

**ECE 451/595 MICROCONTROLLER APPLICATIONS
Fall 2004**

Lecture Topics (tentative)

Introduction to the Motorola HC12/HS12 Microcontroller Families

MC9S12DP256 Architecture and Memory Map

CPU12 Programmer's Model

C Programming with the ICC12 IDE Environment

Interfacing to the Parallel I/O Ports

MC9S12DP256 Interrupts

MC9S12DP256 Memories

Loading Programs to Flash Memory

Programming the Timer

Input Capture and Output Compare

Programming the PWM Module

Analog Input and Output Interface

Serial Communications Interface

SPI Interface

CAN Interface

Design of Static Memory Systems

Interfacing Static Memory to the MC9S12DP256 External Bus

8 or 16-Bit Memory Modules, Critical Timing Analysis