BAKER COLLEGE
STUDENT LEARNING OUTCOMES

CS2420 Advanced Java Programming
3 Semester Credit Hours

Student Learning Outcomes and Enabling Objectives

1. Construct Java technology applications using basic skills
   a. Describe Java programming
   b. Demonstrate how to create a program using an IDE
   c. Illustrate how to use Eclipse
   d. Apply programming methods using polymorphism
2. Create a program using the principles of inheritance and interfaces
   a. Demonstrate how to implement a program that uses a GUI
   b. Demonstrate how to develop a program with inheritance
   c. Utilize layout managers in the java programming language
3. Identify relationships between multiple classes
   a. Apply recursive methods to a program
   b. Explain the basics of object-oriented programming
4. Discuss searching techniques in java
   a. Use the collections framework in Java for a given problem
   b. Identify factors that influence the efficiency of a recursive method
   c. Apply comparator classes

Big Ideas and Essential Questions

Big Ideas
- There are three things you must master:
  o How to develop Java programs utilizing Eclipse
  o How to effectively use JavaFX Grid Pane
  o How to use Java with ArrayLists
- Learn how to structure your code so that
  o It works well
  o Other people can understand it
  o Future modifications and improvements are less likely to cause headaches

Essential Questions

1. What are Java object classes?
2. What is Java Swing and the accompanying event handlers?
3. What are the steps needed to create a JavaFX user interface?
4. What are object-oriented programming and unified modeling language?
5. How do you implement a recursive method in Java?

These SLOs are approved for experiential credit.

Effective: Spring 2023