FACULTY OF LAWS

SYLLABUS

FOR

PG DIPLOMA IN CYBER LAW & INFORMATION SECURITY
(Credit Based Evaluation and Grading System)

(Semester: I–II)
SESSION: 2019-20

GURU NANAK DEV UNIVERSITY
AMRITSAR

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<th>Credits</th>
<th>Total Credits</th>
<th>Mid Sem. Marks</th>
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PG DIPLOMA IN CYBER LAWS AND INFORMATION SECURITY (SEMESTER-I)
(Credit Based Evaluation and Grading System)

LPL 101: CYBER WORLD AND CYBER ETHICS

Lectures: 3 Hrs. / Week
Credits: 3

Total Marks: 100 (Equivalent Grade Points to be Indicated)

Mid Semester Marks: 20
End Semester Marks: 80
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A

Computer and its role in day to day life
Advantages and Disadvantages of Internet Technology
Increasing digitalization
E-Governance and E-Records
Cyber Ethics
Online Plagiarism

SECTION B

Information Technology Act 2000
Need, Aims, Objectives and Applications [Section 1]
Definitions [Section 2]
Attribution of records
Certifying Authority [Sections 30-34]
Cyber contraventions and penalty [Sections 43-45]
Offences and extra territorial jurisdiction [Sections 65-77]
Intermediary not liable in certain cases [Section 2 (w), 79]
Investigation and procedure of search and seizure [Sections 78 & 80]
Amendments under IT Act 2008.
SECTION C

International Legal Regime relating to Cyber Crimes
UNICTRAL Model law on Electronic Commerce
European Convention on Cyber Crimes
Hague Convention on Jurisdiction and Foreign Judgments: Jurisdiction Agreement

SECTION D

Online Vulnerability of certain sections such as children, young adults, senior citizens, Minorites, Backward classes and women
Regulating the functioning of Social Sites
Online Hate Crimes
Scope of Cyber laws
Jurisdictional Issues

References:

1. Pavan Duggal: Cyber Law- The Indian Perspective, Saakshar Publications, New Delhi, 2002; Second Edition
3. Harish Chander: PHI, 2012;
LPL102: CYBER CRIMES

Lectures: 3 Hrs. / Week
Credits: 3
Total Marks: 100 (Equivalent Grade Points to be Indicated)

Mid Semester Marks: 20
End Semester Marks: 80
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SECTION A

Cyber Crimes:
Meaning Nature & Classification;
Distinction between Conventional Crime and Cyber Crimes;
Major kinds of Cyber Crimes
The Indian Penal Law and Cyber Crimes
Fraud
Hacking
Mischief
Trespass
Defamation
Stalking
Spamming

SECTION B

Domestic Legal Regime relating to Cyber Crimes
IT Amendment Act, 2008
Suggested Amendments
Relevant provisions under Indian Evidence Act, Pornography Act etc.

SECTION C

Jurisdictional Issues:
Definition
Jurisdiction to prescribe/Legislative Jurisdiction;
Jurisdiction to adjudicate to enforce;
Cyber Jurisdiction in Civil, Criminal & International Cases.
Laws & Acts:
Unictral Model Law,
Information Technology Act, 2000 including Relevant Rules and Notifications,

SECTION D

Judgments:
Shreya Singhal v. Union of India, AIR 2015SC 1523
Ranjit Udeshi v. State of Maharashtra, AIR 1965 SC 881
Ajay Goswami v. Union of India, (2007) 1 SCC 170
Nasscom v. Ajay Sood & others, (2005)DLT596

Reference Material:
LPL103: INFORMATION SECURITY, CRIME AND INVESTIGATION

Lectures: 3 Hrs. / Week
Credits: 3
Total Marks: 100 (Equivalent Grade Points to be Indicated)

Mid Semester Marks: 20
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Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

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SECTION A

The State of threats against computers, and networked systems,
Overview of computer Security,
Vulnerability assessment, managing firewalls and VPNs,
Overview of Instruction Detection and Intrusion prevention Network and host-based IDS
Classes of attackers, Kids/ hackers/ sophisticated groups, automated: Drones, Worms and Viruses

SECTION B

Information security risk analysis fundamentals Importance of physical security and
Biometrics controls for protecting information systems assets,
Security considerations for the mobile work force,
Network security perspectives, networking and digital communications, security of wireless networks.

SECTION C

Security models and frameworks and standards through introduction to the ISO 27001,
SSECM (systems security engineering – capability maturity model),
COBIT (Control Objectives for Information and related technologies) and the Sarbanes-Oxley Act (SOX) and SAS 70 (statement on auditing standards),
Privacy Fundamentals, business practices, impact on data privacy,
Technological impact on data privacy, privacy issues in web services and applications based on web services.
SECTION D

Internet/Computer Demographics: Computer/network user statistics;

Computer crime statistics,

Types of Computer and Internet Crime: Types of crimes involving computers;

Computer crimes; Network crimes; Criminals, hackers, and crackers

Investigations: The investigation life cycle; Legal methods to obtain the computer;

Jurisdictions and agencies; Internet investigations (e-mail, IRC, chat rooms, etc.);

IP addresses and domain names; Investigative methods, Digital Evidence

Evidence Collection: Working with ISPs and telephone companies; Examining computer,

Server, and network logs; Anonymous services.

