

Course Syllabus

Course Code and Name	EE 26445 – Digital Communications
Credit and contact hours	3 (2, 1, 1) (Lecture, Tutorial, Lab)
Required or Elective	Required
Level / Year	Level (8) / Year (4)
Course Prerequisite	EE 26443 Analog Communications
Textbook	William Stanely and John Jeffords, "Electronic Communications; Principles and Systems", Thomsom Learning, Last Edition.
Course Description	This course covers the following topics: Functional blocks of analog communication systems, design of mixers, converters, RF and IF amplifiers, AM detectors, and FM discriminators. Video amplifiers, synchronize. Separators, horizontal and vertical oscillators and AFC. Functional blocks of color TV receivers. Color signal representation and processing. Functional blocks of digital communication systems: PAM, PWM, PPM and PCM. Design of S/H circuits, A/D and D/A converters, and timing (clock generator) circuits. Circuit design using PLL, VCO and multipliers. Design of PAM, PPM, PWM and PCM transmitters and detectors. Special circuits for phase shift keying.
Brief List of Topics to be Covered	<ol style="list-style-type: none">1. Functional blocks of analog communication systems2. Design of mixers, converters, RF and IF amplifiers, AM detectors, and FM discriminators3. Video amplifiers, synchronize. separators, horizontal and vertical oscillators and AFC4. Functional blocks of color TV receivers5. Color signal representation and processing.6. Functional blocks of digital communication systems7. PAM, PWM, PPM and PCM8. Design of S/H circuits, A/D and D/A converters9. Circuit design using PLL, VCO and multipliers10. Design of PAM, PPM, PWM and PCM transmitters and detectors11. Special circuits for phase shift keying.
Course is prerequisite for	<ul style="list-style-type: none">• EE26549 Wireless Communications