Department of Electrical and Computer Engineering
University of Puerto Rico
Mayagüez Campus

ICOM 4036 – Structure and Properties of Programming Languages
Course Outline – Fall 2005

Topics	Required Reading[1]	Estimated Hours
Course Introduction and Overview PL Design Criteria, Overview of PL Translation	PLP 1.1-1.7	3
The Nature of Computing	Lecture Notes	1
Programming Language Specification & Translation	PLP 2.1-2.2,2.4	4
Programming Paradigms I: Low-level programming	PLP 5.1-5.5,5.7	4
EXAM I		2
Programming Paradigms II: Imperative Programming	Fortran Manual	3
Programming Paradigms III: Functional Programming	Scheme Manual	4
Programming Paradigms IV: Logic Programming	Prolog Manual	4
Names, Lifetimes, Scopes and Bindings	PLP 3.1-3.7	3
EXAM II		2
Control Flow	PLP 6.1-6.6,6.8	1
Type Systems	PLP 7.1-7.8 7.10-7.11	3
Subroutines, Control Abstraction, Exceptions and Concurrency	PLP 8.1-8.7	5
Object-Oriented Programming I: Classes, Data Abstraction, Inheritance and Subtype Polymorphism	PLP 10.1-10.4 Java Docs	3
Object-Oriented Programming II: Multiple Inheritance and Interfaces	PLP Ch 10 Java Docs	1
EXAM III		2
Programming Paradigms VI: Scripting & Web Programming	HTML,CGI, Perl,PHP Docs	4
FINAL EXAM		2
Total class hours		**43**

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[1] Lecture notes and slides constitute required reading for all topics in the course