EE454 -Communication Laboratory II(Required Course)

Code and Name: EE454 -Communication Laboratory II
Credit Hours: 1 (Practical:2)

Textbook:
- Lab manual Given by University

Other References:
- Communication Systems, Simon Haykin and Michael Moher, Fifth Edition, WILEY, 2009.

Course Description:
Digital representation of analog signal; line encoding and decoding, ASK, FSK and PSK Generation and Detection. Waveform coding techniques- PCM; Fiber optic communication system measurements.

Pre-requisites: EE451
Co-requisites: None

Course Learning Outcomes:
With relation to ABET Student Outcomes (SOs: 1-7)

1. Apply theoretical concepts Digital Communication as lab Experiments. (1)
2. Instrument operation. (6)
3. Put results as graphs. (3)
4. Using Facet lab as computer engineering tool. (2)
5. Lab procedure. (6)
6. Apply basic concepts of digital communications. (1)

Topics to be covered:
- Line Encoding
- Line Decoding
- Frequency Shift Keying (FSK): FSK Signal Generation
- Frequency Shift Keying (FSK): FSK Detection
- Phase shift Keying (PSK): PSK signal generation.
- Phase shift Keying (PSK): PSK Synchronous Detection
- Amplitude Shift Keying (ASK): ASK Signal Generation
- Amplitude Shift Keying (ASK): ASK Signal Detection
- Optical Power of Emitting Diodes
- Attenuation in Optical Fiber
- Coupling Losses in Optical Fiber
- Numerical Aperture in Optical Fiber

Grading Policy: check
The grading for the course are 60% coursework and 40% Final Exam. The coursework consists of one Midterm Exam, where the midterm exam is worth 20%. It also includes quizzes and lab reports for the remaining 40% that is modified by the course instructor.