DAVANGERE UNIVERSITY

B.A/B.Sc. in Criminology and Forensic Science with Practical
I TO VI Semester (w.e.f 2024-25 and Onward)

Sem	Sl. No	Title of the Paper	Teaching Hours / week	Semester End Exam	Internal Assessment	Total Marks	Credits	Duration of the Exam
I	1	Introduction to Criminology (Theory)	04 hrs	80	20	100	04	3 hrs
	2	Crime Data Analysis (Practical)	04 hrs	40	10	50	02	3 hrs
II	1	Introduction to Forensic Science (Theory)	04 hrs	80	20	100	04	3 hrs
	2	Scene of Crime Investigation (Practical)	04 hrs	40	10	50	02	3 hrs
III	1	Police Science and Criminal Investigation (Theory)	04 hrs	80	20	100	04	3 hrs
	2	Crime Scene Investigation (Practical)	04 hrs	80	20	100	04	3 hrs
	3	Crime Investigative Techniques (Theory)	02 hrs	40	10	50	02	3 hrs
IV	1	Criminal Law and Penology (Theory)	04 hrs	80	20	100	04	3 hrs
	2	Field Visits: visits to Criminal Justice Institutions (Practical)	04 hrs	40	10	50	02	3 hrs
	3	Crime Scene Management (Theory)	02 hrs	40	10	50	02	3 hrs
V	1	Forensic Medicine and Toxicology (Theory)	04 hrs	80	20	100	04	3 hrs
	2	Medico legal Examination & Digital Forensic Investigation (Practical)	04 hrs	40	10	50	02	3 hrs
	3	Digital Forensic and Cyber Crime (Theory)	04 hrs	80	20	100	04	3 hrs
	4	Elementary Research (Theory)	02 hrs	40	10	50	02	
VI	1	Forensic Documents and Ballistics (Theory)	04 hrs	80	20	100	04	3 hrs
	2	Questioned Documents, Ballistics & Fingerprint Examination (Practical)	04 hrs	40	10	50	02	3 hrs
	3	Dactyloscopy and DNA Fingerprinting (Theory)	04 hrs	80	20	100	04	3 hrs
	4	Project	02 hrs	40	10	50	02	2 hrs
I to VI	Grand Total		72	1160	290	1450	54	

05/05/2024
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Faculty of Arts
Davangere University
Shivagangotri, Davangere-07

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Davangere University
Shivagangotri, Davangere-577007

Coordinator
Department of Studies in
Criminology and Forensic Science
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B.A. Semester–V

Discipline Specific Course (DSC-9A)

Student shall select DSC 9A & 10 A or 9B & 10 B for 06 credits only

Course Title:- FORENSIC MEDICINE AND TOXICOLOGY

Course Code: CFSC9T

Type of Course	Theory /Practical	Credits	Instruction hour per week	Total No. of Lectures/Hours /Semester	Duration of Exam	Formative Assessment Marks	Summative assessment Marks	Total Marks
DSC-9A	**Theory**	**04**	**04**	**56 hrs.**	**3hrs.**	**20**	**80**	**100**

Course Outcomes (COs):At the end of the course students will be able to:

CO1: To understand the basics of Medical Jurisprudence and Toxicology

CO2: Demonstrate the medico-legal importance of Death.

CO3: To familiarize with the poisons and their effects on human body.

CO4: To Familiarize with autopsy and its importance.

