

Biomedical IC Design- EE6410

Course content:

1. Introduction to IoT in Healthcare perspective, Smarter IoT healthcare system using ECG, BCI systems using motor imagery based EEG.
2. Detailed understanding of IEEE 802.15.4 physical layer for low power IoT applications.
3. Overview: IC Design of communication module IEEE 802.15.4, Introduction to Verilog, Top down approach to design, RTL design, Introduction to FPGA design flow and ASIC design flow. FPGA and ASIC implementation of IEEE 802.15.4 Zigbee transceiver design.

References:

1. Samir Palnitkar, "Verilog HDL, a guide to digital design and synthesis", Prenti
2. 802.15.4-2015 - IEEE Standard for Low-Rate Wireless Networks"
<https://ieeexplore.ieee.org/document/7460875>
3. John Proakis, Masoud Salehi "Fundamental of Communication System", Pearson Education, Inc., Prentice Hall, 2nd Edition.