

FSU CURRICULUM FILE SYLLABUS

DATE APPROVED _____ (COMPLETED AT UNIV LEVEL)

COURSE PREFIX/NUMBER: COP 4020

COURSE TITLE: Programming Languages

PRE OR COREQUISITES: COP 4530 REPEAT CODE: 00

LIST COURSE OBJECTIVES:

A student who has completed this course with a passing grade should be able to:

- *State the basic requirements for effective programming language design.*
- *Identify the limitations of programming languages within a historical perspective.*
- *Classify the programming constructs that appear in imperative, functional, and logic programming languages*
- *State the requirements for type safety in programming languages.*
- *Identify the various program translation mechanisms in compilers.*
- *Construct well-designed Lisp (and Scheme) programs.*
- *Construct recursive-descent parsers in Java, C, and C++.*
- *Construct simple Prolog programs from first-order predicate calculus specifications.*
- *State the requirements for exception handling in C++ and Java.*

OBJECTIVES SHOULD BE BROADLY STATED TO ALLOW FACULTY DIFFERENCES AND ALLOW CHANGES IN MODE OF DELIVERY. ENOUGH DETAIL SHOULD BE GIVEN TO DISTINGUISH FROM OTHER COURSES IN ASSIGNMENT OF A SUS COURSE NUMBER. COMMITTEE APPROVALS ARE REQUIRED FOR A CHANGE IN OBJECTIVES.

GIVE BRIEF OUTLINE OF TOPICS TO BE COVERED (NO DATES):

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| History of programming languages |
| Introduction to functional programming |
| Scheme programming |
| Compilers and interpreters |
| Programming language syntax and semantics |
| Static scoping and object bindings |
| Dynamic scoping |
| Subroutines and parameter passing modes |
| Exception handling in Java and C++ |
| Logic programming with Prolog |

EVALUATION CRITERIA CHECK ONE (CHANGE IN EVALUATION CRITERIA REQUIRES THE DEPARTMENT TO SUBMIT A NEW SYLLABUS FOR THE FILE)

EXAMS ONLY (THE NUMBER AND WEIGHT OF EACH TO BE REFLECTED ON THE STUDENT SYLLABUS)

EXAMS AND OTHER (SUCH AS LAB REPORTS OR ASSIGNMENTS, TERM PAPER OR WRITTEN PROJECT, ORAL PRESENTATION; THE WEIGHT OF EACH TO BE REFLECTED ON THE STUDENT SYLLABUS.

NO EXAMS - ONLY ASSIGNMENTS (TO BE DESCRIBED CLEARLY ON THE STUDENT SYLLABUS)