

Part B
Syllabus Prescribed for Three Year UG/PG Programme
Programme: B.Sc. with Forensic Science
Semester 5

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
5S FRS(T)	Forensic Psychology	84

COs:

By the end of this course, the students will be able to:

1. explain goals of psychology.
2. differentiate between basic and forensic psychology.
3. assess methods of personality.
4. cope with stressors.
5. use scientific methods in forensic psychology.
6. describe social psychology in legal terms.

Unit	Content
Unit I	<p>A) Basics of Psychology</p> <ul style="list-style-type: none"> ● Definition of Psychology ● History ● Goals ● Modern Perspectives- Psychodynamic, Behavioristic, Cognitive, Humanistic ● Research methods- Observation, Interview, Case study <p>B) Professions, Ethical Conduct</p> <ul style="list-style-type: none"> ● Types of psychology professions- Psychiatrist, Psychologist, Counselor ● APA code of conduct for psychologists <p style="text-align: right;">(14 periods)</p>
Unit II	<p>A) Theories of Personality</p> <ul style="list-style-type: none"> ● Definition of Personality (Allport's) ● Approaches- Psychodynamic (Freud, Adler & Jung); Humanistic (Roger & Maslow); Dispositional (Type A and B, Rotter, Big 5 traits); Behavioural (Locus of Control & Social learning theory) ● Cognitive theory, REBT <p>B) Assessment Methods of Personality</p> <ul style="list-style-type: none"> ● Characteristics of good psychological test ● Questionnaire ● Rating Scales ● Projective Tests <p style="text-align: right;">(14 periods)</p>
Unit III	<p>A) Basics of Forensic Psychology</p> <ul style="list-style-type: none"> ● Definition of Forensic Psychology ● History ● Importance <p>B) Social Psychology in Legal System</p> <ul style="list-style-type: none"> ● Definition ● Role of media in trial <p>Before the trial begins: Effect of police procedure and media coverage, Eye witness testing- problems and solutions</p> <p>The Central participation in trial: Effect of Attorney, Judges, Jurors and Defendants</p> <p style="text-align: right;">(14 periods)</p>

Unit IV	<p>A) Essentials of Forensic Psychology</p> <ul style="list-style-type: none"> ● Development ● Importance ● Ethical standards <p>B) Stress and Health</p> <ul style="list-style-type: none"> ● Types of stress ● Factors in stress reaction ● Coping with the stress <p style="text-align: right;">(14 periods)</p>
Unit V	<p>A) Personality Disorders</p> <ul style="list-style-type: none"> ● Defining and Diagnosing Personality Disorder ● Odd- Eccentric Personality Disorder ● Dramatic- Emotional Personality Disorder ● Anxious- Fearful Personality Disorder <p>B) Causes of criminal behavior</p> <ul style="list-style-type: none"> ● Psychological Factor & delinquency ● ADHD ● Conduct Disorder ● Psychopathy & Antisocial Personality Disorder ● Sexual Disorder ● Substance Abuse <p style="text-align: right;">(14 periods)</p>
Unit VI	<p>A) Investigative Psychology</p> <ul style="list-style-type: none"> ● Criminal Psychological Profiling ● Psychological Autopsy ● Forensic hypnosis (narco analysis) ● Polygraph ● Stalking <p>B) Legal Aspects of Forensic Psychology</p> <ul style="list-style-type: none"> ● Introduction ● Historical Background (world and India) ● Survey into Psychological evidence in court ● Mental Health Act, 1987 <p style="text-align: right;">(14 periods)</p>
<p>*SEM</p> <ol style="list-style-type: none"> 1. Understanding the basics of psychology. 2. Understanding the basics of forensic psychology 3. The collection, analysis and reporting of biological evidences. 4. Identify: criminals', victims', suspects', witnesses' behaviour 	
<p>**Activities Quiz Competitions, seminar competitions, project assignment unit test, visits to mental asylum, visit to psychology clinic, model making for evidences, skit/ drama to create awareness among society</p>	