Unit	Course Title: FORENSIC MEDICINE AND TOXICOLOGY	56 hrs/ sem
Unit-I	**FORENSIC MEDICINE** Forensic Medicine: Meaning, definition and Importance History of Forensic Medicine Need, Scope, Importance and probative value of medical evidence in Crime Investigation Legal and Ethical Aspects of Practice of Medicine The Indian Medical Council and State Medical Council: Formation, Functions Rights, Privileges and Duties of Registered Medical Practitioners.	14 hrs
Unit-II	**THANATOLOGY** Thanatology, death, its causes, stages of death, signs of death and changes following death, Asphyxia and accidents Death due to heat, cold and electrocution Injuries classification and medico legal aspects Sexual offences Forensic psychiatry	14 hrs
Unit-III	**FORENSIC TOXICOLOGY** Forensic Toxicology: Meaning, Definitions and Importance General consideration and Laws in relation to poisons / Narcotic drugs and Psychotropic substances Act, Common poisons and their classification Identification of common poisons Analytical Toxicology (Principles: Bedside & Common Lab. Tests),	14 hrs

	Collection, Preservation and Dispatch of Viscera to FSL Regulatory Toxicology for prevention of Hazards to Health and Ecology.	
Unit-IV	**MAJOR POISONS** **Corrosive & irritant poisons:** Inorganic Corrosives: Sulphuric, Nitric & Hydrochloric Acid Organic Corrosives: Phenol, Oxalic Acid Inorganic Non-Metallic Irritants: Phosphorus, Halogens, Inorganic Metallic Irritants- Arsenic, Lead, Mercury, Copper Organic Vegetable Irritants: Abrus, Castor, Croton, Calotropis, Semi carpus, Ergot. **Neurotoxin:** Inebriates: Ethyl, Alcohol and Methyl Alcohol Somniferous and Sedative Hypnotics – Opium and Derivatives, Barbiturates Deliriants- Dhathura, Cannabis, Cocaine **Asphyxiants and Other Poisons:** Asphyxiants (Gases): Carbon monoxide, Carbon Dioxide and Cyanides Cardiac Poisons: Oleanders, Aconite and Tobacco Other Poisons- Domestic/ Household Poisons- Kerosene, Detergents	14hrs

References:

1. James J. P., Busuttil A., and Smock W. (2003). *Forensic Medicine: Clinical and Pathological Aspects,* Cambridge University Press.
2. Dettmeyer R. B., Verhoff M. A., and Schutz H. F. (2013), *Forensic Medicine: Fundamentals and Perspectives,* Springer Science & Business Media.
3. Guharaj P.V. & R. Chandran. (1982). *Forensic medicine*, Orient Longman Pvt ltd.
4. Lahiri S.K.. (1973). *Elements of medical jurisprudence*, Prabasi press.
5. Nandy. (1995). *Principals of forensic medicine,* New central book agency.
6. Mant A.K.(2003). *Taylor's priniciples & practice of medical jurisprudence,* Wingking Tong co.ltd.
7. Gordon I &Shapiro H.A.(1982). *Forensic medicine*, Longman group ltd.
8. Lappas, Nicholas T., (2016). *Forensic Toxicology : Principles and Concepts,* Amsterdam: Elsevier.
9. Biswas G.,(2012). *Review of Forensic Medicine and Toxicology,* JP Medical Ltd.
10. Levine B. S., Kerrigan S.,(2020). *Principles of Forensic Toxicology,* Springer Cham.

Formative Assessment for Theory	
Assessment Occasion/type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	**20Marks**
Formative Assessment as per guidelines.	

B.A. Semester–V

Discipline Specific Course (DSC-10A)

Course Title: Medico legal Examination & Digital Forensic Investigation (Practical)

Course Code: CFSC10P

Type of Course	Theory /Practical	Credits	Instruction hour per week	Total No.of Lectures/Hours /Semester	Duration of Exam	Formative Assessment Marks	Summative assessment Marks	Total Marks
DSC-10A	**Practical**	**02**	**04**	**56hrs.**	**3hrs.**	**10**	**40**	**50**

Course Outcomes (COs): At the end of the course, students will be able to:

CO1: Understand about Medico-legal cases

CO2: Know about body Fluids

CO3: Understand about cyber crime

CO4: Analyze modus operandi of Cyber Crime

Part –A

(Maximum 6 Experiment should be carried out)

List of the Experiments

1. Medico-legal aspects of Homicidal
2. Medico-legal aspects of Suicidal
3. Medico-legal aspects of Accidents
4. Examination of Human Skeleton
5. Identification of Sex and age through examination Bone remains
6. Examination of different wounds and injuries.
7. Preliminary Blood tests; Benzidine, phenolphthalein
8. Confirmatory Blood tests : Haemin crystal,
9. Microscopic and blood grouping.
10. Examination of morphology of hair
11. Examination and identification of fibres.
12. Documentation of Forensic Autopsy.

