

# COSC 2410: Computer Organization and Programming

<http://www.cs.uh.edu/~mirkovic/cosc2410>

LECTURES: TTH 1–2:30 IN 232 PGH

LAB: TTH 11:30–1 AND 2:30–4 IN HOFFMAN HALL (PGH) 563

OFFICE HOURS (TENTATIVE): TUESDAY AND THURSDAY  
4–5:30

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221 PGH

TA: COLIN PURI OFFICE: 566

## Course Description

Basic computer organization; machine cycle, digital representation of data and instructions, assembly language programming, assembler, loader, macros, subroutines, and program linkage.

## Prerequisites:

### COSC 1410 Introduction to Computer Science I

Computer organization, introduction to structured programming, C programming language, and algorithm design.

## Texts

1. **Required:** *Assembly Language Programming for the IBM PC Family*, by William B. Jones. Scott/Jones; 3rd edition (2001).  
An introductory Assembly language text written for programmers using the two predominant commercial assemblers, Microsoft MASM and Borland Turbo Assembler TASM.
2. **Recommended:** *Assembly Language for Intel-Based Computer* 4th Edition (2002-2003) by Kip Irvine. Intermediate-level college textbook, covers many advanced topics.
3. Vendors (Intel, Microsoft,...) literature available on the web. (See the course web page which is under construction).

## Evaluation

The homework assignments will not be graded. You will have to demonstrate your knowledge and understanding of these problems, though, by solving the

similar problems in quizzes (approx. 2/month).

Lab Projects (5-6)	30%
Quizzes (5-6)	25%
Midterm Exam (around March 11)	20%
Final Project	25%

## 1 Course Outline

- Introduction
- Preliminaries: Hardware, Software, Number systems,...
- Assembler overview
- Integer Arithmetic
- Control Structures
- Subprograms
- Arrays and Strings
- Floating Point Calculations
- File Processing
- Applications of the Assembly
- Advanced Topics