

**UTKALMANI GOPABANDHU INSTITUTE OF**  
**ENGINEERING, ROURKELA**



**LESSON PLAN**

**SESSION: 2022-2023**

**DEPARTMENT OF ELECTRONICS AND TELECOMMUNICATION ENGINEERING**

**SUBJECT CODE: Th.4**

**NAME OF THE SUBJECT: INTERNET OF THINGS**

**BRANCH: ELECTRONICS & TELECOMMUNICATION**

**SEMESTER: DIPLOMA 6<sup>TH</sup> SEM**

**NUMBER OF CLASSES ALLOTTED PER WEEK: 4**

**TOTAL PERIODS ALLOTTED TO THE SUBJECT ACCORDING TO  
SCTEVT: 60**

**NAME OF THE FACULTY: PRIYADARSHINI MISHRA**

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**SEMESTER:** DIPLOMA -6<sup>TH</sup> SEM

**NO OF CLASSES ALLOTTED PER WEEK:** 4(14/02/2023 to 23/05/2023)

**NAME OF THE FACULTY:** PRIYADARSHINI MISHRA

<b>Week/Date</b>	<b><u>Lecture</u></b>	<b><u>Topic to be covered</u></b>	<b>Remarks</b>
1 <sup>st</sup> week 14/02/2023 To 18/02/2023	1 <sup>st</sup>	<b>CHAPTER-1</b> What is IoT. & Architectural Overview of IOT	
	2 <sup>nd</sup>	Design principles of IOT	
	3 <sup>rd</sup>	Needed capabilities of IOT	
2 <sup>nd</sup> week 20/02/2023 To 25/02/2023	1 <sup>st</sup>	IoT Applications	
	2 <sup>nd</sup>	Sensing, Actuation	
	3 <sup>rd</sup>	Basics of Networking, M2M	
	4 <sup>th</sup>	Basics of Networking- IoT Technology	
3 <sup>rd</sup> week 27/02/2023 To 04/03/2023	1 <sup>st</sup>	Fundamentals- Devices and gateways	
	2 <sup>nd</sup>	Everything as a Service(XaaS),	

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Week/Date	Lecture	Topic to be covered	Remarks
	3 <sup>rd</sup>	Role of Cloud in IoT,	
	4 <sup>th</sup>	Security aspects in IoT	
4 <sup>th</sup> week 06/03/2023 To 11/03/2023	1 <sup>st</sup>	<b>CHAPTER-2</b> Introduction to Hardware Components Computing (Arduino)	<b>(Holiday)Need one extra classes for adjustment</b>
	2 <sup>nd</sup>	Components of Arduino	
	3 <sup>rd</sup>	Components of Raspberry Pi	
	4 <sup>th</sup>	Components of Raspberry Pi	

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5 <sup>th</sup> week 13/03/2023 To 18/03/2023	1 <sup>st</sup>	Communication, Sensing	
	2 <sup>nd</sup>	Actuation, I/O interfaces	
	3 <sup>rd</sup>	Software Components- Programming API's (using Python) for Communication	
	4 <sup>th</sup>	Programming using Python	
6 <sup>th</sup> week 20/03/2023 To 25/03/2023	1 <sup>st</sup>	Programming using Python	
	2 <sup>nd</sup>	Programming using Python	
	3 <sup>rd</sup>	Protocols –MQTT	
	4 <sup>th</sup>	Protocols – ZigBee	

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**NO OF CLASSES ALLOTTED PER WEEK:** 5(14/09/2022 to 23/05/2023)

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7 <sup>th</sup> week 27/03/2023 To 01/04/2023	1 <sup>st</sup>	Protocols -Bluetooth, COAP	(Holiday)Need one extra classes for adjustment
	2 <sup>nd</sup>	Protocols - UDP, TCP	
	3 <sup>rd</sup>	<b>CHAPTER-3</b> Solution framework for IoT applications	
	4 <sup>th</sup>	Implementation of Device integration	
8 <sup>th</sup> week 03/04/2023 To 08/04/2023	1 <sup>st</sup>	Data acquisition	(Holiday)Need one extra classes for adjustment
	2 <sup>nd</sup>	Data integration	
	3 <sup>rd</sup>	Device data storage- Unstructured data storage on cloud/local server	
	4 <sup>th</sup>	Device data storage- Unstructured data storage on cloud/local server	

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**PERIODS PER WEEK:** 4  
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**NO OF CLASSES ALLOTTED PER WEEK OFF-LINE:** 4(14/02/2023 to 23/05/2023)

<b>9<sup>th</sup> week</b> 10/04/2023 To 15/04/2023	<b>1<sup>st</sup></b>	Authentication, authorization of devices.	<b>(Holiday)</b> Need one extra classes for adjustment
	<b>2<sup>nd</sup></b>	<b>CHAPTER-4</b> Understanding the IoT Big Picture	
	<b>3<sup>rd</sup></b>	Understanding the IoT Big Picture	
	<b>4<sup>th</sup></b>	Building the Internet of Things	
<b>10<sup>th</sup> week</b> 17/04/2023 To 22/04/2023	<b>1<sup>st</sup></b>	Understanding Building Blocks	
	<b>2<sup>nd</sup></b>	Understanding Network Conections	
	<b>3<sup>rd</sup></b>	Understanding IP Adresses	
	<b>4<sup>th</sup></b>	Understganding Cellular & Mesh Network	

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<b>11<sup>th</sup> week</b>  24/04/2023 To 29/04/2023	1 <sup>st</sup>	<b>CHAPTER-5</b> What is Smart TV & its use	
	2 <sup>nd</sup>	What is inside Smart TV	
	3 <sup>rd</sup>	What is inside Smart TV	
	4 <sup>th</sup>	What a Smart TV does	
<b>12<sup>th</sup> week</b>  01/05/2023 To 06/05//2023	1 <sup>st</sup>	Smart TV Operating Systems	<b>(Holiday)Need one extra classes for adjustment</b>
	2 <sup>nd</sup>	What is Smart TV Set	
	3 <sup>rd</sup>	Top Devices of Smart TV	
	4 <sup>th</sup>	Intergrating Smart TV in to IOT	

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<b>13<sup>th</sup> week</b>  08/05/2023 To 13/05//2023	1 <sup>st</sup>	<b>CHAPTER-6</b> Smart Home	
	2 <sup>nd</sup>	Examples of Smart Home Technologies	
	3 <sup>rd</sup>	How Smart homes work	
	4 <sup>th</sup>	Smart Automation	
<b>14<sup>th</sup> week</b>  15/05/2023 to 20/05/2023	1 <sup>st</sup>	Role of IOT in Smart home concept	<b>(Holiday)Need one extra classes for adjustment</b>
	2 <sup>nd</sup>	Pros & Cons of Smart home	
	3 <sup>rd</sup>	Real life examples of Smart home	
	4 <sup>th</sup>	Revision	
<b>15<sup>th</sup> Week</b>  22/05/2023 to 23/05/2023	1 <sup>st</sup>	Semester Question Discussion	