Course Material/Learning Resources/ Suggested Readings

1. Psychology, (2006) Ciccarelli, S. K. & Meyer G. E. New Delhi; Perason Education	8. 'Social Psychology', Robert A. Baron & Nyla R. Branscombe, Pearson Edcation, India.
2. Introduction to Psychology, (1986) Morgan C.T., King R.A., Weisz J.R., Schopler J., McGraw-Hill Book Co.	
3. Principles of General Psychology, 3rd ed. Kimble G.A., Garnezy, , New York	
4. Psychology, (2001), Baron R.A. New Delhi; Pearson Education Pvt.Ltd.	
5. Cognitive Psychology Mind and Brain', Edward E. Smith, Stephen M. Kosslyn, New Delhi, Pearson Education	
6. Invitation to Psychology, Parameswaran, E.G., BeenaC.Tata McGraw-Hil, New Delhi.	
7. Psychology-An Introduction, Thakkar P., Dr. Ambekar A.	
8. Handbook of Forensic Psychology', Prof Dr. Vimala Veeraraghwan, Edition 1st, 2009, Selective and Scientific Books Publications, New Delhi	
9. 'Handbook of Forensic Psychology', Irving B. Weiner, Allen K. Hiss, Edition 3rd, 2006, Wiley Publication.	
10. 'Forensic Psychology', Solomon M. Fulero & Lawrence S. Wrightsman, Third edition, 2009, Wadsworth, Cengage learning publication, United States of America.	

11. 'Forensic and Criminal Psychology', Dennis Howitt, 2002, Pearson Education LTD, England.
12. E., Tett, R. P., Vandecreek, L. (2003). Psychological testing and the selection of police officers: A National Survey. Criminal Justice and Behavior, 30(5), 511-537.
13. 'Forensic Criminology', Petherick W. A., Turvey B. E., Ferguson C. E., [2010], Elsevier Inc. 'Psychological Interventions of Mental Disorders', S. K. Shrivastava, Nayanika Singh, Shivani Kant, Edition 1st, 2013, Sarup Book Publishers, PVT. LTD.
14. Abnormal Psychology, Irwin G. Sarason & Barbara R. Sarason, Edition 11th, PHI Learning Private Limited, New Delhi.
15. Barlow & Durand. V. M. (2005) Abnormal Psychology, 6th Ed. New Jersey
16. 'Criminology', Digumarti Bhaskara Rao, First Edition 1st, 2012, Discovery Publication House PVT. LTD., New Delhi.
17. 'Human Aggression-theory, research and intervention', Sunil Saini, Nilam Goyal, Edition 1st Global Vision Publication House, New Delhi.
18. 'Applied Criminology-Concept, Theories and Applications', Joseph Ronald, Edition 1st, 2013, Cyber Tech publications, New Delhi.
19. 'Criminology and Penology', Mittal S., Saxena S. K., [2012], Commonwealth Publishers Pvt. Ltd., New Delhi.
20. Principles of Social Psychiatry', Craig Morgan, Dinesh Bhugra, Edition 2nd, 2010, Wiley Blackwell Publication
21. Introduction to Forensic Psychology-Research and Application', Curt R. Bartol, Anne M. Bartol, Edition 2nd, 2008, Sage Publication.
22. 'Handbook of Forensic Psychology', Irving B. Weiner, Allen K. Hiss, Edition 3rd, 2006, Wiley Publication.
23. 'Forensic Psychology', Solomon M. Fulero & Lawrence S. Wrightsman, edition 3rd, 2009, Wadsworth, Cengage learning, United States of America.
24. 'Forensic and Criminal Psychology', Dennis Howitt, 2002, Pearson education Publication.
25. Barlow & Durand. V. M. (2005) Abnormal Psychology, 6th Ed. New.
26. Prof. Paranjape N. V., Criminology and Penology, Central Law Publication, Allahbad.
27. Kocsis, R. N. (2003). Criminal psychological profiling: Validities and abilities. International Journal of Offender Therapy and Comparative Criminology, 47 (2), 126-144.

