

Course Title: Foundation Course on IoMT, Wearables

Duration: 1 Months

Target Audience: UG & PG students (Pharmacy, Biomedical, Electronics, Computer Science, and related fields)

Mode: Hybrid (Theory + Hands-on Practical Sessions)

Module 1: Introduction to Digital Health & IoMT (Week 2)

- Session 1: Introduction to IoMT (Internet of Medical Things)
- Session 2: Evolution & Trends in Digital Health
- Session 3: Regulatory Landscape for IoMT Devices (India, USA, EU)
- Session 4: Cloud & Edge Computing in Digital Health
- Practical: Basics of IoT Communication – Hands-on with Raspberry Pi & Arduino for Health Monitoring & Developing a Prototype – IoMT Device

Module 2: Wearable Technologies & Biosensors (Week 2)

- Session 1: Overview of Wearables – Smartwatches, Smart Clothing, and Patches
- Session 2: Sensors in Wearable Health Devices – ECG, SpO2, Temperature, Motion, etc.
- Session 3: Data Analytics & AI in Wearable Health Monitoring
- Session 4: Cybersecurity & Data Privacy in IoMT
- Practical: Build a Simple Wearable Sensor for Heart Rate Monitoring

Assessment & Certification

- Capstone Project: Students work in teams to develop an IoMT base prototype.
- Final Presentation & Evaluation by Industry Experts.
- Certificate of Completion