Lesson Plan Cyber Security & Laws (Institute Elective)

Subject: Cyber Security and Laws

Subject code: ILO7016

Teacher-in-charge: Prof. Unik Lokhande

Academic Term: July – October 2022

Sr. No.	Detailed Contents	Hrs.
01	**Introduction to Cybercrime:** Cybercrime definition and origins of the world, Cybercrime and information security, Classifications of cybercrime, Cybercrime and the Indian ITA 2000, A global Perspective on cybercrimes.	4
02	**Cyber offenses & Cybercrime:** How criminal plan the attacks, Social Engg, Cyber stalking, Cybercafé and Cybercrimes, Botnets, Attack vector, Cloud computing, Proliferation of Mobile and Wireless Devices, Trends in Mobility, Credit Card Frauds in Mobile and Wireless Computing Era, Security Challenges Posed by Mobile Devices, Registry Settings for Mobile Devices, Authentication Service Security, Attacks on Mobile/Cell Phones, Mobile Devices: Security Implications for Organizations, Organizational Measures for Handling Mobile, Devices-Related Security Issues, Organizational Security Policies and Measures in Mobile Computing Era, Laptops	9
03	**Tools and Methods Used in Cybercrime** Phishing, Password Cracking, Key loggers and Spywares, Virus and Worms, Steganography, DoS and DDoS Attacks, SQL Injection, Buffer Over Flow, Attacks on Wireless Networks, Phishing, Identity Theft (ID Theft)	6
04	**The Concept of Cyberspace** E-Commerce, The Contract Aspects in Cyber Law, The Security Aspect of Cyber Law, The Intellectual Property Aspect in Cyber Law, The Evidence Aspect in Cyber Law, The Criminal Aspect in Cyber Law, Global Trends in Cyber Law, Legal Framework for Electronic Data Interchange Law Relating to Electronic Banking, The Need for an Indian Cyber Law	8
05	**Indian IT Act.** Cyber Crime and Criminal Justice: Penalties, Adjudication and Appeals Under the IT Act, 2000, IT Act. 2008 and its Amendments	6
06	**Information Security Standard compliances** SOX, GLBA, HIPAA, ISO, FISMA, NERC, PCI.	6

Course Objectives:

1. To understand and identify different types cybercrime and cyber law
2. To recognized Indian IT Act 2008 and its latest amendments
3. To learn various types of security standards compliances

Course Outcomes:

1. Understand the concept of cybercrime and its effect on outside world
2. Interpret and apply IT law in various legal issues
3. Distinguish different aspects of cyber law
4. Apply Information Security Standards compliance during software design and development.

CO-PO-PSO Mapping:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
ILO7016.1						1								1
ILO7016.2						2		1						1
ILO7016.3						2								1
ILO7016.4						2		1						1

Justification of PO to CO mapping:

Course Outcome	Competency	Performance Indicator
ILO7016.1	6.1 Demonstrate an ability to describe engineering roles in a broader context, e.g. pertaining to the environment, health, safety, legal and public welfare	6.1.1 Identify and describe various engineering roles; particularly as pertains to protection of the public and public interest at the global, regional and local level
ILO7016.2	6.1 Demonstrate an ability to describe engineering roles in a broader context, e.g. pertaining to the environment, health, safety, legal and public welfare	6.1.1 Identify and describe various engineering roles; particularly as pertains to protection of the public and public interest at the global, regional and local level
	6.2 Demonstrate an understanding of professional engineering regulations, legislation and standards	6.2.1 Interpret legislation, regulations, codes, and standards relevant to your discipline and explain its contribution to the protection of the public
	8.2 Demonstrate an ability to apply the Code of Ethics	8.2.2 Examine and apply moral & ethical principles to known case studies
ILO7016.3	6.1 Demonstrate an ability to describe engineering roles in a broader context, e.g. pertaining to the environment, health, safety, legal and public welfare	6.1.1 Identify and describe various engineering roles; particularly as pertains to protection of the public and public interest at the global, regional and local level
	6.2 Demonstrate an understanding of professional engineering regulations, legislation and standards	6.2.1 Interpret legislation, regulations, codes, and standards relevant to your discipline and explain its contribution to the protection of the public
ILO7016.4	6.1 Demonstrate an ability to describe engineering roles in a broader context, e.g. pertaining to the environment, health, safety, legal and public welfare	6.1.1 Identify and describe various engineering roles; particularly as pertains to protection of the public and public interest at the global, regional and local level
	6.2 Demonstrate an understanding of professional engineering regulations, legislation and standards	6.2.1 Interpret legislation, regulations, codes, and standards relevant to your discipline and explain its contribution to the protection of the public
	8.2 Demonstrate an ability to apply the Code of Ethics	8.2.2 Examine and apply moral & ethical principles to known case studies

