Faculty members are required to have the outline submitted to the Academic Affairs Office. The course outline is the form used for approval of new courses by the Academic Affairs and Standards Council.

DEPT. CSCI  COURSE NUMBER: 2250

NUMBER OF CREDITS: 4  Lecture: 4  Lab: 0

Course Title:
Java Programming

Catalog Description:
Provides an overview of the Java programming language and special features of control structures, input/output streams, data structures and abstraction mechanisms. Concepts include creating complete Java classes, derive new classes with effective use of inheritance, and use Java to create applets.

FULFILLS MN TRANSFER CURRICULUM AREA(S)

Goal 1: Communication: ____ by meeting the following competencies:

Goal 2: Critical Thinking: ____ by meeting the following competencies:

Goal 3: Natural Sciences: ____ by meeting the following competencies:

Goal 4: Mathematics/Logical Reasoning: ____ by meeting the following competencies:

Goal 5: History and the Social and Behavioral Sciences: ____ by meeting the following competencies:

Goal 6: The Humanities and Fine Arts: ____ by meeting the following competencies:

Goal 7: Human Diversity: ____ by meeting the following competencies:

Goal 8: Global Perspective: ____ by meeting the following competencies:

Goal 9: Ethical and Civic Responsibility: ____ by meeting the following competencies:

Goal 10: People and the Environment: ____ by meeting the following competencies:

Prerequisites or Necessary Entry Skills/Knowledge:
CSCI 2200
**Topics to be Covered:**

- Introduction to computers, the internet and web
- Introduction to Java applications
- Introduction to Java applets
- Introduction to Java swing components
- Control structures: Part 1
- Control structures: Part 2
- Methods
- Arrays
- Object-based programming
- Object-oriented programming
- Strings and characters
- Graphics and Java2D

**Student Learning Outcomes**

1) Manipulate the interactive development environment and/or the JDK to create, edit, compile, debug and save designed application source code and a Java Applet.

2) Describe fundamental data types, arithmetic operators and their order of precedence.

3) Develop algorithms with the notion of top-down, stepwise refinement employing control structures effectively to produce programs that are understandable, debuggable and maintainable over time.

4) Discuss common math methods available from the Java API, create new methods and understand the mechanisms used to pass information between methods.

5) Structure homogeneous data into arrays both single-subscripted and double-subscripted, and investigate various array manipulations; populating, printing, sorting and the passing and searching of arrays.

**Is this course part of a transfer pathway:** Yes ☐ No ☒

Revised Date: May 2020