Course Learning Outcomes for Washington Accord

Course: Probability Methods in Engineering

Semester: 3rd

Course Code: EE2103

	CLOs	Description	Taxonomy Domain & Level	PLOs, Levels
Measurable Learning Outcomes	CLO1	Identify elements of axiomatic probability and apply these to realistic problems in engineering.	Cognitive, One	PLO1, Low
	CLO2	Calculate probability densities/distributions and statistical moments of discrete and continuous random variables.	Cognitive, Three	PLO2, Medium
	CLO3	Illustrate stationarity and describe second-moment theory for random processes.	Cognitive, Two	PLO1, Low
	CLO4	Use Matlab to generate and analyze various random variables.	Cognitive, Three	PLO5, Medium

Course: Electromagnetic Field Theory

Semester: 5th

Course Code: EE 3102

	CLOs	Description	Taxonomy Domain & Level	PLOs, Levels
Measurable Learning Outcomes	CLO1	Learn the multivariable calculus and to express the vector fields into orthogonal-coordinate systems such as rectangular, cylindrical and spherical coordinate systems.	Cognitive, One	PLO1, Low
	CLO2	Analyze the theory of electrostatics in general and apply it in the region surrounded by various static charge configurations.	Cognitive, Two	PLO2, Medium
	CLO3	Analyze the theory of magnetostatics in general and apply it in the region surrounded by various moving charge configurations.	Cognitive, Three	PLO2, Medium
	CLO4	Learn to characterize time-varying fields and illustrate the physical significance of point and integral forms of Maxwell's equations.	Cognitive, Three	PLO1, Medium

Course: Digital Signal Processing (Theory)

Semester: 6th

Course Code: EE 3203

	CLOs	Description	Taxonomy Domain & Level	PLOs, Levels
Measurable Learning Outcomes	CLO1	Learn bidirectional conversion from continuous-time signals to discrete-time signals, relationships between analog and digital frequencies, and the characterization of discrete-time LTI systems.	Cognitive, One	PLO1, Low
	CLO2	Perform frequency-domain analysis of sequences and sampled-data systems using z and discrete Fourier transforms and their calculations using properties and efficient implementation via FFT.	Cognitive, Two	PLO2, Medium
	CLO3	Design different basic digital filter types: low and high-pass, band-pass and band-stop, digital resonators, oscillators, notch filters, minimum-phase systems and inverse systems.	Cognitive, Three	PLO3, Medium
	CLO4	Evaluate design problems related to frequency-selective filtering and design FIR/IIR filters.	Cognitive, Three	PLO3, Medium

Course: Digital Signal Processing (Lab)

	CLOs	Description	Taxonomy Domain & Level	PLOs, Levels
Measurable Learning Outcomes	CLO1	Via Matlab, learn how to use FFT and design filters that meet a given specification.	Cognitive, One	PLO5, High
	CLO2	Develop effective communication skills.	Cognitive, Two	PLO 10, High

Course: Mobile and Wireless Communications (Theory)

Semester: 8th

Course Code: EE 4204

	CLOs	Description	Taxonomy Domain & Level	PLOs, Levels
Measurable Learning Outcomes	CLO1	Learn the multiple-access techniques, 1-5G cellular networks, fundamentals and features of cellular frequency-reuse concept.	Cognitive, One	PLO1, Low
	CLO2	Analyze the mobile and wireless multipath propagation via quantification of associated parameters, radio-channel modeling and empirical path-loss models.	Cognitive, Two	PLO2, Medium
	CLO3	Develop a canonical receiver for demodulation of digital modulations in fading channels.	Cognitive, Three	PLO 3, Medium
	CLO4	Understand and analyze the fading mitigation techniques for improvement in mobile radio-link performance.	Cognitive, Three	PLO2, Medium

Course: Mobile and Wireless Communications (Lab)

	CLOs	Description	Taxonomy Domain & Level	PLOs, Levels
Measurable Learning Outcomes	CLO1	Use MATLAB to simulate the error-probability performance of wireless communications systems.	Cognitive, One	PLO5, High
	CLO2	Compare the theoretical and simulated results and discuss the differences, if any.	Affective, Four	PLO 10, High