Employability Skills Categories

Effective Relationships	Interpersonal Skills- Students should be able to lead the investigation team with ease Personal Qualities- Students should have moral values while dealing with victims, survivors and their families
Workplace Skills	Resource Management- Students should be able to use minimum resources effectively provided by the investigation agency Information Use- Students should be able to search the relevant resources over the internet or in books or reading materials and can use to solve crimes using the same Communication Skills- Students should be able to communicate and support the technical details of their findings in a clear, logical manner that can easily be understood in a court of law Systems Thinking- Students should be curious and open to solve all types of crimes and deal with any of the samples. Technology Use- Students should be able to use advanced and sophisticated techniques
Applied Knowledge	Applied Academic Skills- Students should learn how to create an unbiased sampling of evidence and select proper methods to process that evidence. Critical Thinking Skills- Students should be able to use fundamental scientific principles to approach and solve problems in forensic science.

Part B
Syllabus Prescribed for Three Year UG/PG Programme
Programme: B.Sc. with Forensic Science
Semester 5

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5S FRS Practical	Forensic Psychology Practical	21 Sessions

COs:

By the end of this course, the students will be able to:

1. Calculate intelligence level of their subjects.
2. Assess personality traits.
3. Solve problems of subject on their own.
4. Measure aggression level.
5. Conduct psychological test scientifically.

*** List of Practical/Laboratory Experiments/Activities etc.**

1.	Introduction to psychological tests.
2.	Blind fold test.
3.	Eysencks' Personality Inventory.
4.	State Trait Anxiety Scale.
5.	Verbal Intelligence Test.
6.	Aggression Testing Scale.
7.	Sentence Completion Test.
8.	Bhatia Battery Performance Test.
9.	16 P. F. test.
10.	Raven's Standard Progressive Matrices.
11.	Picture Frustration Test.
12.	Thematic Apperception Test.
13.	Measuring of Locus of control.
14.	Differential Aptitude Test.
15.	Minnesota Multiphasic Personality Inventory.
16.	Rorschach Inkblot Test.
17.	Wechsler's Intelligence Scale for children.
18.	Wechsler's Adult Intelligence Scale
19.	Coloured Progressive Matrices.
20.	Thinking and Problem solving

Suggested Readings

1. 'Introduction to Forensic Psychology-Research and Application', Curt R. Bartol, Anne M. Bartol, Editon 2nd, 2008, Sage Publication.
2. 'Psychological Testing', Anne Anastasi, Susana Urbina, Edition 7th, 2010, PHI Learning PRI. LTD, New Delhi
3. 'Introduction to Forensic Psychology-Research and Application', Curt R. Bartol, Anne M. Bartol, Editon 2nd, 2008, Sage Publication.
4. E., Tett, R. P., Vandecreek, L. (2003). Psychological testing and the selection of police officers: A National Survey. Criminal Justice and Behavior, 30(5), 511-537.
5. 'Forensic Criminology', Petherick W. A., Turvey B. E., Ferguson C. E., [2010], Elsevier Inc. 'Psychological Interventions of Mental Disorders', S. K. Shrivastava, Nayanika Singh, Shivani Kant, Edition 1st, 2013, Sarup Book Publishers, PVT. LTD.
6. 'Human Aggression-theory, research and intervention', Sunil Saini, Nilam Goyal, Edition 1st Global Vision Publication House, New Delhi.

Part B**Syllabus Prescribed for Three Year UG/PG Programme****Programme: B.Sc. with Forensic Science****Semester 6**

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
6S FRS (T) (DSE-I)	Digital and Cyber Forensic (DSE-I)	84

COs:

By the end of this course, the students will be able to:

1. Identify and analyze digital evidences.
2. Collect and document the evidences of forensic importance.
3. Investigate the incident.
4. Use internet.
5. Analyze e-mails, search histories, log.
6. Recover deleted data.