Justification of CO to PSO mapping:

Course Outcome	Competency	Performance Indicator
ILO7016.1	2.1 Demonstrate an ability to understand the cyber security regulations and legislations.	2.1.1 Interpret cyber security legislation and regulations
ILO7016.2	2.1 Demonstrate an ability to understand the cyber security regulations and legislations.	2.1.1 Interpret cyber security legislation and regulations
ILO7016.3	2.1 Demonstrate an ability to understand the cyber security regulations and legislations.	2.1.1 Interpret cyber security legislation and regulations
ILO7016.4	2.1 Demonstrate an ability to understand the cyber security regulations and legislations.	2.1.1 Interpret cyber security legislation and regulations

CO Assessment Tools:

Course Outcomes	***Indirect Method (20%)***					
	Unit Test		**Quiz**	**Video Assignment**	**End Sem Exam**	**Course Exit Survey**
	I	**II**				
ILO7016.1	30%	--	10%	10%	50%	100%
ILO7016.2	--	30%	10%	10%	50%	100%
ILO7016.3	30%	--	10%	10%	50%	100%
ILO7016.4	--	30%	10%	10%	50%	100%

CO calculation= (0.8 *Direct method + 0.2*Indirect method)

Curriculum Gap identified: (with action plan): Students were not able to relate Indian cyber laws given in the syllabus with real life scenarios.

Action Plan followed to fill curriculum gap:

- Case study demonstration was given in classes on different laws in ITA2000 and 2008 amends.
- Students given case studies from real Court Cases in India.
- Using case studies students created presentation.
- Each student was given individual case study.
- If topic is broad, they were allowed to create groups in 2-3 students.
- Students recorded 5-15 min. Video on case studies.

Content beyond syllabus: Nil

REFERENCES:

1. Nina Godbole, Sunit Belapure, Cyber Security, Wiley India, New Delhi
2. The Indian Cyber Law by Suresh T. Vishwanathan; Bharat Law House New Delhi
3. The Information technology Act, 2000; Bare Act- Professional Book Publishers, New Delhi.
4. Cyber Law & Cyber Crimes by Advocate Prashant Mali; Snow White Publications, Mumbai
5. Nina Godbole, Information Systems Security, Wiley India, New Delhi
6. Kennetch J. Knapp, Cyber Security &Global Information Assurance Information Science Publishing.
7. William Stallings, Cryptography and Network Security, Pearson Publication
8. Websites for more information is available on: The Information Technology ACT, 2008- TIFR: https://www.tifrh.res.in
9. Website for more information, A Compliance Primer for IT professional : https://www.sans.org/reading-room/whitepapers/compliance/compliance-primer- professionals-33538

Lesson Plan

Class	Sem VII (Institute Elective)		
Academic Term	July- October 2022		
Subject	Cyber Security & Laws (ILO7016)		
Periods (Hours) Per Week	Lecture	3	
	Practical	N/A	
	Tutorial	N/A	
Evaluation System		**Hours**	**Marks**
	Theory examination	3	80
	Internal Assessment	--	20
	Practical Examination	--	--
	Oral Examination	--	--
	Term work	--	--
	Total	3	100

Time Table	**Day**	**Time**
	Tuesday	1.30PM-2.30PM
	Wednesday	1.30PM-2.30PM
	Thursday	1.30PM-2.30PM

