

ECEn 361. Transmission Lines and Introductory Fields Laboratory

Catalog Description:	ECEn 361. Transmission Lines and Introductory Fields Laboratory. (1:0:3) F, W Experiments and measurement techniques in static and time varying fields. Transmission line design and measurements. Microwave generation, propagation, detection, and hardware components.	
Course Type:	Engineering Topics	
Prerequisites:	ECEn 360 or concurrent enrollment.	
Textbooks and/or other required materials	None	
Topics Covered:	<ol style="list-style-type: none"> 1. Time-Domain Reflectometer 2. Sinusoidal Steady State 3. Advanced Design System (ADS) 4. Digital Matching -- Simulations 5. Cross Talk 6. Laplace Solver 7. AM Demodulator 8. Finite Difference for Transmission Lines 9. Broadband Impedance Matching 	
Course Competencies:	Ability to conduct experiments to gain insight into the behavior of electromagnetic fields in waveguides and free space.	Outcome 2
	Ability to design microwave frequency components and incorporate them in a microwave system.	Outcome 3
	Ability to use microwave test equipment to assess the performance of microwave subsystems.	Outcome 11
	Ability to fabricate microwave frequency components using relevant PC board techniques.	Outcome 11
Schedule:	Lectures: None (see ECEn 360) Laboratory: 3 hour lab, 1 day per week TA Recitations: None	
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