Projects – Fall 2007

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Table 1: Ongoing Master's Projects

Project Description	Staff	Status
Open Loop Wavelength Control of SGDBR tunable lasers.	Andrew Dekelaita	Finishing Fall 2007
SGDBR tunable laser wavelength agility characterization, OCT meat tenderness	Ben Maher	Finishing Fall 2007
LIDAR with SGDBR tunable lasers	Shane OConnor	In Progress
LIDAR with SGDBR tunable lasers	Mike Bernacil	In Progress
Link Simulator – Doppler and delay	Kyle Woorich	Starts Fall 2007

Table 2: Established Senior Projects

Project Description	Staff	Status
Optical Subsystem Characterization	Eli Stiny	EE464 fall 2007
RF ID Applications	Marc Pacubas	EE464 fall 2007
RF ID Applications	Nicholas Lavalley	EE464 fall 2007
OCT interface motion control and graphics display	Pam Calica	EE464 fall 2007

Table 3: New Master's Projects – Looking for Students in 2007

Project Category	Description	When
Electrical Signal Integrity	Optimization of Disk Head Amplification	Fall 2007
LIDAR	Chirped LIDAR system construction and characterization	Fall 2007
OCT (optical coherence tomography)	OCT system construction and characterization	Fall 2007
Millimeter Wave Generation	Construction of 0 to 200 GHz fast swept source	Fall 2007
GaN Transistor Power Combing	Demonstrate efficient broadband power combining techniques for GaN HEMPT transistors	Fall 2007
Open	Bring in your proposal	Fall 2007

Table 4: New Senior Projects – Looking for Students in 2007

Project Category	Description	When
Electrical Signal Integrity	Optimization of Disk Head Amplification	Fall 2007
International Microwave Symposium Design Contest	Construct amplifiers according to the rules of the International Microwave Symposium Design Contest. Participate and publish in June 2008 IMS Conference.	Fall 2007

EE375 laboratory automation	Our EE375 laboratory does not have GPIB connections to the instrumentation. This project would automate various experiments using LABVIEW.	Fall 2007
LIDAR subsystem Construction	Work with Master's student to construct subsystem for LIDAR investigation	Fall 2007
100 to 1000 GHz signal generation technologies investigation	Survey the literature for methods of generating signals in the 100 to 1000 GHz frequency range. Converge on one method and set up an experiment.	Fall 2007
Agilent 33220 Arbitrary Waveform Generator Applications	Agilent recently donated arbitrary waveform generators to our laboratory. The purpose of this project would be to learn the capabilities of the instrument and adapt it to several of our EE375 experiments.	Fall 2007
LIDAR using the Nortel Tunable Laser	Take Ting Kung's senior project output as a starting point and extend it to a systems measurement	Fall 2007
MEMs device characterization	Explore Hysteresis and other effects in a MEMs beam steering element.	Fall 2007
Tunable Filter/Detector	Develop a interface for the Aegis tunable filter/detector	Fall 2007
Open	Bring Your Proposal	Fall 2007