Introduction to Embedded Systems

ELEC 3300

4 Credits

Pre-requisites: COMP 2611 OR ELEC 2350 OR ISDN 4000F

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Office Hours: By email appointments

Course Description

This course is designed to teach techniques on how to integrate machine-level software and hardware in ARM-core microcontroller based systems. It makes use of industry-standard techniques and technologies, from which students can interface, design and program microcontroller systems. The task of the course will be to complete six laboratory experiments which address different aspects of hardware/software interfacing, and one large microprocessor/microcontroller based project which should result in the design and implementation of a small working embedded system.

Assessments:

Assessment Task	Contribution to Overall Course grade (%)	Due date
In-class activities	8%	Week 1 to 10
Homework assignments	4%	Week 3
Laboratory experiments	15%	Week 2 to Week 8
Preliminary proposal discussion (peer)	3%	Week 5
Laboratory test	15%	Week 9
Final proposal presentation	4%	Week 7
Interim project demonstration	6%	Week 11
Final project demonstration and presentation	40%	Week 13
Final project report	5%	Week 13

Required Texts and Materials

No specific Text Book

Additional Resources

STMicroelectronics STM32F103ZET6 Datasheet

STM32 Reference Manual

STM32 Cortex M3 Programing Manual