



| DISCIPLINE: ELECTRONICS AND TELECOMMUNICATION ENGG. | SEMESTER: 6 th | NAME OF THE TEACHING FACULTY: PRAKASH CHANDRA DAS | | |
|--|--|--|--------------------------------|-------------------|
| SUBJECT: INTERNET OF THINGS | No. of Days/per week class allotted: 4 | Semester From Date: 16 TH January, 2024 No.of Weeks:15 | | |
| Week | Class Day | Theory Topics | Chapter | |
| | 1st | What is IoT.Architectural Overview, | 1. Introduction to IoT | |
| 1st | 2nd | Design principles and needed capabilities, | | |
| | 3rd | IoT Applications, Sensing, Actuation, | | |
| | 4th | Basics of Networking, M2M and IoT Technology | | |
| 2nd | 1st | Fundamentals- Devices and gateways, | | |
| | 2nd | Data management, Business processes in IoT | | |
| | 3rd | Everything as a Service(XaaS), | | |
| | 4th | Role of Cloud in IoT, Security aspects in IoT. | | |
| 3rd | 1st | Hardware Components- Computing (Arduino,Raspberry Pi), | | 2.Elements of IoT |
| | 2nd | Communication, Sensing, Actuation | | |
| | 3rd | I/O interfaces | | |
| | 4th | Software Components- Programming API's | | |
| 4th | 1st | Software Components- Programming API's | | |
| | 2nd | Protocols-MQTT, | | |
| | 3rd | ZigBee, , | | |
| | 4th | Bluetooth, | | |
| 5th | 1st | CoAP | | |
| | 2nd | UDP, TCP. | | |
| | 3rd | Implementation of Device integration | 3. IoT Application Development | |
| | 4th | Implementation of Device integration | | |
| 6th | 1st | Data acquisition and integration | | |
| | 2nd | Data acquisition and integration | | |
| | 3rd | Data acquisition and integration | | |
| | 4th | Device data storage- | | |
| 7th | 1st | Device data storage- | | |
| | 2nd | Device data storage- | | |
| | 3rd | Unstructured data storage on cloud/local server | | |
| | 4th | Unstructured data storage on cloud/local server | | |
| 8th | 1st | Solution framework for IoT applications | | |
| | 2nd | Solution framework for IoT applications | | |
| | 3rd | Authentication, authorization of devices | | |
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| 9th | 1st | Understanding the IoT Big Picture | | |

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| | 2nd | Building the Internet of Things | 4.Smart Technology |
| | 3rd | Building the Internet of Things | |
| | 4th | Understanding Smart Devices, Building Blocks | |
| 10th | 1st | Understanding Smart Devices, Building Blocks | |
| | 2nd | Understanding Network Conections | 4.Smart Technology |
| | 3rd | Understanding IP Adresses | |
| | 4th | Understanding IP Adresses | |
| 11th | 1st | Understanding cellular Network & Mesh Network | |
| | 2nd | Understanding cellular Network & Mesh Network | 4.Smart Technology |
| | 3rd | Understanding cellular Network & Mesh Network | |
| | 4th | What is Smart TV & its use | |
| 12th | 1st | What is inside Smart TV | |
| | 2nd | What is inside Smart TV | 5.Smart TV |
| | 3rd | What a Smart TV does | |
| | 4th | What a Smart TV does | |
| 13th | 1st | Smart TV Operating Systems | |
| | 2nd | Smart TV Operating Systems | 5.Smart TV |
| | 3rd | What is Smart TV Set-TopDevices | |
| | 4th | Intergrating Smart TV in to IOT | |
| 14th | 1st | Intergrating Smart TV in to IOT | |
| | 2nd | smart home | 6.IOT Case Studies |
| | 3rd | smart car | |
| | 4th | smart cities | |
| 15th | 1st | smart drone | |
| | 2nd | industrial automation | 6.IOT Case Studies |
| | 3rd | industrial automation | |
| | 4th | industrial automation | |

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