

## CYBER SECURITY AND PRIVACY IN IOT LAB

**Course Code : CSI 521**

**Credit Unit: 01**

**Total Hours: 30**

**Course Objectives:**

- Understand key terms and concepts in cyber law, intellectual property and cyber-crimes, trademarks and domain theft.
- To understand important cyber security legal principles that need to be made as an integral component and part of the growth and further evolution of emerging technologies like Internet of Things.

**Program List :**

1. How implement security and privacy concerns in IOT: **(3 Hours)**
2. Implement Android-based Smartphone Security using IOT: **(3 Hours)**
3. How can do Stepping Stone Detection using IOT: **(3 Hours)**
4. How Broken Authentication and Session Management Vulnerabilities in IOT: **(3 Hours)**
5. Use of Computer Forensic Investigation and Cyber Terrorism: **(3 Hours)**
6. How is underlying architecture of internet of things is different from web of things explain with help of example: **(3 Hours)**
7. Construct a model to demonstrate working of network of communicating devices with help of suitable diagram: **(3 Hours)**
8. State the following with example: Public cloud, Private cloud, Hybrid cloud and Community cloud: **(3 Hours)**
9. Example of Identity based authentication in IOT: **(3 Hours)**
10. Example of public-key-based authentication in IOT: **(3 Hours)**

**Course Outcomes :**

Upon completion of this course, students will be able to:

- Describe and analyze the hardware, software, components of a network and the interrelations.
- Explain networking protocols and their hierarchical relationship hardware and software. Compare protocol models and select appropriate protocols for a particular design.
- Manage multiple operating systems, systems software, network services and security. Evaluate and compare systems software and emerging technologies.
- Develop solutions for networking and security problems, balancing business concerns, technical issues and security.

**Examination Scheme:**

IA			EE			
A	PR	Practical Based Test	Major Experiment	Minor Experiment	LR	Viva
5	10	15	35	15	10	10

Note: IA –Internal Assessment, EE- External Exam, A- Attendance PR- Performance, LR – Lab Record, V –Viva.



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**Text & References:**

- Practical Internet of Things Security (Kindle Edition) by Brian Russell, Drew Van Duren Securing the Internet of Things Elsevier
- Security and Privacy in Internet of Things (IoTs): Models, Algorithms, and Implementations
- Thomas Erl, Ricardo Puttini, Zaigham Mahmood, Cloud Computing: Concepts, Technology & Architecture, Prentice Hall, 2013.
- Cyber Security Law Thoughts On Iot, Ai & Blockchain by Pavan Duggal



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