Administrative Unit: Computer and Mathematical Sciences Department
Course Prefix and Number: CISS 375
Course Title: Compiler Construction

DIGITAL DESCRIPTIONS

STUDENT DESCRIPTION:  PAY-HOUR DESCRIPTION:
# Cr Hrs - # Lec Hrs - # Lab Hrs  Total # = Lec Hrs + Lab Hrs
3 - 3 - 0  3 = 3 + 0 \times \frac{2}{3}

Catalog Description: Concepts and theories of compiler design and language translation. Lexical analysis, syntax specification, parsing, error recovery, syntax directed translation, semantic analysis, symbol tables, runtime storage. Prerequisite: CISS 350 or CISS 358. Offered Even Fall.

Prerequisites/Corequisites: CISS 350 or CISS 358.


Course Objectives: By the end of the course, students will:
— understand the concepts of language design and formal grammars used in compilers;
— complete a substantial compiler or interpreter project.

Topical Outline: Programming Language and Data Structures Concepts
— Compiler and Subset Design
— Finite Automata and Lexical Analysis
— Parsing and Syntax Directed Translation
— Symbol Tables
— Error Detection and Recovery
— Optimization
— Code Generation

Recommended maximum class size for this course: 20
NOTE: The intention of this master course syllabus is to provide a general outline of the contents of this course, as specified by the faculty of Columbia College, regardless of who teaches the course, when it is taught, or where it is taught. This generic outline is not intended to restrict the way any individual faculty member teaches the course. The master syllabus, therefore, should be general enough to allow for a diversity of individual approaches to teaching the course, while at the same time it provides guidance on what the course should cover.