Unit	Content
Unit I	<p>A) Introduction to Computers: Basic Computer Operating System; Input and Output Devices; Processor and Memory: Central Processing Unit (Arithmetic Logic Unit ALU & Control Unit CU), Types of Memory(RAM and ROM and Their types), Introduction to Windows and Linux Operating System.</p> <p>B) Introduction to Internet: World Wide Web, E-mails, hat, Search Engines, Network security- Threats, Vulnerabilities, Access Control, Malicious code (Virus, Worms, Trojans, etc.) Introduction to security and security model.</p> <p style="text-align: right;">(14 periods)</p>
Unit II	<p>Incidence Response: Introduction; Role of First Responder; Common First Responder Mistakes; (What is Computer Security Incident, What are the goals of Incident Response ? , Who is involved in Incident Response Process, Incident Response Methodology, Formulate a Response Strategy, Investigate the Incident.); Preparing For Incident Response; Overview of Preincident Preparation; Identifying Risk; After Detection of an Incident.</p> <p style="text-align: right;">(14 periods)</p>
Unit III	<p>A) Cyber Crimes and Computer Crime: Introduction Conventional Crime Cyber Crime; Types of Cyber Crimes; Online based Cyber Crimes; Cyber Law; Terms: Internet, hacking, virus, obscenity, pornography, program manipulation, Software piracy, attacks, phishing etc., and case studies.</p> <p>B) Introduction to Cryptography; Types of Cryptographic Algorithms</p> <p style="text-align: right;">(14 periods)</p>
Unit IV	<p>A) Digital Evidence: Introduction; Types of Digital Evidence; Admissibility of Digital Evidence; Digital Evidence Vs. Physical Evidence; Best practices in digital evidence collection; Precautions while dealing with digital evidence; Slack Space , Swap Space</p> <p>B) Cyber Forensics Tools and Utilities: Introduction, Cyber Forensic Tools; Examining a Breadth of Products; Tool Review: Forensic Toolkit (FTK), EnCase, etc.; What is disk imaging.</p> <p style="text-align: right;">(14 periods)</p>
Unit V	<p>Introduction to Biometrics, What is Biometrics, Why use Biometrics; Model of Biometric system, Various types of Biometric methods, Advantages & disadvantages; General Biometric System (Identification and Verification); Comparison of different Biometric Technologies.</p> <p style="text-align: right;">(14 periods)</p>
Unit VI	<p>A) Cyber Forensics Investigation: Technical issues, Security Technologies; E-Mail Investigation. Mobile Forensics: Evolution and importance of cell phone forensics; Types of evidences on mobile devices, Handling Mobile Devices as Sources of Evidence, Future Trends; Forensic Preservation of Mobile Devices; Forensic Examination and Analysis of Mobile Devices</p> <p>B) Information Technology law: IT Act 2000- Introduction, Scope and Objective; Digital Signature; Electronic-Governance; Offences, penalties; IT Act (Amendment) 2008</p> <p style="text-align: right;">(14 periods)</p>
*SEM	<ol style="list-style-type: none"> 1. Understanding the basics of Digital Forensics. 2. Collection, preservation and analysis of digital evidence. 3. MOOC on SWAYAM relevant. 4. Identify: Cybercrime.
**Activities	<p>Quiz Competitions, seminar competitions, project assignment, unit test, visits to Cyber Cell, Police Station, Jail, Create dummy cybercrime and investigate it using forensically sound tools, design software</p>

