



CIS 2530

Division: Career and Technical Education

Department: Computer Information Systems

Course: CIS 2530

Title: Programming Language - Java

Catalog Description:

This course is an introduction to the Java programming language. It includes learning to use object oriented concepts and how to implement graphics, animation, etc., into a web page using Java.

General Education Requirements: N/A

Semesters Offered: TBA

Credit/Time Requirement: Credit: 3; Lecture: 3; Lab: 1

Clock/Hour Requirements: 60

Offered for Non-Credit: No

Prerequisites: Either CIS 1501 or CIS 2520

Corequisites: None

Justification:

The Java programming language rapidly is becoming the language of choice on the Internet. The experience gained in this course will increase the chances of employment with almost any modern software company. This course is recommended by the program advisory committee. This course prepares students for job readiness at graduation and/or transfer to a four-year college.

Student Learning Outcomes:

Upon successful completion of this course, students will be able to:

- understand the structure of Java programs
- understand Java language syntax
- understand the portability of Java
- design well structured Java programs
- write working Java programs using the most common operators, expressions, classes, and statements
- successfully debug Java programs.

Content:

Course objectives will be accomplished by providing students with experiences in these subject areas:

- short history of Java
- introduction to Java program structure
- Java screen input/output
- streams

- decision structures, if/else, switches, etc.
- loops (iterations) and simple and multiway decisions
- creating and using functions
- using arrays and pointers
- using structures
- basic file handling
- using linked lists
- use of classes and inheritance
- Graphical User Interface components
- sorting
- linked lists
- designing, programming, and debugging a series of advanced Java programs.

General Education Outcomes:

- 4) Retrieve, evaluate, interpret, and deliver information through a variety of traditional and electronic media. Students will research technical issues through the internet, industry journals, and reference manuals.
- 5) Apply a cultural and historical awareness to a variety of phenomena. Students will be aware of the changing nature of the computer field and how it impacts use of dated software with newer and older hardware. An awareness of the history and development of computers is a must for professional preparation.

Key Performance Indicators:

In class:

- Students will be expected to design, program, and debug, in a professional manner, several working programs using the concepts taught in the course. Students also will be required to pass exams given during the course, including a comprehensive final exam.

Following class:

- Students will demonstrate success in subsequent courses.

Representative Text and/or Supplies:

- John Lewis & William Loftus, *Java Software Solutions*, current edition, Addison Wesley.

Optimum Class Size: 12

Maximum Class Size: 20

Signatures:

I hereby submit this course syllabus:

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I hereby find this course consistent with the goals and resources of the Computer Information Systems Department:

Michael P. Medley, MBA, Assistant Professor, Chair

I hereby find this course consistent with the goals and resources of the Career and Technical Education Division:

Michael P. Medley, MBA, Assistant Professor, Dean

I have discussed the need for library resources related to this class with the person submitting the syllabus:

Lynn Anderson, MLIS, Technical Services Librarian (Main Campus)

Michelle Olsen, MLS, Campus Librarian (Richfield Campus)