Text/References Books:

1. Information Systems Security Management by Nina S. Godbole (Wiley India Pvt.Ltd.)
2. Security Engineering by Ross Anderson
3. Information Security Management Handbook by Harold Tpton & Micki Krause
   (Auerbach Publications)
   Education)
5. Security Planning & Disaster Recovery by Eric Maiwald and William Sieglein (Tata
   McGraw-Hill)
   (McGraw-Hili Prof. 2001.)
   Governments, and Others Achieve Objectives and Attain Competitive Advantages (CRC
   Press, 2002.)
PG DIPLOMA IN CYBER LAWS AND INFORMATION SECURITY (SEMESTER-II)
(Credit Based Evaluation and Grading System)

LPL 104: INTERNATIONAL TREATIES, IPR & CYBER WORLD

Lectures: 3 Hrs. / Week
Credits: 3
Total Marks: 100 (Equivalent Grade Points to be Indicated)
Mid Semester Marks: 20
End Semester Marks: 80
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

Instructions for the Paper Setters:

Eight questions of equal marks (Specified in the syllabus) are to be set, two in each of the four Sections (A-D). Questions may be subdivided into parts (not exceeding four). Candidates are required to attempt five questions, selecting at least one question from each Section. The fifth question may be attempted from any Section.

SECTION A

Introduction:
Introduction to Intellectual Property Rights
GATT & WTO,
WIPO,
TRIPS,
Berne Convention,
Universal Copyright Convention,
Copyright Treaty (WCT),
Copyright Act 1957,
Trades Marks Act, 1999, Definition, Breach and remedies.

SECTION B

Data Protection: Meaning
Principles of Data Protection
Jurisdictional issues
Retention of e- records
Transnational Data Flow and International Controls
Uniform Domain Name Dispute Resolution Policy.

SECTION C

**International Treaties:**
- PCT,
- PLT,
- SPLT,
- Washington Treaty

SECTION D

**Patents:**
- Indian Patent Act, Definitions breach and remedies,
- Application of Patents to information Technology;
- Patents for computer software,
- Patents for electronic commerce,
- Patent and Patentability criteria in India, US, EPC, Japan, China, Singapore etc.
- Various national and International Patent classifications
LPL 105  ELECTRONIC COMMERCE

Lectures: 3 Hrs./Week
Credits: 3
Total Marks: 100 (Equivalent Grade Points to be Indicated)
Mid Semester Marks: 20
End Semester Marks: 80
Mid Semester Examination: 20% weightage
End Semester Examination: 80% weightage

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SECTION A

Meaning, Scope and Changing Dimensions
E-Commerce v. Traditional Commerce
Advantages and Disadvantages
Global Trends

SECTION B

Issues relating to Jurisdiction, Online Dispute Resolution, including the Role of WTO
Issues relating to Access
Issues relating to Infrastructure
Digital Divide
Privacy
Security

SECTION C

UNICTRAL Model law on E-Commerce
Threats to E-Commerce
Inaccurate Management
Price Manipulation
Spam
Malicious code threats
Hactivism
Wi-fi Eavesdropping
SECTION D

Disintermediation and Re-intermediation,
Bitcoins
Internet and Mobile Banking,
Online Payment Gateways,
Electronic money/Truncated Cheque/Electronic Cheque
Regulating E-transactions including Role of RBI
Countering Cyber Attacks
Secure electronic transactions
Encryption
Digital Certificates
Security Audit

References:

LPL 106: COMPUTER SECURITY, AUDIT AND ASSURANCE

Lectures: 3 Hrs. / Week  
Credits: 3  
Total Marks: 100 (Equivalent Grade Points to be Indicated)  
Total Marks: 100  
Mid Semester Marks: 20  
End Semester Marks: 80  
Mid Semester Examination: 20% weightage  
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SECTION A

Information System Audit and Assurance - An Overview, Determination of policy and the degree of assurance required from controls,  
Information Security Management System (ISMS),  
Audit and review of ISMS Internal Control and Information System Audit information  
Security Governance and Assurance and Audit Security Controls,  
Systems Assurance and Control (SAC), Systems Audit ability and Control (SAC) reports,  
Control Objectives for Information and Related Technologies

SECTION B

Attack and Threat Analysis, various types of Attacks and Threats and their Analysis on Security, Security Management techniques,  
Infrastructure assessments, System assessments, Business case assessments for improvements.  
Study of various tools and techniques available for Security risk analysis  
Security Controls, Physical Security,  
Virtual Private Networks (VPNs), IP sec, Access Controls,  
Identification and Authentication Techniques, Managed Firewalls, Data Monitoring Software,  
Email Security Cryptology.
SECTION C

Security Policies and Procedures,
An investigation into the types of policies and procedures
How to formulate your IT Security Policy, IT Policy standards,
Creating, implementing, and managing controls and monitoring mechanisms, as well as other
important security policies and procedures.

SECTION D

IT Security Audits, Systematic technical assessments, personal interviewing, vulnerability
scanning, examining operating system settings,
Analysis of network shares, review of firewall management, physical security, penetration test
techniques, reviewing audit logs, look at encryption used, and view documentation from any
changes to systems or software.

Text/ References:

   2005.
   Hall of India, 3rd Ed., 2005.