Week No.	**Lecture No.**	**Planned Dates**	**Actual Dates**	**Topics to be covered**	**Content Delivery Method/Learning Activities/ Remarks**
1	1	02-08-2022	19-07-2022	Cybercrime definition and origins of the world, Cybercrime and information security,	Blackboard, PPT
	2	03-08-2022	20-07-2022	Classifications of cybercrime	Blackboard, PPT
	3	04-08-2022	22-07-2022	Cybercrime and the Indian ITA 2000, A global Perspective on cybercrimes.	Blackboard, PPT
2	4	10-08-2022	26-07-2022	How criminal plan the attacks, Social Engineering attacks	Blackboard, PPT
	5	11-08-2022	27-07-2022	Cyber stalking	Blackboard, PPT
3	6	17-08-2022	29-07-2022	Cybercafé and Cybercrimes, Botnets, Attack vector	Blackboard, PPT
	7	18-08-2022	02-08-2022	Proliferation of Mobile and Wireless Devices, Trends in Mobility,	Blackboard, PPT
4	8	23-08-2022	03-08-2022	Credit Card Frauds in Mobile and Wireless Computing Era	Blackboard, PPT
	9	24-08-2022	04-08-2022	Security Challenges Posed by Mobile Devices,	Blackboard, PPT

	10	25-08-2022	10-08-2022	Registry Settings for Mobile Devices, Authentication Service Security,	Blackboard, PPT
5	11	30-08-2022	11-08-2022	Attacks on Mobile/Cell Phones, security Implications for Organizations	Blackboard, PPT
6	12	06-09-2022	17-08-2022	Organizational Measures for Handling Mobile, Devices-Related Security Issues,	Blackboard, PPT
	13	07-09-2022	18-08-2022	Organizational Security Policies and Measures in Mobile Computing Era, Laptops	Blackboard, PPT
	14	08-09-2022	23-08-2022	Phishing	Blackboard, PPT
7	15	13-09-2022	24-08-2022	Password Cracking, Key loggers and Spywares	Blackboard, PPT
	16	14-09-2022	25-08-2022	Virus and Worms, Steganography	Blackboard, PPT
8	17	20-09-2022	06-09-2022	DoS and DDoS Attacks	Blackboard, PPT
	18	21-09-2022	07-09-2022	SQL Injection, Buffer Over Flow	Blackboard, PPT
	19	22-09-2022	20-09-2022	Attacks on Wireless Networks, Phishing, Identity Theft (ID Theft)	Blackboard, PPT
9	20	27-09-2022	21-09-2022	E-Commerce, The Contract Aspects in Cyber Law, The Security Aspect of Cyber Law	Blackboard, PPT
	21	28-09-2022	22-09-2022	The Intellectual Property Aspect in Cyber Law, The Evidence Aspect in Cyber Law	Blackboard, PPT
	22	29-09-2022	27-09-2022	The Criminal Aspect in Cyber Law, Global Trends in Cyber Law	Blackboard, PPT
10	23	04-10-2022	28-09-2022	Legal Framework for Electronic Data Interchange Law Relating to Electronic Banking	Blackboard, PPT
	24	06-10-2022	29-09-2022	The Need for an Indian Cyber Law	Blackboard, PPT
11	25	11-10-2022	04-10-2022	ITA 2000-I	Blackboard, PPT
	26	12-10-2022	08-10-2022	ITA 2000-II	Blackboard, PPT
	27	13-10-2022	11-10-2022	ITA 2000-III	Blackboard, PPT
12	28	18-10-2022	12-10-2022	ITA 2000-IV	Blackboard, PPT
	29	19-10-2022	13-10-2022	Penalties, Adjudication and Appeals Under the IT Act,2000	Blackboard, PPT
	30	20-10-2022	19-10-2022	ITA 2008 amendments	Blackboard, PPT
13	31	25-10-2022	19-10-2022	SOX, GLBA, HIPAA,	Blackboard, PPT
	32	27-10-2022	24-10-2022	ISO, FISMA	Blackboard, PPT
14	33	01-11-2022	24-10-2022	NERC, PCI.	Blackboard, PPT

Submitted By:	**Approved By**	
Prof. Unik Lokhande Sign:	Dr. Sujata Deshmukh	Sign:
	Dr. B. S. Daga	Sign:
	Prof. Merly Thomas	Sign:
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Date of Submission:	**Date of Approval**	