Instructor: Dr. Ismail Hababeh
Office: M319
Email: Ismail.Hababeh@gju.edu.jo

All relevant course information as well as all slides and other material will be published on the GJU E-learning platform (http://elearning.gju.edu.jo). Please consult the course website regularly.

PREREQUISITE:

Algorithms and Data Structures (CS222 & CS223).

COURSE MATERIALS:

Textbooks:

1. Compilers Principles, Techniques, and Tools, 2nd Edition 2007 - Alfred Aho, Monica Lam, Ravi Sethi, Jeffrey Ullman
2. Compiler Construction principles and practice, Kenneth Louden
3. Formal Language and Automata, 5th Edition Peter Linz 2012

COURSE DESCRIPTION:

The course covers the theory and techniques used to construct compilers for programming languages. The main topics of the course are:
- Simple syntax-directed translator
- Lexical analysis
- Syntax analysis
- Syntax-directed translation
- Intermediate code generation
- Run-time environments
- Code generation and optimization

The main software tools that are used to develop programming languages' compilers are:
- Lex
- Flex
- Yacc
- Bison

GRADING/EVALUATION:

Assignments: There are several homework and programming assignments that cover various topics of the course. Among these assignments, the highest 3 will be considered for a total of 15 points.

Exams: the course includes a mid-term exam and a final exam. The weights of the mid-term and final exams are 30 and 40 points, respectively.

Project: There is a project in the course that accounts for 15 points. Each student will be asked to develop a compiler for a programming language.

Point Values	
Item	*Points/Item*
Assignments	15
Mid-term exam	30
Final exam	40
Project	15
TOTAL	**100**

COURSE POLICIES:

Plagiarism: Plagiarism is an academic misconduct. All incidents of plagiarism will be reported to the dean's office, and appropriate action will be taken.

Attendance: Class attendance is mandatory, and the attendance will be taken during each lecture. If the student misses 4 lectures without an acceptable excuse, the student will fail the course.

Programming assignments: Each student should be able to answer all questions regarding the assignments without the help of his friends. Failure to answer the questions about the assignment might degrade the mark of the student. Assignments that are 24 hours and 48 hours late will be scored with a 10% and 20% penalty, respectively. An assignment that is turned in more than 48 hours late will get zero points.

Exams: An exam missed without an acceptable excuse will be recorded as a grade of zero. Missed exams with acceptable excuse can be made up if the student provides a documented medical or family emergency, or if there is a conflict with the exam time.