UNIVERSITY OF MUMBAI

88

DEPARTMENT OF LAW

Post Graduate Diploma

in

CYBER LAW
AND
INFORMATION TECHNOLOGY

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Ordinances, Regulations, Scheme of Papers and Syllabus for the Post-Graduate Diploma in Cyber Law and Information Technology

(with effect from the academic year 2018-2019)

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DEPARTMENT OF LAW

INTRODUCTION

The Department of Law was established in November, 1959 for the purpose of imparting post graduate legal education and encouraging legal research, the need for which was felt long ago as Mumbai is the commercial capital of India and the importance of the study of Law and legal research cannot be over emphasized. The Department provides for courses leading to LL.M., M.Phil., Ph.D. Degree and the following Post Graduate Diploma Courses.

1) Post Graduate Diploma Course in Intellectual Property Rights
2) Post Graduate Diploma in Alternative Dispute Resolution
3) Post Graduate Diploma in Securities Law
4) Post Graduate Diploma in Cyber Law and Information Technology

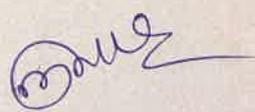| O. 5554	Title of the Course	: Post Graduate Diploma in Cyber Law and Information Technology
O. 5555	Eligibility	: Graduate from any faculty from a recognized University.
R. 5240	Duration of the Course	: One Academic Year
R. 5241	Fees for the course	: Rs. 8700/-

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Dr. (Mrs.) Madhura Kalamkar
I/C Principal
Hindi Vidya Prachar Samiti's College of Law
Ramniranjan Jhunjhunwala College Premises
Opp. Railway Station, Ghatkopar (W),
Mumbai-400086.

Examination : To be held at the end of the Academic Year.

No student will be allowed to appear for the examination unless he / she has attended 75% of the total number of Lectures / Seminars / Practicals conducted during the course.

Each Paper will be of 100 Marks

R. 5242 Intake Capacity : 50
Duration of Lectures : **Eight Hours per week**

R. 5243 Teachers Qualification : Post Graduate in Law or Graduate in Law with five to ten years teaching experience or five to ten years professional / service experience in the subject of Law :

R. 5244 Standard of Passing :
   a) To pass the Diploma examination a student must obtain 45% of marks in each paper and 50% in aggregate
   b) Candidate who secures 50% to 59% marks in aggregate shall be declared to have passed the examination in the Second Class.
   c) Candidate who secures an aggregate of 60% and above marks in aggregate shall be declared to have passed the Examination in the First class
   d) In addition to (a) (b) and (c) above, a candidate who secures 70% and above marks in aggregate shall be declared to have passed the Examination with Distinction.

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Details of Papers :

Paper–I   : **Basic of Computer and Cyber Security**

Paper–II   : **Information Technology Law (Cyber Law)**

Paper–III   : **Cyber Crimes and Investigation Procedures**

Paper–IV   : **Practical Training / Field work**

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SYLLABUS FOR POST GRADUATE DIPLOMA IN CYBER LAW AND INFORMATION TECHNOLOGY

PAPER I - Basics of Computer & Cyber Security

(Total Marks : 100)

1. History of Computers, Areas of Application
2. Computers and its components, Application Software and System Software
3. Introduction to Operating System
4. Basics of Networks and Internet, Types of Networks, Definition of Cyber Security
5. Search Engines, E-mails and WWW', Working of internet, Internet Service Provider, IP Address, Working of Email System, Domain Name System, Blogs, Peer to Peer sharing
6. Cryptography, type, Goals, PKI
7. Digital signatures and electronic signatures, Electronic Payment system and Taxation.
8. Computer & Cyber Security :
   a. Types of Attacks,
   b. Network Security
   c. Overview of Security threats,
   d. Hacking Techniques,
   e. Password cracking
   f. Insecure Network connections,
   g. Malicious Code
   h. Concept of Fire Wall Security

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9. Email security: Web Security: Web Authentication, SSL and SET

10. Database Security

11. Operating System Security

12. E-commerce & M-commerce Security

13. Advanced Computers, Network & Mobile Security Techniques

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PAPER II - Information Technology Law (Cyber Law)

(Total Marks : 100)

1. Evolution of the Information Technology Act, Genesis and Necessity
2. Salient features of the Information Technology Act, 2000; various authorities under Information Technology Act and their powers.; Penalties & Offences, amendments
3. Impact on other related Acts (Amendments) :
   (a) Amendments to Indian Penal Code.
   (b) Amendments to Indian Evidence Act.
   (c) Amendments to Bankers' Books Evidence Act.
   (d) Amendments to Reserve Bank of India Act.
4. **Cyber Space Jurisdiction**
   (a) Jurisdiction Issues under IT Act, 2000,
   (b) Traditional Principles of Jurisdiction
   (c) Extra Terrestrial Jurisdiction
   (d) Case Laws on Cyber Space Jurisdiction
5. **E-commerce and Laws in India**
   (a) Digital/ Electronic Signature in Indian Laws
   (b) E-Commerce; Issues and provisions in Indian Law
   (c) E-Governance; concept and practicality in India
   (d) E-Taxation issues in Cyberspace
   (e) E-Contract and its validity in India
   (f) Cyber Tribunal & Appellate Tribunal
   (h) Cyber Regulations