Part –B

(Maximum 6 Experiment should be carried out)

List of the Experiments

1. Detection of deletions
2. Detection of Obliterations
3. Detection of modifications of files using encase software.
4. Tracing the routes followed by e-mails and chats.
5. Identification of the IP address of the sender of e-mails.
6. Identification of memories Hardware in PCs/laptops
7. Identification of proxy applications
8. Identification of encryption files.
9. Identification of hidden files.
10. Acquire the data from PCs/laptops/HDDs
11. Acquire the data from USBs pen drives, memory cards and SIM cards.
12. Study of cybercrime cases and report writing.

Instruction:
Course Teacher and HOD/ Coordinator/ Principal certified practical record book is mandatory for appearing semester end practical examinations

Formative and Summative examination pattern

Internal tests	10 marks
Viva –Voce	05 marks
Practical/ Visits Book	05 marks
Experiment/ institutes visits based questions	30 marks
Total	**10+ 40 = 50 marks**

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B.A. Semester–V

Discipline Specific Course (DSC-9B)

Student shall select DSC 9B & 10 B or DSC 9A & 10 A for 06 credits only

Course Title:- DIGITAL FORENSICS AND CYBER CRIME

Course Code: CFSC11T

Type of Course	Theory /Practical	Credits	Instruction hour per week	Total No.of Lectures/Hours /Semester	Duration of Exam	Formative Assessment Marks	Summative assessment Marks	Total Marks
DSC-9B	**Theory**	**04**	**04**	**56 hrs.**	**3hrs.**	**20**	**80**	**100**

Course Outcomes (COs):At the end of the course students will be able to:

CO1: To understand the concept of digital evidence, collection and preservation of evidence and its significance.

CO2: To understand the importance of Cyber Security

CO3: Demonstrate the methods and techniques, best practices to protect against various kind of cyber- attacks.

CO4: To familiarize with the application of Cyber laws in general.

Unit	Course Title: DIGITAL FORENSICS AND CYBERCRIME	56 hrs/ sem
Unit I	**INTRODUCTION TO DIGITAL FORENSICS** • History of computers and mobile generations. • General awareness of mobile and computer hardware devices, software, memory and processors. • Basic operating system in smart phone and computer- Android, KitKat, MS Dos and Windows. • Internet: Basic setup and internet working, Forensic utility of Smartphone, computer and internet. • Networks- LAN, WAN and MAN	14 hrs
Unit II	**COMPUTER, SMART PHONE AND CYBERCRIME** • Definition, distinction between computer, smart phone crimes and conventional crimes and reasons for commission of such crimes. • Different types of cybercrime: i. Identity theft, cyber defamation, hacking, viruses, trojan and worms, spoofing, spamming, phishing, software piracy. ii. Cloning of mobile and sim cards, Imaging software, logic bombs, cyber stalking. • Cyber terrorism, credit and information theft.	14 hrs