Course Material/Learning Resources/ Suggested Readings

1. Computer Forensics: Computer Crime Scene Investigation, Volume 1 John R. Vacca ,Charles River Media
2. Advances in Digital Forensics II edited by Martin S. Olivier, Sujeet Sheno
3. Computer Forensics: Investigating File and Operating Systems, Wireless networks and storage CHFI By EC-Council (book 2 of 4)
4. Handbook of Security, Cryptography & Digital Signature
5. Forensic Science – From the Crime Scene to the Crime Lab by Richard Saferstein
6. E-Commerce: The Cutting Edge of Business, Kamlesh K. Bajaj & Debjani Nag, Tata McGraw Hill
7. Cyber Law and E .Commerce, David Baumer, J C Poindexter, TMG Cyberlaw Simplified Vivek Sood, TMG
8. e-Commerce Strategy, Technologies and Applications, David Whiteley, McGraw Hill International
9. E- Security, Electronic Authentication and Information Systems Security Sundeep Oberoi, TMG 11.
10. Firewalls and Internet Security: Repelling the Wily Hack

Employability Skills Categories

Effective Relationships	Interpersonal Skills- Students should be able to lead the investigation team with ease Personal Qualities- Students should have moral values while dealing with victims, survivors and their families
Workplace Skills	Resource Management- Students should be able to use minimum resources effectively provided by the investigation agency Information Use- Students should be able to search the relevant resources over the internet or in books or reading materials and can use to solve crimes using the same Communication Skills- Students should be able to communicate and support the technical details of their findings in a clear, logical manner that can easily be understood in a court of law Systems Thinking- Students should be curious and open to solve all types of crimes Technology Use- Students should be able to use advanced and sophisticated techniques
Applied Knowledge	Applied Academic Skills- Students should learn how to create an unbiased sampling of evidence and select proper methods to process that evidence. Critical Thinking Skills- Students should be able to use fundamental scientific principles to approach and solve problems in forensic science.

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Semester 6

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6S FRS (P1)	Digital and Cyber Forensic Practical (LAB on DSE-1)	21 Sessions

COs:

By the end of this course, the students will be able to

1. Operate Windows OS.
2. Recover deleted files in Windows OS.
3. Crack password of gmail accounts and electronic devices.
4. View logs in windows OS.
5. Handle softwares for cell phone forensics.
6. Do window shopping.

*** List of Practical/Laboratory Experiments/Activities etc.**

1.	Working with Windows file (creation, modification, deletion, attributes) folder(creation, nesting, attributes)
2.	Working with Linux file (creation, modification, deletion, attributes) folder (creation, nesting, attributes)
3.	Working with external storage devices using windows- Reading and writing data on CD, DVD.
4.	To create a new folder in windows OS.
5.	To create a new file in windows OS.
6.	To use internet using search engine.
7.	To create e-mail account and send the attachment and reply with the attachment.
8.	To transfer data from computer to external storage device (USB pendrive).
9.	To perform the analysis of g-mail (e-mail).
10.	To recover deleted data using Recuva.
11.	To Recover deleted data using EaseUs.
12.	To view the security event log in Windows Operation System.
13.	To view the application event log in Windows Operation System.
14.	To view the system event log in Windows Operation System.
15.	To use E-commerce for window shopping.
16.	To recover Gmail password.
17.	To perform FTK (Forensic ToolKit).
18.	To use EnCase.
19.	To investigate using cell phone forensic tools.
20.	To use E-discovery.

Suggested Readings

1. Cyber Forensics: A Field Manual for Collecting, Examining, and Preserving evidence of computer crimes By Albert J. Marcella, Jr. Doug Menendez Auerbach publication
2. Cyber Forensics: From Data to Digital Evidence By Albert J. Marcella, Jr., Frederic Guillossou
3. Handbook of Digital Forensics and Investigation By Eoghan Casey
4. A Practical Guide to Computer Forensics Investigations By Darren R. Hayes

Part B

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Programme: B.Sc. with Forensic Science

Semester 6

Code of the Course/Subject	Title of the Course/Subject	(Total Number of Periods)
6S FRS (T) (DSE-II)	Preventive and Recovery Forensic (DSE – II)	84

COs:

By the end of this course, the students will be able to

1. Identify and analyze fraudulent cases.
2. Perform auditing.
3. Investigate the incident.
4. Define forensic engineering.
5. Differentiate between areas of engineering.

