

Course Description Summary

Course number: ECE 371	Course name: Communications Systems
لغة تدريس المقرر: English	Pre-requisites: ECE 270
Credit hours: 4 (3+2+0)	Course level: Seventh Level- Fourth Year

Course Description

وصف المقرر :

Review of Fourier series and Fourier transform Amplitude modulation. Phase and frequency modulation. Sampling and quantization, Pulse code modulation, Line coding and spectra, Signaling over band-limited channels and inter-symbol interference, Digital modulation schemes. Introduction to current and emerging communication systems

Course objectives

أهداف المقرر :

- ✓ To introduce basic communication systems and their signal flow diagrams.
- ✓ To enable describing AM and FM modulation schemes in both time and frequency domains and design basic AM and FM systems.
- ✓ To enable grasping the analog-to-digital conversion and line coding.
- ✓ To introduce digital modulation schemes and their applications.

Course Outcomes

مخرجات التعليم:

Upon completing the course, the student should be able to:

- Derive and describe the frequency spectrum of different types of radio signals.
- Identify, analyze, compare, and implement amplitude and frequency modulation schemes.
- Understand sampling and analog to digital conversion.
- Identify and implement basic digital modulation schemes.

Textbook and references

الكتاب المقرر والمراجع المساندة:

Book	Authors	Publisher	Publication year
Modern Digital and Analog Communication Systems (textbook)	Lathi B. P.	Oxford University Press	2018 5th Edition
Digital and Analog Communication Systems	Couch L. W.	Prentice-Hall	2013
Communication Systems Engineering	Proakis J. G. and Salehi M.	Prentice-Hall	2002
Digital Communications: Fundamentals and Applications	Sklar B.	Prentice-Hall	2009