Unit III	**CYBER RELATED LAWS AND ENFORCEMENT AGENCIES** • Information Technology Act 2000 and Information Technology (Amendment) Act 2008, Objectives, Applicability, Non-applicability, Definitions, Amendments and Limitations. • Offences Under IT Act, Offences Related with Digital Signature and Electronic Signature Under IT Act. Various cyber-crimes under Sections 43(a) to (j), 43A, 65, 66, 66A to 66F, 67, 67A, 67B, 70, 70A, 70B, 80 etc.. Penalties Under IT Act, Regulation of Certifying Authorities, Appointment and Powers and Functions of Controller, Cyber Appellate Tribunals. Investigation of malicious applications Agencies for investigation in India, their powers and their constitution as per Indian • Laws Procedures, Intellectual Property Rights in the Cyber World.	14 hrs
Unit IV	**CYBER SECURITY AND INVESTIGATION OF CYBERCRIME** • Fraud detection in computer and mobile forensic: detecting fraud, technologies used for fraud detection; data mining and fraud detection. • Internet security system, tracing domain name or IP address, firewall security systems, wireless network security. • Security using Cryptography and Steganography. • Investigation of Cybercrime: Seizure of computers- Seizure of suspected computer, preparation required prior to seizure, collection and seizure of magnetic data. Restoration of deleted files- familiarization of software, Encase, Cyber check suites, Encryption and decryption methods. • Legal and privacy issues.	14 hrs

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References :

1. Nelson B. Philips A., and Steuart C. (2014). *Guide to computer Forensics and Investigations*, Cengage Learning.
2. Goel S., Gladyshev P., Nikolay A., Markowsky G., and Johnson D. (2023), *Digital Forensics and Cyber Crime,* Springer Nature.
3. Sammons J. (2015). Digital Forensics: Threatscape and best practices, Syngress.
4. Moore, R. (2005) *"Cyber crime: Investigating High-Technology Computer Crime,"* Cleveland, Mississippi: Anderson Publishing.
5. Gupta and Agarwal. (2012) *Cyber Law,* Premier Publication Company, Allahabad.
6. Information Technology Act 2005 & IT Act Amendment, 2008
7. Paranjape N.V. (2010). *Cyber Crimes and Law, Central law Agency*, Allahabad.
8. Halder, D., & Jaishankar, K. (2011). *Cyber crime and the Victimization of Women: Laws, Rights, and Regulations*. Hershey, PA, USA: IGI Global.
9. Ashok Kumar, Manocha O. P. (2023). *Cyber Encounters: Cops Adventures With Online Criminals,* Penguin eBury Press.
10. Sammons J. (2015). *Digital Foreniscs: Threatscape and Best Practices,* Syngress.

Formative Assessment for Theory	
Assessment Occasion/type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	**20 Marks**
Formative Assessment as per guidelines.	

Unit IV	**FIREARM EVIDENCE** • Matching of bullets and cartridge cases in regular firearms. • Automated method of bullet and cartridge case comparison. • Determination of range of fire and time of fire. • Mechanisms of formation of gunshot residues • Methods of analysis of gunshot residues from shooting hands and targets, with special reference to clothing.	14hrs

References :

1. Albert S. Osborn. (1998). *Questioned Documents*, 2nd Ed., universal Law Pub., Delhi
2. Albert S Osborn. (1998). *the Problem of Proof,* 2nd Ed., Universal Law Pub. Delhi.
3. Harrison W. R., (2001). *Suspect Documents Their Scientific Examination,* Universal Law Pub. Delhi Indian Reprint.
4. Morris Ron N, (2001). *Forensic Handwriting Identification*, Acad Press, London..
5. Charles C. Thomas, I.S.Q.D. (1971). *Identification System for Questioned Documents*, Billy Prior Bates Springfield, Illinois, USA
6. Kurtz Sheila; (1983). *Graphotypes a new Plant on Handwriting Analysis*, Crown Pub. Inc., USA
7. urrard. (1956). *The Identification of Firearms and Forensic Ballistics*, Herbert Jenkins, London,
8. Gunther and Gunther. (1935). *The Identification of Firearms,* New York,
9. Sharma, B.R., (2011). *Firearms in Criminal Investigation & Trials*, (4th Edn), Universal Law Publishing Co Pvt Ltd, New Delhi.
10. Smith and Smith, (1972). *Book of Rifles,* Stackpole Books, Harrisburg, Pa.

