

Course Title: Wireless Networks

Course Code: ETEG 433

Credit Hours: 3

Course Description:

This course intends to provide an understanding of core concepts of modern and next generation mobile and wireless networks and is to provide an understanding of the essentials of latest and next generation communications systems.

The objectives of the course include, but are not limited to, the following:

- Learning basic concepts and issues in modern wireless networks.
- Exploring current technology and trends for wireless networks, their implementation and deployment.
- Finding fundamental differences between existing networks and their limitations

Course Contents:

Unit 1: Introduction

Evolution of 1G-5G

Unit 2: Modern Wireless Networks

Fundamentals of WMAN, WLAN, WSN, WPAN, WBAN, THz Communication, Molecular Communication, 3G, LTE, LTE-A, IoT & Smart Grid

Unit 3: Standardizing Committee

IEEE, 3GPP, ITU-T, ETSI, Wi-Fi alliance, Wi-Max forum, LTE alliance

Unit 4: Next Generation computing

5G and beyond, Survey on current research activities on next generation computing

Unit 5: Modern network application in case of Nepal

Introduction of 2G, 3G, 4G in Nepal, Application and scope of modern communication network in context of Nepal

References:

As prescribed by the instructor

Evaluation:

In-Semester Evaluation: 50%

End-Semester Evaluation: 50%