

## C V RAMAN POLYTECHNIC, BHUBANESWAR


### LESSON PLAN Session (2025-2026)

|  |                                    |   |
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| <b>Discipline:</b> Electronics and Telecommunication Engineering | <b>Semester:</b> 6th , Summer/2026 | <b>Name of the Faculty:</b><br>Sabyasachi Patra<br>Asst. Prof.<br><b>Email ID:</b> sabyasachi.patra@cvrp.edu.in |
| <b>Subject:</b> Internet of Things<br>TH.4(ii)                   | <b>No. of Days/week:</b><br>04     | <b>Start Date:</b> 22/12/2025<br><b>End Date:</b> 18/04/2026  |

| Week            | Class Day        | Theory Topic  |
|-----------------|------------------|---|
| 1st             | 1st              | Unit 1: What is IoT, Architectural Overview                                     |
|                 | 2 <sup>nd</sup>  | Design principles and needed capabilities, IoT Applications, Sensing, Actuation |
|                 | 3 <sup>rd</sup>  | Basics of Networking, M2M and IoT Technology                                    |
|                 | 4 <sup>th</sup>  | Fundamentals- Devices and gateways  |
| 2 <sup>nd</sup> | 5 <sup>th</sup>  | Data management   |
|                 | 6 <sup>th</sup>  | Business processes in IoT, Everything as a Service(XaaS)                        |
|                 | 7 <sup>th</sup>  | Role of Cloud in IoT, Security aspects in IoT                                   |
|                 | 8 <sup>th</sup>  | Revision, Assignment1   |
| 3 <sup>rd</sup> | 9 <sup>th</sup>  | Unit 2: Hardware Components- Computing (Arduino)                                |
|                 | 10 <sup>th</sup> | Hardware Components- Computing ( Raspberry Pi)                                  |
|                 | 11 <sup>th</sup> | Communication, Sensing, Actuation, I/O interfaces                               |
|                 | 12 <sup>th</sup> | Software Components- Programming API's (using Python)                           |
| 4 <sup>th</sup> | 13 <sup>th</sup> | Software Components- Programming API's (using Python )                          |
|                 | 14 <sup>th</sup> | Software Components- Programming API's (using Arduino)                          |
|                 | 15 <sup>th</sup> | Software Components- Programming API's (using Arduino)                          |
|                 | 16 <sup>th</sup> | Practice programming & Assignment   |

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| 5 <sup>th</sup>  | 17 <sup>th</sup> | Protocols-MQTT, ZigBee, Bluetooth, CoAP, UDP, TCP                      |
|                  | 18 <sup>th</sup> | Protocols-MQTT, ZigBee, Bluetooth, CoAP, UDP, TCP                      |
|                  | 19 <sup>th</sup> | Quiz test1   |
|                  | 20 <sup>th</sup> | Unit 3: Solution framework for IoT applications                        |
| 6 <sup>th</sup>  | 21 <sup>st</sup> | Implementation of Device integration, Data acquisition and integration |
|                  | 22 <sup>nd</sup> | Device data storage- Unstructured data storage on cloud/local server   |
|                  | 23 <sup>rd</sup> | Authentication, authorization of devices                               |
|                  | 24 <sup>th</sup> | Revision & Assignment2   |
| 7 <sup>th</sup>  | 26 <sup>th</sup> | Unit 4: Understanding the IoT Big Picture                              |
|                  | 27 <sup>th</sup> | Building the Internet of Things  |
|                  | 29 <sup>th</sup> | Understanding Smart Devices, Building Blocks                           |
|                  | 28 <sup>th</sup> | Understanding Network Connections                                      |
| 8 <sup>th</sup>  | 29 <sup>th</sup> | Understanding IP Adresses  |
|                  | 30 <sup>th</sup> | Understanding cellular Network & Mesh Network                          |
|                  | 31 <sup>st</sup> | Revision   |
|                  | 32 <sup>nd</sup> | Student presentation   |
| 9 <sup>th</sup>  | 33 <sup>rd</sup> | Unit 5: What is Smart TV & its use                                     |
|                  | 34 <sup>th</sup> | What is inside Smart TV  |
|                  | 35 <sup>th</sup> | What a Smart TV does   |
|                  | 36 <sup>th</sup> | Smart TV Operating Systems   |
| 10 <sup>th</sup> | 37 <sup>th</sup> | What is Smart TV Set-Top Devices                                       |
|                  | 38 <sup>th</sup> | Integrating Smart TV in to IOT   |
|                  | 39 <sup>th</sup> | Revision, Assignment3  |
|                  | 40 <sup>th</sup> | Video class / Swayam/ NPTEL  |
| 11 <sup>th</sup> | 41 <sup>st</sup> | Unit 6: IoT case studies a. Smart Home                                 |
|                  | 42 <sup>nd</sup> | Smart Home   |
|                  | 43 <sup>rd</sup> | b. Smart car   |
|                  | 44 <sup>th</sup> | c. Smart Cities  |
| 12 <sup>th</sup> | 45 <sup>th</sup> | c. Smart Cities  |
|                  | 46 <sup>th</sup> | d. Smart Drones  |
|                  | 47 <sup>th</sup> | Arduino Programming for Smart city                                     |
|                  | 48 <sup>th</sup> | Arduino Programming for Smart home                                     |
| 13 <sup>th</sup> | 49 <sup>th</sup> | Industrial automation  |
|                  | 50 <sup>th</sup> | Industrial automation  |
|                  | 51 <sup>st</sup> | Revision, Assignment 4   |

|                  |                  |                                   |
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|                  | 52 <sup>nd</sup> | Quiz2                             |
| 14 <sup>th</sup> | 53 <sup>rd</sup> | Revision                          |
|                  | 54 <sup>th</sup> | Practice short question           |
|                  | 55 <sup>th</sup> | Surprise Test/Quiz Test           |
|                  | 56 <sup>th</sup> | Doubt Clearing Class              |
| 15 <sup>th</sup> | 57 <sup>th</sup> | Doubt Clearing Class              |
|                  | 58 <sup>th</sup> | Doubt Clearing Class              |
|                  | 59 <sup>th</sup> | Previous Year Question Discussion |
|                  | 60 <sup>th</sup> | Previous Year Question Discussion |

  
Signature Of Faculty

  
Signature Of HOD