Formative Assessment for Theory	
Assessment Occasion/type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	**20Marks**
Formative Assessment as per guidelines.	

K. B. P.

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DAVANGERE UNIVERSITY

Course: ELEMENTORY RESEARCH METHODOLOGY BA/BSW/BVA Programs as per SEP-2024

Course Credit	No. of Hours Per Week	Total No. of Teaching Hours
2 Credits	2 Hrs	32 Hrs

Course Objectives

1. To gain understanding of nature and relevance of social science research and its application in the study of social phenomena
2. To learn steps and process of formulation of research design and carry out the same
3. To develop familiarity with qualitative and quantitative research methods
4. To learn how to prepare tools for collection of data
5. To learn process of data collection, organization, presentation, analysis and report writing

Learning Outcomes

1. Able to conduct research, and to do this with an understanding of the application of different methods and tools
2. Able to develop skills of data collection, organization, presentation, analysis and report writing

Unit I: Introduction to Research:

Chapter-1: Research: Concepts, Meaning, Definitions, Objectives, Characteristics, and Scope.

Chapter-2: Basic Elements and types of Research: Concepts, Constructs, Variables, Hypothesis. Types of Research: Pure (basic, fundamental) and applied research, qualitative and quantitative.

Chapter-3: Research Process: Identification and Formulating a Research Problem, Research objectives, Review of literature, Research designs, Sampling, Data Collection, Analysis & Interpretation

Unit II: Research Design and Sampling:

Chapter-4: Research Design: Concept and its importance in research, Features of a good research design. Types of Research Design – Exploratory, Explanatory, Descriptive, Experimental and Case study method

Chapter-5: Sampling Framework – Universe, Population, Sample, and Sampling Techniques

Chapter-6: Types of Sampling: Probability and Non-Probability Sampling

Unit III: Sources of data and Data Collection:

Chapter-7: Sources of Data: Primary and Secondary

(P.T.O)

Chapter-8: Tools and Techniques of Data Collection: Quantitative: Survey, Interview Schedule, Interview Guide and Questionnaire

Chapter-9: Qualitative: Observation, In-depth Interview and Focus Group Discussion, and Case Study

Unit IV: Data Processing and Report Writing:

Chapter-10: Processing and Presentation of Data (Analysis and Interpretations)

Chapter-11: Statistics: Meaning, Definition, Scope, Functions and Limitations, Application of Basic statistics in research

Chapter-12: Research Report: Significance of Research report, abstract and keywords, structure and contents.

REFERENCES:

An Introduction to Research Methodology: Authored by B.L. Garg, R. Karadia, F. Agarwal, and U.K. Agarwal (2002),

Black, J. and Champion, D. (1976). Methods and Issues in Social Research. New York,N.Y.:Wiley.

Bryman,Alan(2016),Social Research Methods. 5th Edition.London:OxfordUniversityPress.

Cook, Thomas D Cook and Reichardt, eds (1979). Qualitative and Quantitative Methods in Evaluation Research. CA:Sage

Creswell,JW(1994).Research Design:Qualitative and Quantitative Approaches.CA:Sa Ge Publications.

Denzin,N.K.andLincoln,Y.S.Eds(2017).TheSageHandbookofQualitativeResearch.Sage

Gupta,S.C.,(2012),FundamentalsofStatistics,7threviseded.,HimalayaPublishingHouse,Ne wDelhi.

Kerlinger,F.(1986).FoundationsofBehavioralResearch.NewYork:Holt,RinehartandWinston.

Kothari,C.R.,(2004),ResearchMethodology–MethodsandTechniques,2nded.,

Kumar,R.,(2006),ResearchMethodology,2nded.,PearsonEducation,NewDelhi.

