

COURSE SYLLABUS FORM

**American University of Beirut
Faculty of Arts and Sciences
Department of Computer Science**

CMPS 274: Compiler Construction

1. Course Learning Outcomes

1. Understand how compilers work.
2. Gain an appreciation of how theoretical concepts integrate to simplify the development of large programming systems.
3. Develop a substantial programming project.

2. Resources Available to Students

1. Textbook: Alfred V. Aho, Ravi Sethi, and Jeffrey D. Ullman, *Compilers–Principles, Techniques, and Tools*, Addison-Wesley.
2. Reference textbooks:
 - Allen I. Holub, *Compiler Design in C*, Prentice-Hall.
 - Brian W. Kernighan and Rob Pike, *The UNIX Programming Environment*, Prentice-Hall, 1984.
 - Brian W. Kernighan and Dennis M. Ritchie, *The C Programming Language*, 2nd ed., Prentice-Hall, 1988.
 - John R. Levine, Tony Mason, and Doug Brown, *Lex & Yacc*, O'Reilly Associates.

3. Grading Criteria

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| 1. Homework assignments | 5% |
| 2. Programming assignments | 25% |
| 3. Mid-term exam | 30% |
| 4. Final exam | 40% |

4. Schedule

Weeks	Topic	Assignments
1–2	Introduction: Simple Compiler	Programming assignment 1
3	Context-Free Grammars	
4–5	Lexical Analysis	Course project: phase 1
6–7	Top-Down Parsing	Course project: phase 2
8–9	Bottom-Up Parsing	Course project: phase 3
10–11	Semantic Analysis	Course project: phase 4
12–15	Code Generation	Course project: phases 5 & 6

5. Course Policy (if any)

1. Due Dates for Assignments
Due dates are **non-negotiable**. By default, late assignments are not accepted. However, the assignment handout may specify a daily penalty and an accompanying maximum lateness for the specific assignment.
It is the responsibility of the student to make sure that the work is complete and that there is enough time to submit the material before the deadline.
2. Honesty

You will be treated as professionals and you should plan on conducting yourself as such.

The course includes several homework and programming assignments. You are free to discuss these assignments with others. However, the programs and homework solutions you submit are to be developed by you. Cheating is a very serious offense and will not be tolerated. Supplying others with material is also against this rule. The policy is that both the supplier and receiver of information will be punished... As a minimum, both will get a **zero** on the assignment in question. The case will also be referred to the Dean's office and could result in a failing grade for the course and suspension or expulsion from the University.

Save all handwritten notes and printouts you generate as you work on an assignment and keep them until the end of the semester so as to protect yourself in the event that someone "borrows" your program, or the version you submit is mislaid. For your protection, cases of missing output should be immediately reported.

3. Computer Account Security and Use

To help others resist the temptation of using your work, you should maintain proper security on your computer account. Especially, keep your password from others and do not alter the protection on any of your files. To give others access to your account, files, or program listings is the same as giving them the information directly and will be dealt with accordingly. Any trouble with computer accounts should be reported to me as soon as possible.

4. Make-up Tests

Make-up tests will only be given in extremely rare circumstances. In general, a missed exam results in a **zero** grade for the particular exam.

To be eligible for a make-up exam, the student must present a solid and convincing case to the Student Affairs office and the course instructors. In presenting his/her case, the student must essentially demonstrate that he/she was going through a very grave emergency that made it precluded his/her sitting for the exam. Needless to say, the student must also provide the appropriate paperwork to document this emergency.

When the student's excuse is accepted, he/she must be ready to sit for the make-up exam within one week of the absence. The student is responsible for arranging the make-up exam with the course instructors.