Unit	Content
Unit I	<p>Network Forensics: Ethernet analysis, Network interface card analysis, wireless forensic , attackers footprints , firewall logs, IDS/IPS, web proxies, traffic captures, DHCP log examination, sniffing traffic , analyzing proxy cache, tools like tcpdumps, Snort, ngrep, tcpextract, and wireshark. Email tracker pro, analyzing index.dat, input debugging, controlled flooding, ICMP traceback, packet marking techniques, honeypots and honeynets, source path isolation engine (SPIE). (14 periods)</p>
Unit II	<p>Anti-Computer Forensics: Anti-Computer Forensic: Definition, Sub-categories, Purpose and goals, Data hiding, Encryption, Steganography, Other forms of data hiding, Artifact wiping, Disk cleaning utilities, File wiping utilities, Disk degaussing / destruction techniques, Trail obfuscation, Attacks against computer forensics Physical, Effectiveness of anti-forensics. (14 periods)</p>
Unit III	<p>Ethical Hacking: Computer Image Verification and Authentication, understanding Malicious and hostile code including viruses, Trojan horses, worms, backdoors, trapdoors honeypot forensics and spyware. Identification, Authentication and Authorization including passwords, smartcards and biometrics. Physical, environmental and organizational considerations for deploying forensic computing initiatives. Computer security and analyze security breaching attacks, Risk analysis, risk assessment and contingency planning for information security. Risk management. Impact and probability of threat. (14 periods)</p>
Unit IV	<p>Preventive methods: System Hacking and prevention, DoS Attacks and prevention, Session Hijacking and prevention, Hacking Web server and prevention, Hacking Web Application and prevention, SQL Injection and prevention, Social Engineering and prevention, Recognize the range of surveillance techniques and countermeasures. Investigate a range of security issues relating to operating systems, PC systems, threats vulnerabilities and security mechanisms. (14 periods)</p>
Unit V	<p>Recovery Forensic : Understanding the storage mechanism of devices like CD, DVD, USB, flash card, Harddisk, floppy disk etc, Data deletion concept, Breadth of Recovery software, limitations of recovery software, partition recovery(NTFS, FAT), recover data from CD, DVD, recover lost partition, Gpart recover data when sector 0 is damaged, data recovery form corrupted/formatted/repartitioned/deleted hard drive, backup of master boot record, restoration of firmware, Carving, recovering data from damaged storage devices. (14 periods)</p>
Unit VI	<p>Winhex: recovering digital evidence using winhex, creation and study of event logs in winhex, analysis of physical view and logical view, Disk cloning, disk imaging, RAM editor, Analyzing files, Analyzing files, wiping unused space, editing data structure, splitting files, viewing and manipulating files, hiding data and discovering hidden data, API, Cyber forensic application of Winhex. (14 periods)</p>

***SEM**

1. Understanding the basics of Digital Forensics.
2. Collection, preservation and analysis of digital evidence.
3. MOOC on SWAYAM relevant
4. Identify: Cybercrime.

****Activities** Quiz Competitions, seminar competitions, project assignment, unit test, visits to Cyber Cell, Police Station, Jail, Create dummy cybercrime and investigate it using forensically sound tools, design software.

