

# CSCI-GA.2130-001: Compiler Construction

## Spring 2012

**Meeting time:** Wednesdays 7:10-9:00 pm

**Instructor:** Mohamed Zahran (mzahran@cs.nyu.edu)

**Web page:** <http://cs.nyu.edu/courses/spring12/CSCI-GA.2130-001/index.html>

Check the web page for updated information about the course, announcements, as well as the lecture notes. Each lecture note will be posted before the actual lecture day.

### **Goal:**

After this course you should:

- Understand what is a compiler
- Understand the different phases of a compiler
- Have a good idea about designing and maintaining a compiler and using compiler generator tools

Basically you will be able to design a simple compiler after this course!

### **Text:**

*Compilers: Principles, Techniques, and Tools* (2nd edition),  
by Aho, Lam, Sethi, and Ullman (ISBN-10: 0321486811)

### **Grading:**

The grades will be assigned in the following basis:

- Project 60%
- Final 40%

### **Syllabus:**

The following topics will be covered in this course:

- Overview of a compiler phases
- Lexical analysis
- Syntax analysis
- Semantic analysis
- Intermediate code generation
- Code generation

The project consists of building a simple compiler with its phases starting from lexical analysis. The project will be submitted in different segments (lexical segment, parsing segment, semantic, ...). Each segment will have its own deadline.

If you have a documented disability and wish to discuss academic accommodations with me, please contact me as soon as possible.

Feedback: I would like as much feedback/criticisms as possible from you, as early as possible, so that I can try to improve the way the course is taught. Please feel free to give me any suggestions (anonymously if you wish) that you think could improve the way the course is handled. Keep in mind that you are not alone. If you have a question, undoubtedly others do too; and we will all benefit from your input. Do not be shy to ask about anything you do not understand in the course.

**Good Luck and Have fun!**