Laldas, D. K., (2000), Practice of Social Research, Rawat Publication, New AgeInternational (P)Ltd.,NewDelhi.

Neuman, W. L. (2014). Social Research Methods- Qualitative and QuantitativeApproach. 7thEdition.NewDelhi:Pearson EducationIndia.

Note; Elementary Research Methodology course shall be allotted by the Principal, considering the workload of the faculty members of different streams and within the faculty.

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. Semester–VI

Discipline Specific Course (DSC-11A)
Student shall select DSC 11B & 12 B or DSC 11A & 12A for 06 credits only

Course Title:- FORENSIC DOCUMENT AND BALLISTICS

Course Code: CFSC13T

Type of Course	Theory /Practical	Credits	Instruction hour per week	Total No.of Lectures/Hours /Semester	Duration of Exam	Formative Assessment Marks	Summative assessment Marks	Total Marks
DSC-11A	**Theory**	**04**	**04**	**56 hrs.**	**3hrs.**	**20**	**80**	**100**

Course Outcomes (COs):At the end of the course students will be able to:

CO1: Understand the disputed documents
CO2: Understand the characteristics of handwriting
CO3: Know about the types of ammunition and firearms
CO4: Examine the importance of ballistics in criminal investigation

Unit	Course Title: FORENSIC DOCUMENT AND BALLISTICS	56 hrs/ sem
Unit I	**INTRODUCTION TO FORENSIC DOCUMENT** • Document: Meaning and Definitions • Questioned Document: Meaning, Definitions and Types • Preliminary examination, collection, Handling and Transportation of document. • Organization and functions of Government Examiners for Question Document. • Laboratory analysis and court permission as evidence.	14 hrs
Unit II	**FORENSIC DOCUMENT EXAMINATION** • Handwriting: Meaning and Principles. • Class and individual characteristics of Handwritings. • Comparison of handwriting: Natural variations and fundamental divergences in handwritings. • Examination of signatures characteristics, Examination of paper and ink. Forgery: Meaning and Types. • Alterations in documents. Indented and invisible writings. • Tools and Techniques for examination and Identification of Forgeries.	14 hrs
Unit III	**FORENSIC BALLISTICS** • Firearm: Meaning and historical development • Classification of firearms. • Firing mechanisms of different firearms. • Ammunition: Types of ammunition, Constructional features and characteristics of different types of cartridges and bullets. • Different types of marks produced during firing process on cartridge – firing pin marks, • Breech face marks, chamber marks, extractor and ejector marks.	14 hrs

Unit IV	**FIREARM EVIDENCE** • Matching of bullets and cartridge cases in regular firearms. • Automated method of bullet and cartridge case comparison. • Determination of range of fire and time of fire. • Mechanisms of formation of gunshot residues • Methods of analysis of gunshot residues from shooting hands and targets, with special reference to clothing.	14hrs

References :

1. Albert S. Osborn. (1998). *Questioned Documents*, 2nd Ed., universal Law Pub., Delhi
2. Albert S Osborn. (1998). *the Problem of Proof,* 2nd Ed., Universal Law Pub. Delhi.
3. Harrison W. R., (2001). *Suspect Documents Their Scientific Examination,* Universal Law Pub. Delhi Indian Reprint.
4. Morris Ron N, (2001). *Forensic Handwriting Identification*, Acad Press, London..
5. Charles C. Thomas, I.S.Q.D. (1971). *Identification System for Questioned Documents*, Billy Prior Bates Springfield, Illinois, USA
6. Kurtz Sheila; (1983). *Graphotypes a new Plant on Handwriting Analysis*, Crown Pub. Inc., USA
7. urrard. (1956). *The Identification of Firearms and Forensic Ballistics*, Herbert Jenkins, London,
8. Gunther and Gunther. (1935). *The Identification of Firearms,* New York,
9. Sharma, B.R., (2011). *Firearms in Criminal Investigation & Trials*, (4th Edn), Universal Law Publishing Co Pvt Ltd, New Delhi.
10. Smith and Smith, (1972). *Book of Rifles,* Stackpole Books, Harrisburg, Pa.

