E.M.G. YADAVA WOMEN'S COLLEGE, MADURAI – 625 014.

(An Autonomous Institution – Affiliated to Madurai Kamaraj University)

Re-accredited **(3rd Cycle)** with Grade **A+** and **CGPA 3.51 by NAAC**

CBCS

DEPARTMENT OF PHYSICS-B.Sc

VALUE ADDED COURSE

(w.e.f. 2021-2024 onwards)

Title of the paper : MOBILE COMMUNICATION Contact hours: 30 hrs

Semester : V

Subject Code : 21PVACP

Objectives:

1. Understand the fundamentals of Mobile Communication

2. Gain the knowledge about Global system for Mobile Communication

Unit I - Mobile Communication

Need for Mobile Communication – Requirements of mobile communication – History of Mobile Communication – Properties of Wireless Medium – Radio Propagation – Propagation Coverage Calculations.

Unit II - Introduction to Cellular Mobile Communication

Cellular structure – Frequency Reuse – Traffic and Switching Techniques – Cellular Mobile Communication Switching.

Unit III – Cellular Mobile Communication System Architecture

System Architecture – Authentication Centre – Home Location Register – Visiting Location Register – Equipment Identify Register – Base Station System.

Unit IV – Mobile Communication Standards

Generation of Wireless Networks – First Generation Wireless Standards – Second Generation Wireless System – Third Generation and Beyond Wireless Systems – Standards Organization – Implementation Organization – Regional Organization – Global Organization.

Unit V – Global System for Mobile Communication

Global System for Mobile Communication (GSM) – GSM Architecture – Advanced Mobile Phone Service(AMPS).

Text Book

T.G. Palanivelu, R. Nakkeeran Wireless and Mobile Communication. PHI learning private limited, New Delhi -June 2011.

Unit I Chapter 3 – 3.1 – 3.4, 3.4.1, 3.4.2
Unit II Chapter 4 – 4.1, 4.2, 4.4, 4.4.1
Unit III Chapter 4 – 4.3, 4.3.1- 4.3.5
Unit IV Chapter 5 – 5.1, 5.1.1- 5.1.3, 5.2, 5.2.1- 5.2.3
Unit II Chapter 5 – 5.3, 5.4, 5.5

Reference Books:

1. Jochen H. Schiller, mobile communications, second edition, Pearson education limited, New Delhi-2000
2. Sanjeev Kumar, Wireless and Mobile Communications, New Age International, Private limited,2008
3. Prakash C. Gupta, Data Communications and Computer Networks, PHI learning private limited, New Delhi- 2009
4. David Tse, Pramod Viswanth, Fundamentals of Wireless Communications, Cambridge university press, 2005
5. Afif Osseiran, Patrick March, Mobile and Wireless Communications Technology, June – 2016

PROJECT WORKS:

- Finding mobile model
- Use of various Tools& Instruments used in mobile phone repairing
- Assembling & Disassembling
- Testing of various parts with Multimeter
- Touch /Display Replacement
- Mic, Speaker, Ringer trouble shooting Solutions
- Insert SIM /No signal solution
- Charging Solution
- IC Replacement
- Keypad Problem
- Touch Screen Problem
- Network Problem
- Charging Connecter pin Replacement