Course Outline

Course Code: COMP5522
Course Name: Compiler Construction
Credit Hours: 3
Prerequisites: COMP 3318 (Assembly Language) & COMP 5521 (Finite Automata)
Textbook: Introduction to Compiler Construction, By T. Parsons, W. H. Freeman and Company, 1992, First Edition

Other References:
1. Michael L. Scott, Programming Language Pragmatics, Morgan Kaufman Publishers, 2000, 2nd Edition.
2. Ravi Sethi, Programming Languages: Concepts and Constructs, Addison-Wesley, 1996, 2nd Edition.
3. Bruce MacLennan, Principles of Programming Languages, Oxford University Press, 1999, First Edition.
4. D. Watson, High-Level Languages & Their Compilers, Addison-Wesley, 1989, First Edition.

Instructor: Dr. Swamy Kutti; Room: 0003: Ph: 2498; Email: nskutti@squ.edu.om

Office Hours:

Day:	Sat	Sun	Mon	Tues	Wed
Time	-	11:00 – 13:00	-	11:00 – 13:00	-

Course Objective

1. To study the evolution of various language machines (such as assemblers, interpreters and compilers) and their differences.

2. To introduce fundamental concepts and techniques underlying high level language compilers.

3. To become familiar with each step of compilation from lexical analysis, parsing, abstract syntax, semantic analysis, code generation, and possibly optimization.

4. To involve with the design and implementation of high-level language compilers, focusing on imperative programming languages using practical assignments that will be dealing with the development of a scanner, a parser, and code generation.

Course Syllabus

Topic	Chapter (Sections)	# Weeks
Introduction	1.1 – 1.9	1
Lexical Analysis	2.1 – 2.9	2
Syntactic Analysis I	3.1 – 3.4	4
Syntactic Analysis II	4.1 – 4.3	4
Intermediate Code Generation	5.1 – 5.2	3

Grading System:

Assignments	4 Phases	20%	Project-style assignment
Quizzes	2	10%	
Mid Term Exams	1	30%	
Final Exam	1	40%	

DCS Academic Regulation:
It is important that each student solves the given assignments and answers the tests/ exams individually with the aim of acquiring knowledge in a true sense. Copying, plagiarism, collusion, switching and falsification are violations of the University Academic Regulations. Students involved in violating any of the academic conduct will be punished severely. The department has also adopted a firm policy on this issue. A ZERO mark will be assigned when a student is caught at first time with copying and his/her name will be added to a watch list maintained by the department. Any repeated incidence of copying will result to an F grade for that course. This is in line with the University regulations (see pp. 36-37 of the 2005 edition of University Academic Regulations Handbook).