Lifelong Learning with Micro-Credentials

Lifelong learning through micro-credentials offers a flexible and modular approach to upskilling in emerging technologies like the Internet of Things (IoT). Micro-credentials are short, targeted certifications that validate specific skills or competencies, allowing learners to build expertise in focused areas such as sensor networks, embedded systems, cloud integration, and IoT security. This format is particularly beneficial in the fast-evolving IoT domain, where technologies, tools, and industry standards are continually advancing. Learners can engage with bite-sized learning modules that are often aligned with industry needs and standards, enabling rapid skill acquisition and immediate application in real-world scenarios.

For professionals, students, or career changers, micro-credentials provide a stackable and customizable learning pathway that complements traditional degrees or serves as stand-alone qualifications. In the context of IoT, this could mean earning credentials in device connectivity, edge computing, or data analytics—each contributing to a broader understanding of IoT ecosystems. These credentials are often issued digitally and are shareable on professional platforms, making them valuable tools for showcasing competence and staying competitive in the job market. By fostering continuous learning and adaptability, micro-credentials support the development of a future-ready workforce equipped to drive innovation in smart technologies.

Semester No:	VII
Course Code/Title:	20CS533 & Internet of Things
Topic	Introduction to Internet of Things
Pedagogical Method	Lifelong Learning with Micro-Credentials
Technology Used	Infosys Springboard and AICTE Parak
PO-PSO Mapping	PO1, PO2, PO3, PO4, PO5 PO12, PSO1, PSO2

Objectives:

- Recall fundamental concepts of the Internet of Things (IoT), including components like sensors, actuators, and communication protocols.
- Identify the various layers and architecture of IoT systems
- Demonstrate the setup and configuration of basic IoT hardware and software components.
- Apply IoT protocols (e.g., MQTT, CoAP) in data transmission scenarios.
- Evaluate the performance, scalability, and security of different IoT solutions.

Semester No:	VI
Course Title:	20CS533/Internet of Things
CO. No.	Course Outcome Statement
CO1	Understand general concepts of Internet of Things (IoT).
CO2	Analyze various protocols for IoT.
CO3	Explore and learn about Internet of Things with the help of preparing projects designed for Raspberry Pi.
CO4	Analysis and Evaluate design issues in IoT applications.
CO5	Understand Web of Things over IoT applications using web technologies.

CO–PO–PSO Alignment

Course Outcome	Mapped PO/PSO	Justification
CO1	PO1, PO2, PSO1	CO1 focuses on understanding general IoT concepts, supporting PO1 (basic engineering knowledge) and PO2 (problem analysis). It aligns with PSO1 by building domain-specific knowledge in IoT fundamentals.
CO2	PO2, PO3, PSO2	CO2 involves analyzing IoT protocols which requires critical thinking and problem-solving (PO2) and applies engineering design principles (PO3). PSO2 is addressed by enhancing skills in IoT communication protocols.
CO4	PO3, PO4, PSO2	CO4 targets analysis and evaluation of IoT design issues, linking to PO3 (design/development of solutions) and PO4 (use of modern tools). PSO2 ties in through specific IoT application expertise.
CO5	PO5, PO12, PSO1	CO5 emphasizes understanding Web of Things using web technologies, supporting PO5 (modern tool usage) and PO12 (lifelong learning via emerging tech). PSO1 is met by integrating IoT with web technologies.

Infosys
Navigate your next

COURSE COMPLETION CERTIFICATE

The certificate is awarded to

Bhavani A M A

for successfully completing the course

Introduction to Internet of Things

on August 6, 2024

Infosys | Springboard

Congratulations! You make us proud!

Thirumala Arohi
Executive Vice President and Global Head
Education, Training & Assessment (ETA)
Infosys Limited

Issued on: Wednesday, August 7, 2024
To verify, scan the QR code at https://verify.onwingspan.com

Student Learning Assessment

ALL INDIA COUNCIL FOR TECHNICAL EDUCATION, NEW DELHI

Student Learning Assessment

AKILAN P (SLAS1045483)

4th Year

COMPUTER SCIENCE AND ENGINEERING

HINDUSTHAN INSTITUTE OF TECHNOLOGY (1-4294141)

Date : 12-07-2024

Type : Self-Assessment

Overall Rating

★★★★★

★★★★★ Excellent | ★★★★☆ Very Good | ★★★☆☆ Good

Internet Of Things ★★★★★

- You can be the intense choice of everyone for their team.
- You are knowledgeable in both the creating and engineering.