Course Material /Learning Resources/ Suggested Readings

1. Computer Forensics: Computer Crime Scene Investigation, Volume 1 John R. Vacca, Charles River Media
2. Advances in Digital Forensics II edited by Martin S. Olivier, Sujeet Shenoj
3. Computer Forensics: Investigating File and Operating Systems, Wireless networks and storage CHFI By EC- Council (book 2 of 4)
4. Handbook of Security, Cryptography & Digital Signature
5. E- Security, Electronic Authentication and Information Systems Security Sundeep Oberoi, TMG
6. Firewalls and Internet Security: Repelling the Wily Hack
7. Foundations of security by neil daswani, anita kesavan.
8. Hacking Exposed Web Applications, Second Edition by Joel Scambray, Mike Shema, Caleb Sima
Professional Pen Testing for Web Applications by Andres Andreu
9. Preventing Web Attacks with Apache by Ryan C. Barnett
10. Innocent Code : A Security Wake-Up Call for Web Programmers by Sverre H. Huseby
11. HackNotes(tm) Web Security Pocket Suggestive readingsby Mike Shema
12. Improving Web Application Security: Threats and Countermeasures by Microsoft Corporation
13. Hacking the Code: ASP.NET Web Application Security by Mark Burnett
14. Exploiting Software : How to Break Code by Greg Hoglund and Gary McGraw
15. Advances in digital forensic VI by kam pui chow, sujeet shenoj
16. Windows registry forensic by Harlan carvey,
17. Digital forensic for network internet and cloud computing clint garrison
18. Wireless crime and forensic investigation by Gregory kipper
19. Digital image forensic by husrev taha, nasir memon
20. Computer forensic investigating data and image files by Ec-council
21. Network forensic tracking hackers by sherri Davidoff
22. Mastering windows network forensic by steven anson
23. Anti computer forensic by Gred numitor
24. Computer forensic Nathan Clarke

Employability Skills Categories

Effective Relationships	Interpersonal Skills- Students should be able to lead the investigation team with ease PersonalQualities- Students should have moral values while dealing with victims, survivors and their families
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Workplace Skills	Resource Management- Students should be able to use minimum resources effectively provided by the investigation agency Information Use- Students should be able to search the relevant resources over the internet or in books or reading materials and can use to solve crimes using the same Communication Skills- Students should be able to communicate and support the technical details of their findings in a clear, logical manner that can easily be understood in a court of law Systems Thinking- Students should be curious and open to solve all types of crimes Technology Use- Students should be able to use advanced and sophisticated techniques
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Applied Knowledge	Applied Academic Skills- Students should learn how to create an unbiased sampling of evidence and select proper methods to process that evidence. Critical Thinking Skills- Students should be able to use fundamental scientific principles to approach and solve problems in forensic science.
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Semester 6

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6S FRS (P2)	Preventive and Recovery Forensic Practical (LAB on DSE-II)	21 Sessions

COs:

By the end of this course, the students will be able to

1. Assess password strength.
2. Create awareness regarding different types of malwares.
3. Detect malwares using various softwares.
4. Handle intrusion detection systems.
5. Monitor risks and vulnerabilities to the network

*** List of Practical/Laboratory Experiments/Activities etc.**

1. Network administration services and security measure application
2. Password strength assessment
3. Scanning for vulnerabilities using (Angry IP, HPing2, IPScanner, Global Network Inventory Scanner, Net Tools Suite Pack.)
4. NetBIOS Enumeration Using NetView Tool, Nbtstat Enumeration Tool (Open Source).
5. How to Detect Trojans by using – Netstat, fPort, TCPView, CurrPorts Tool, Process Viewer.
6. Working with Trojans, Backdoors and sniffer for monitoring network communication
7. Denial of Service and Session Hijacking using Tear Drop, DDOS attack.
8. Wireless Network attacks , Bluetooth attacks
9. Firewalls , Intrusion Detection and Honeypots
10. Malware – Keylogger, Trojans, Keylogger countermeasures
11. Understanding SQL Injection

Suggested Readings

1. Cyber Forensics: A Field Manual for Collecting, Examining, and Preserving evidence of
2. Computer crimes By Albert J. Marcella, Jr. Doug Menendez Auerbach publication
3. Cyber Forensics: From Data to Digital Evidence By Albert J. Marcella, Jr., Frederic Guilloso
4. Handbook of Digital Forensics and Investigation By Eoghan Casey
5. A Practical Guide to Computer Forensics Investigations By Darren R. Hayes
6. Testing Web Security: Assessing the Security of Web Sites and Applications by Steven Splaine
7. How to Break Software Security by James A. Whittaker and Herbert H. Thompson
8. Malware forensic by Cameron malin