Formative Assessment for Theory	
Assessment Occasion/type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	**20Marks**
Formative Assessment as per guidelines.	

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B.A. Semester–VI

Discipline Specific Course (DSC-12A)

Course Title: Questioned Documents: Ballistics & Fingerprint Examination (Practical)

Course Code: CFSC14P

Type of Course	Theory /Practical	Credits	Instruction hour per week	Total No.of Lectures/Hours /Semester	Duration of Exam	Formative Assessment Marks	Summative assessment Marks	Total Marks
DSC-12A	**Practical**	**02**	**04**	**56hrs.**	**3hrs.**	**10**	**40**	**50**

Course Outcomes (COs): At the end of the course, students will be able to:

CO1: Understand the handwriting characteristics

CO2: Evaluate the questioned documents

CO3: Understand Different type of fingerprints

CO4: Evaluate Fingerprints as a evidence

Part –A

(Maximum 6 Experiment should be carried out)

List of the Experiments

1. Recording of fingerprints of a living person
2. Different types of finger print recording
3. Finger Print Pattern identification
4. Finger Print Pattern analysis.
5. Identification of Ridge Characteristics.
6. Comparison of fingerprints
7. Identification of plastic prints
8. Henry's classification
9. Developing latent fingerprints – Physical methods
10. Developing latent fingerprints Chemical Methods
11. Tracing Foot Prints
12. Taking plaster cast of sunken foot prints

Part –B

(Maximum 6 Experiment should be carried out)

List of the Experiments

1. Identification of handwriting characters.
2. Identification of signature characteristics
3. Study the natural variations and comparison of handwritings.
4. Detection of simulated forgery
5. Identifying obliterated hand writing
6. Identification of different writing materials
7. Identification of weapons through bullet remains
8. Comparison of fired bullets.
9. Comparison of fired cartridge cases.
10. Examination of angle of impact of the bullet
11. Estimation of the range of fired bullets.
12. Identification of gunshot residue.

Instruction:
Course Teacher and HOD/ Coordinator/ Principal certified practical record book is mandatory for appearing semester end practical examinations

Formative and Summative examination pattern

Internal tests	10 marks
Viva –Voce	05 marks
Practical/ Visits Book	05 marks
Experiment/ institutes visits based questions	30 marks
Total	**10+ 40 = 50 marks**

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B.A. Semester–VI

Discipline Specific Course (DSC-11B)

Student shall select DSC 11B & 12 B or DSC 11A & 12A for 06 credits only

Course Title:- DACTYLOSCOPY AND DNA FINGERPRINTING

Course Code: CFSC15T

Type of Course	Theory /Practical	Credits	Instruction hour per week	Total No.of Lectures/Hours /Semester	Duration of Exam	Formative Assessment Marks	Summative assessment Marks	Total Marks
DSC-11B	**Theory**	**04**	**04**	**56 hrs.**	**3hrs.**	**20**	**80**	**100**

Course Outcomes (COs):At the end of the course students will be able to:

CO1: Understand the different types of finger prints
CO2: Examine the fingerprints found in crime scene
CO3: Evaluate the latent prints
CO4: Understand relevance of fingerprint in crime detection

Unit	Course Title: - DACTYLOSCOPY AND DNA FINGERPRINTING	56 hrs/ sem
Unit I	**INTRODUCTION TO DACTYLOSCOPY** • **Dactyloscopy :** Meaning, Nature and Importance • Historical Development of Fingerprint Science. • Principles of Fingerprints • Organization and functions of State and Central Fingerprint Bureaus • Evidentiary value of Fingerprint in the Court of Law • Foot prints: Meaning, Types and Importance • Components and measuring of Gait Pattern	14 hrs
Unit II	**CLASSIFICATION OF FINGER PRINTS PATTERNS** • Finger print patterns: Meaning and • Types Henry's ten Digit Classification • of Fingerprints Battely's Single digit • Classification System • Ridge Characteristic. • Chance Prints: Meaning and Types, • Poroscopy & Edegeoscopy	14 hrs

