Module Name: (B.2) Next Generation Networking and IoT Technologies

Aim

This module aims to familiarize students with the latest technologies devised for modern and forthcoming wireless and optical networks under the umbrella of Internet of Things emphasizing on rising research trends.

Learning Objectives

The main learning objectives include the ability to recognize, analyze, and research the techniques employed in contemporary communication networks that constitute the foundation of the anticipated next generation Internet of Things.

Learning Outcomes

On successful completion of this module, students should be able to:

- Research scientific papers on Next Generation Networking and IoT Technologies
- Explain the operational principles of Software Defined Networking (SDN), Network Function Virtualization (NFV), and Mobile Edge Computing (MEC)
- Identify the evolutional characteristics of cell network generations up to 6G
- Assess the benefits of the new trends in passive optical networking
- Examine heterogeneous IoT networks that include sensors, cars, Unmanned Aerial Vehicles, and satellites
- Investigate the developments in wireless networking up to the latest IEEE standards
- Compare contemporary protocols for realizing IoT systems
- Synthesize resource allocation models for optimizing modern networking systems

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