Minnesota State University Moorhead

CSIS 450: Programming Languages

A. COURSE DESCRIPTION

Credits: 3

Lecture Hours/Week: 3

Lab Hours/Week: 0

OJT Hours/Week: *.*

Prerequisites:
This course requires the following prerequisite
    CSIS 255 - Data Structures

Corequisites: None

MnTC Goals: None

An examination of underlying concepts in high-level programming languages and techniques for their implementation in a selected group of such languages along with a discussion of the interrelationship between programming and programming languages.

B. COURSE EFFECTIVE DATES: 06/01/1996 - Present

C. OUTLINE OF MAJOR CONTENT AREAS

1. Evaluating Programming Languages.
2. History of Programming Languages.
3. Describing Syntax and Semantics.
4. Abstract Data Types and Encapsulation.
5. Object-Oriented Programming Languages.
6. Identifier Names and Scopes.
7. Subprograms and the Runtime Stack.
8. Functional Programming Languages.
9. Data Types.
10. Logical Programming Languages.
11. Control Structures.
12. Exception and Event Handling.
13. Concurrency.
14. Research.

D. LEARNING OUTCOMES (General)

1. Understand criteria used to evaluate, compare, and contrast languages.
2. Be aware of the historic context driving the development of programming languages.
3. Utilize notations to formally describe language syntax and semantics.
4. Understand language design issues for data types, variables, control structures, subprograms, and exception handling.
5. Develop code in an object-oriented programming language.
6. Develop code in a functional programming language.
7. Develop code in a logical programming language.

E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

G. SPECIAL INFORMATION

None noted