility of electronic record, Authentication of electronic records.	
Unit-IV	**Cyber offenses and penalty** • Penalty and compensation for damage to the computer, computer system, etc., Compensation for failure to protect data, Penalty for failure to furnish information, return, etc., with special reference to Information Technology Act.	**09**
Unit-V	**Impact of IT Act on other related act** • Amendments to Indian Penal Code • Amendments to Indian Evidence Act • Amendments to the Reserve Bank of India Act	**09**

Suggested Readings/Reference Books:

1. Commentary on The Information Technology Act by J N Barowalia, Abhishek Barowalia
2. The Information Technology Act, 2000, Bare Act with short notes, Universal's New Delhi, 2022
3. Information Technology Law and Practice- Cyber Laws and Laws Relating to E-Commerce, Vakul Sharma and Seema Sharma 2021
4. Bharat's The Indian Cybar Law with The Information Technology Act 2000 by Suresh T Viswanathan Edition 2022

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FRL/DSE/505P	Practical based on FRL/DSE/505T	Credit:01	Contact Hours:30	Marks:25

Course Overview

This is a laboratory course based on Cyber Laws (FRL/DSE/505T). The course objectives and outcomes of this laboratory course have been added to the theory course. A minimum of 6 practical has to be covered in the semester for successful completion of the course.

List of Practical

(Minimum of 6 practical has to be performed for successful completion of the course)

1. Perform a case study on the status of the Examiner of Electronic Records in India
2. Perform a case study on the admissibility of electronic records compiling the various Supreme courts judgments
3. Perform a case study on e-governance policy in India
4. Perform a case study on the status of cyber infrastructure in India
5. Perform a comparative study of cyber laws of India and other countries
6. Perform a case study on the judgment on IT Act (Case can be taken from any of the Civil/High/Supreme Courts) **(minimum three different cyber offences).** While performing the study consider the following:
    a. Nature of crime
    b. Modus operandi
    c. Mens rea
    d. Factors that take the offender to commit the crime
    e. Provisions of punishment under the law for that crime
    f. The punishment given to the offender

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FRL/DSE/506T	Courses on SWAYAM and other digital platforms	Credit:03	Contact Hours:45	Marks:75

Course Overview

- There is a provision that the student can select the course from SWAYAM or another digital platform. The student can select a course of 3/4 credits. The other guidelines will be issued by the university from time to time

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FRL/DSE/506P	Practical Based on FRL/DSE/506T	Credit:01	Contact Hours:30	Marks:25

Course Overview

- The practical will depend on the structure of course available on platform. In case there is only theory course of 4 credits, the students will be free to opt the same.

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Research Methodology

FRL/RM/549	Research Methodology	Credit:04	Contact Hours:60	Marks:100

Course Overview

- The course gives an overview of research methodology, research writing, and selection of research problems.

Course Objectives

The course has the following objectives:

- Students will gain an idea of research and describe the research process and research methodology
- Students will learn qualitative research and methods used to execute and validate qualitative research
- Students will have an understanding of how to apply the basic aspects of the research process in order to plan and execute a research project.
- Students will able to present, review and publish scientific articles

Course Outcomes

After the completion of the course, the students will be able to do the following:

- CO1: Understand and explain the research process
- CO2: Perform systematic literature survey, formulation of a research topic, study design, analysis and interpretation of data.
- CO3: Design a research approach for a specific research issue of their choice
- CO4: Create a research document for the implementation of the research project

Part-I (30 Contact Hours)

Unit	Course Content	Contact Hours
Unit-I	**Fundamentals of Research** • Introduction to research methodology, definition and basic concepts of research, objectives of research, motivation behind a research, types of research, research process: defining research problem, review the literature, formulation of hypothesis, research design, collection and analysis of data, interpretation and writing a report. Criteria for good research, measuring research impact and quality: JCR report,	10

	impact factor and citation index, ethics and scientific conduct, Ethics in human and animal studies.	
Unit-II	**Writing and Presenting Research** • Components of research paper: the IMRAD system, title, authors and addresses, abstract, acknowledgments, references, tables, and illustration; preparation for publication, submission of manuscript, publication processes; presentation of research: oral and poster presentations, presentation and submission of research proposals to the funding agencies.	**10**
Unit-III	**Funding Agency and Plagiarism** • A brief idea about funding agencies for research and development: UGC, CSIR, DFSS, DST, ICMR, BPR&D, DBT, BARTI. • Plagiarism: definition, types, consequences, UGC regulations.	**10**

Part II (30 Contact Hours)

Presentations, case studies, Assignments, and Tutorials based on Units I to III **(30 Hrs.)**

Students are expected to do the followings

1. Select a broad area of research
2. Read the basic concepts/fundaments of the broad topic
3. Identify 10 SCOPUS / WEB OF SCIENCE Indexed Journals related to the broad topic
4. Search and download 20 research articles from the above research Journals
5. Do systematic review of above 20 research articles
6. While doing review of each of above mentioned 20 research articles, students are expected to prepare a note on following points
    - What are the objectives of the research article?
    - What methodology has been adopted?
    - What are prominent results?
    - How these results of relevant to the latest development of the subject?
    - What is novelty of research article?
    - What are prominent shortcomings of this research a presented in this research article?

- What are your plans to address those shortcomings?

7. Draft the fine-tuned title of research project
8. Draft hypothesis
9. Draft Objectives and Methodology
10. Draft expected outcome of the research project

At the end of the assignment, students are expected to prepare a report having following points

i) Fine-tuned title of Research Project
ii) Fundamental aspects of the fine-tuned research topic
iii) Hypothesis
iv) Objectives
v) Methodology
vi) Detailed Experimental plan
vii) Expected outcome
viii) References

References:

1. Research Methodology by Dr. S. L. Gupta, Hitesh Gupta; International Book House Pvt Ltd **(2013),** ISBN-10: 8191064278, ISBN-13: 978-8191064278
2. Basic Research Methods-Gerard Guthrie SAGE Publications, India, Pvt Ltd, New Delhi **(2010),** ISBN-10: 8132104579, ISBN-13: 978-8132104575
3. Research Methodology-methods and techniques By C. R. Kothari, New Age International Publishers **(2011)** ISBN 978-81-224-1522-3
4. Principles of Research Methodology- Phyllis G. Supino, Jeffrey S. Borer; Springer, Verlag New York **(2012),** ISBN-ebook: 1461433592, ISBN (Hardcover): 978-1461433590
5. Research Design Qualitative, Quantitative. and Mixed Methods Approaches- John W. Creswell; SAGE Publications Ltd, UK **(2011),** ISBN-9780857023452
6. Research Methodology -A Step-by-Step Guide for Beginners- Ranjit Kumar; Sage Publications Ltd**(2010)**, ISBN- 1849203016.
7. Scientific Writing and Communication- Angelika Hofmann; Oxford University Press, US **(2010),** ISBN-13-: 978-0 199947560, ISBN-10: 01 99947562
8. Writing Science: How to Write Papers That Get Cited and Proposals That Get Funded- Joshua Schimel, Oxford University Press, **(2011)**, ISBN: 9780199760237
9. Handbook of Scientific Proposal Writing- A.YavuzOruc; CRC Press, Taylor & Francis group **(2011)**, ISBN: 9781439869185

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