

ELEX 7820 – Course Contents*

Introduction to Real-Time Embedded Systems

Choice of Processor

TI's c2000 Processor

TI's Code Composer IDE

Microprocessors vs Microcontrollers vs Digital Signal Processors vs FPGAs vs ASICs

Fixed-Point vs Floating-Point Processing

Firmware Design Strategies

Real-Time Operating Systems

Hardware including Communication Ports

Code Optimization for Higher Speed

Predicting and Measuring Real-Time Performance

Code and Hardware Optimization for Lower Power

Stand-Alone Operation

Selected Testing and Debugging Concepts

Selected Board Design Concepts (including PCB Layout Tips)

Hardware and Firmware Reliability

IP Security

Industry Examples

* Note: The order is not necessarily exactly as shown in that material can sometimes be interspersed between or combined amongst each topic.