

Course Syllabus

Course Code and Name	EE 26443 – Analog Communications
Credit and contact hours	3 (2, 1, 1) (Lecture, Tutorial, Lab)
Required or Elective	Required
Level / Year	Level (7) / Year (4)
Course Prerequisite	EE 26341 Signal Analysis and Systems
Textbook	S. Haykin, Communication Systems, Wiley, 2009.
Course Description	This course cover the following topics: Overview and Basic elements of communication systems - Double Sideband Modulation (DSB), Amplitude modulation (AM) - Single Sideband Modulation (SSB), Vestigial Sideband Modulation (VSB) - Frequency Translation, Superheterodyne Receiver - Angle Modulation, Frequency Modulation (FM) - Frequency-division multiplexing (FDM) and Stereo FM Receiver - Correlation and Spectral Density - Random Variables - Random Process and Power Spectral Density - Random Processes and Linear Systems - Noise in Analog Systems - Sampling; Pulse Modulation (PAM, PWM, PPM) - TDM; Pulse Code Modulation (PCM); DPCM and DM; Regenerative Repeaters; Advantages of Digital Communication; Line Coding (Binary Signaling) – Introduction to Digital Modulation (ASK, FSK, PSK).
Brief List of Topics to be Covered	<ol style="list-style-type: none"> 1. Overview and Basic elements of communication systems 2. Double Sideband Modulation (DSB), Amplitude modulation (AM) 3. Single Sideband Modulation (SSB), Vestigial Sideband Modulation (VSB) 4. Frequency Translation, Superheterodyne Receiver 5. Angle Modulation, Frequency Modulation (FM) 6. Frequency-division multiplexing (FDM) and Stereo FM Receiver 7. Correlation and Spectral Density 8. Random Variables 9. Random Process and Power Spectral Density 10. Random Processes and Linear Systems 11. Noise in Analog Systems 12. Sampling; Pulse Modulation (PAM, PWM, PPM) 13. TDM; Pulse Code Modulation (PCM); DPCM and DM; 14. Regenerative Repeaters; Advantages of Digital Communication; Line Coding (Binary Signaling) 15. Introduction to Digital Modulation (ASK, FSK, PSK).
Course is prerequisite for	<ul style="list-style-type: none"> • EE26445 Digital Communications