6. **Intellectual Property Rights, Domain Names and Trademark Disputes**
    (a) Concept of Trademark in Internet Era
    (b) Cyber squatting
    (c) Reverse Hijacking
    (d) Jurisdiction in Trademark Disputes
    (e) Copyright in the Digital Medium
    (f) Copyright in Computer Programmes
    (g) Copyright and WIPO Treaties
    (h) Concept of Patent Right
    (i) Relevant Provisions of Patent Act, 1970

7. **Sensitive Personal Data or Information (SPDI) in Cyber Law**
    (a) SPDI Definition and Reasonable Security Practices in India
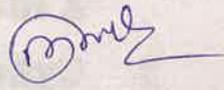   (b) Reasonable Security Practices – International perspective

8. **Cloud Computing & Law**

9. **Cyber Law : International Perspective**
    (a) EDI : Concept and legal Issues.
    (b) UNCITRAL Model Law.
    (c) Electronic Signature Laws of Major Countries
    (d) Cryptography Laws
    (e) Cyber Laws of Major Countries
    (f) EU Convention on Cyber Crime

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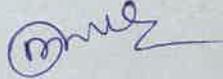Opp. Railway Station, Ghatkopar (W),
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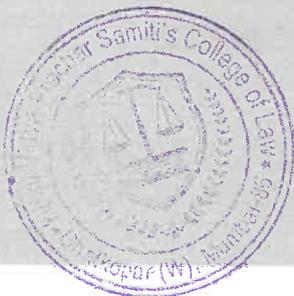## PAPER III - Cyber Crimes & Investigation Procedures

(Total Marks : 100)

1. Cyber Forensic and Computer Crimes and types, Crimes targeting Computers : Definition of Cyber Crime & Computer related crimes, Classification & Differentiation between traditional crime and cyber crime.
   a. Data Theft
   b. Hacking
   c. Spreading Virus & Worms
   d. Phishing
   e. Cyber Stalking/Bullying
   f. Identity Theft & Impersonation
   g. Credit card & Online Banking Frauds
   h. Obscenity, Pornography& Child Pornography
   i. Cyber Defamation, Defacement,
   j. Illegal online selling & Gambling
   k. Denial of Service Attacks
   l. Cyber terrorism
   m. Software Piracy & Illegal Downloading
2. Reasons for Cyber Crimes.
3. Cyber Crime Mode and Manner of Committing Cyber Crime.
4. Prevention of Cyber Crimes & Frauds, Critical analysis & loop holes of The Information Technology Act, 2000
5. Cyber Crimes : Freedom of Speech in Cyber Space & Human Right issues
6. Investigation of Cyber Crimes :

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7. Investigation of malicious applications
8. Agencies for investigation in India, their powers and their constitution as per Indian Laws
9. Procedures followed by First Responders;
10. Search and Seizure Procedures of Digital Evidence
11. Securing the Scene, Documenting the Scene, Evidence Collection and Transportation
    a. Data Acquisition
    b. Data Analysis
    c. Reporting
12. **Digital Forensics**
    a. Computer Forensics
    b. Mobile Forensics
    c. Forensic Tools
    d. Anti-Forensics
13. **Electronic/Digital Evidence : Laws & case Laws**
14. **International Organizations and their roles**
    a) ICANN
    b) URDP
    c) WTO and TRIPS
    d) Interpol & Europol
    e) Impact of Cyber warfare on Privacy Identity
    f) Net Neutrality and EU Electronic communication Regulatory framework
    g) WCAG
    h) Social Networking sites vis-a-vis Human Rights
15. **Case Laws : Indian & International Cases**

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PAPER IV - Practical Training/ Project Work

(Total Marks : 100)

The project report submitted by the student will be evaluated jointly by the internal and external examiners during the practical examination. The distribution of marks will be as follows

a) Dissertation   - 80 marks

b) Viva-voce   - 20 marks

RECOMMENDED BOOKS :

Cyber Law & Cyber Crimes by Advocate Prashant Mali; Snow White Publications, Mumbai

Cyber Law in India by Farooq Ahmad; Pioneer Books

Computer Forensics: Principles and Practices by Linda Volonino, Reynaldo Anzaldua and Jana Godwin; Pearson Prentice-Hall 2007.

Digital Evidence and Computer Crime, 2nd Ed. By Eoghan Casey; Academic Press, 2004.

First Responder's Guide to Computer Forensics by Richard Nolan et al; Carnegi Mellon, 2005.

Guide to Cyber and E- Commerce Laws by P.M. Bukshi and R.K. Suri; Bharat Law House, New Delhi

Guide to Cyber Laws by Rodney D. Ryder; Wadhwa and Company, Nagpur

Information Technology, Law and Practice by Vakul Sharma; Universal Law Publishing Co. Pvt. Ltd.

The Indian Cyber Law by Suresh T. Vishwanathan; Bharat Law House New Delhi

The Information technology Act, 2000; Bare Act- Professional Book Publishers, New Delhi.

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Introduction to Forensic Science in Crime Investigation By Dr. (Smt) Rukmani Krishnamurthy

List of Websites for more information is available on Http /www garykessler net library/forensicsurl html

The Regulation of Cyberspace by Andrew Murray, 2006, Rutledge - Cavendish

Scene of the Cybercrime Computer Forensics Handbook by Syngress

Security and Incident Response by Keith J. Jones, Richard Bejtlich and Curtis W. Rose

Note : All research projects, dissertations & other research assignments are required to be in accordance with the circular of the University of Mumbai dated 15th June 2018, no. Exam./Thesis/Uni/VCD/947 of 2018 and University Grants Commission (Promotion of Academic Intergrity & Prevention of Plagiarism in Higher Educational Institutions) Regulation 2018.

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