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Unit III	**DEVELOPMENT OF LATENT FINGER PRINTS AND FOOT PRINTS** • **Development of Latent Finger Prints by:** **i.** Physical methods for latent fingerprint Development **ii.** Chemical methods for latent fingerprint Development **iii.** Iodine Fuming Method.,Vacuum Metal Deposition (VMD) method • **Lifting Foot Prints:** **i.** Tracing and casting of Foot Prints **ii.** Electro Static lifting of latent foot prints.	14 hrs
Unit IV	**DNA FINGERPRINTS** • Meaning of DNA Fingerprints and Scopes. • Importance of DNA Fingerprints. • Legal Procedures for Conducting DNA Fingerprints. • Different Type's Case Conduct DNA Fingerprints. • Source of DNA: Blood, Saliva, Hair, Skin tissue and Nail.	14 hrs

References:

1. B.S. Nabar., *Forensic Science in Crime Investigation*, 3rdEdn., Asia Law House, Hyderabad
2. Barry, A.J. Fisher; (2003.)*Techniques of Crime Scene Investigation*, 7th Ed, CRC Press, NY,
3. Bennett, W.W. & Karen, M.Hass, (2001).*Criminal Investigative*, 6th Ed. Worsworth Thompson Learning,
4. Peter R. De Forest,and Henry C. Lee. *Forensic Science An Introduction to Criminalsitcs.*
5. Sharma. B. R. *Forensic Science in Criminal Investigation and Trials*
6. Saferstein R. *"Criminalsitics: - An Introduction to Forensic Science*".
7. Akhil Vij, Anoop Namboodiri, (2014) " *Learning Minutiae Neighborhoods: A New Binary Representation for Matching Fingerprints"*,
8. E. Zhu, J. Yin, G. Zhang, (2005) *Fingerprint matching based on global alignment of multiple reference minutiae, Pattern Recognition.*
9. D. Wan, J. Zhou, (2006) *Fingerprint recognition using model-based density map*, IEEE Trans. Image Process.
10. Wertheim K, Maceo A (2002) *The critical stage of friction ridge and pattern formation.*

Formative Assessment for Theory	
Assessment Occasion/type	**Marks**
Internal Assessment Test 1	05
Internal Assessment Test 2	05
Assignment	10
Total	**20 Marks**
Formative Assessment as per guidelines.	

QP CODE :

Semester B.A./B.Sc, Degree Examination
(SEP Scheme)
CRIMINOLOGY AND FORENSIC SCIENCE
Paper :

Time : 3 Hrs Max Marks : 80

Note : Answer question from Part – A, B & C

PART - A

I. Answer all questions each question carries TWO Marks (10x2=20)
ಎಲ್ಲಾ ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ ಪ್ರತಿ ಪ್ರಶ್ನೆಗೆ ಎರಡು ಅಂಕಗಳು

a.
b.
c.
d.
e.
f.
g.
h.
i.
j.

PART - B

II. Answer any SIX of the following. Each question carries FIVE Marks. (6x5=30)
ಯಾವುದೇ ಆರು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಗೂ 5 ಅಂಕಗಳು ಇದೆ.

1.
2.
3.
4.
5.
6.
7.
8.
9.

PART – C

I. Answer any THREE of the following. Each question carries TEN Marks. (3x10=30)
ಯಾವುದೇ ಮೂರು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. ಪ್ರತಿಯೊಂದು ಪ್ರಶ್ನೆಗೂ 10 ಅಂಕಗಳು ಇದೆ.

10.
11.
12.
13.

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