

CSE0420 – Embedded Systems

By
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Contact

- **Contact info**

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- **When to contact**

- e-mail first,
- take an appointment

- **What to expect**

- help on your problems about the course and your projects
- you should have “**spent some time**” on it !!!

General Information

- **Lecture Hours:**

- Friday between 09:00-11:00 @ AK 4B1214

- **Lab Hours:**

- Group A – Friday 11:00 - 13:00 @ AKLAB 2B0406
- Group B – Friday 13:00 - 15:00 @ AKLAB 2B0406

Prerequisites

- **A good knowledge of C programming language**

- Bitwise operators,
- Pointers,
- Functions, and so on ...

- **Familiarity with basic digital circuits**

- Breadboard
- LEDs, resistors, and so on..

Course Outline

- **Introduction to Embedded Systems**
 - Why embedded systems are different, embedded design life cycle
- **Microprocessor and microcontroller concepts**
 - Programming models for embedded systems
- **Digital I/O**
- **Data Acquisition**
 - Sensors, ADC, DAC
- **Data processing techniques**

Course Outline

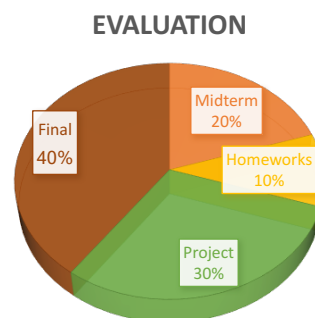
- **Timers**
 - Prescaling, up/down counters, overflow, use of timers
- **Interrupts**
 - Types of interrupts, how to handle them
- **Data communications**
 - UART, SPI, I2C
- **Project Presentations**
 - We will come to that!

Course Metarial

- **Lecture notes**
 - slides available at www.ce.yildiz.edu.tr
- **Web resources**
 - Always make reference to resourceses !
- **Book :**
 - **Embedded Systems Design: An Introduction to Process, Tools, and Techniques** by Arnold S. Berger
 - User manuals of the selected microcontroller and/or development board.

Grading Policy (Tentative)

- **One midterm**
 - 7th/8th week
- **Homeworks**
 - a few
- **One Project**
- **Labs**
 - NOT for grading, but practicing
- **One final exam**



Please Do NOT !!!

- try to take credit for work done by someone else.
- reuse the same work for more than one class.
- use any resource not permitted by the instructor during an exam.
- communicate with an another person during a test.

Otherwise

- the least severe sanction, getting a zero grade on the exam or assignment.
- Any time I do this the student may ask to be judged by the honor court instead, and I will grant that request!