COMP 5280, Object-Oriented Programming Languages and Principles

Credit hours: 3 lecture
Contact hours: 3 lecture

Catalog Description: Object oriented language principles and study of the language support for these principles. Example languages and distributed object programming principles.

Prerequisites: COMP 3220
Corequisites: None

Selected Elective Course (CSCI, SWEN, WIRS)

Instructor or Course Coordinator: Dr. Jeff Overbey

Required Textbook

Reference Materials

Course Outcomes
The student will be able to
• understand and apply object-oriented programming principles, languages and programming techniques.

Topics Covered
• Fundamental concepts of OO languages (6 hours)
• Type problems in OO languages (3 hours)
• The lambda calculus (3 hours)
• The polymorphic lambda calculus (3 hours)
• Defining a simple object-oriented language (SOOL) (3 hours)
• Type-safety in SOOL (3 hours)
• Specifying SOOL semantics (3 hours)
• Self, nil, and multiple inheritance (5 hours)
• Adding bounded polymorphism to SOOL (6 hours)
• Design and implementation issues in Java (8 hours)
• Exams (2 hours)

Course Requirements
• Homework Assignments (40%)
• Exams (60%)

Syllabus prepared: Spring 2016