El Centro College
INEW 2438
ADVANCED JAVA PROGRAMMING
Syllabus

COURSE DESCRIPTION

Prerequisite: ITSE 2417 or instructor approval

A continuation of advanced Java programming techniques such as servlets and advanced graphical functions.

Inheritance, abstraction, GUIs, error handling, and design of object-oriented applications are also covered. At the end of this course, the successful student should be able to design and code simple Object-Oriented applications in Java.

This is a 4 credit course. (3 Lec., 4 Lab.)

WECEM END-OF-COURSE OUTCOMES: Design, write, and test documented Java programs and servlets; and use advanced graphic functions.

STUDENT LEARNING OUTCOMES:

Upon successful completion of INEW 2438, students will be able to:

- **Identify** higher level software development skills and knowledge needed to advance their careers.
- **Produce** Java programs which incorporate features including database and advanced graphical features, inheritance, abstraction, GUI, classes, error handling and design of object-oriented applications.
- **Reinforce** skills by selecting fundamental and advanced features to design and create Java programs based on assignment criteria.
- **Demonstrate** advanced knowledge of Java by developing and writing documented programs, designing, debugging and analyzing Java program code.

COURSE MATERIALS


Other Resources: eCampus will be used to post and collect assignments, give tests, reference resources, and discuss problems. Students -- both on-line and in-class -- are expected to login to check assignments and announcements no less than once a week.

A student of this institution (El Centro College) is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook may also be available from an independent retailer, including an online retailer.
Major Course Requirements

Students will participate in Discussion Boards addressing topics in each lecture
Students will complete lab exercises and a final project which include:

- Reviewing prerequisite knowledge of Java
- Writing Java syntax for programs involving Inheritance, Polymorphism, static & dynamic types, overriding & dynamic method lookup & protected access
- Introducing abstract classes & interfaces, GUIs including layouts, event handling, anonymous inner classes, basic Swing components & MVC concepts
- Introducing Exception throwing & catching, defensive programming error reporting and assertions
- Developing an understanding of designing and object-oriented applications, including CRC cards and patterns

Chapter Quizzes and completion of a Case Study final project will evaluate the student’s understanding of Advanced Java programming concepts and utilize their course knowledge.

Subject Matter

Topics covered in the lecture portion of the course include:

- Improving Structure with Inheritance
- More about Inheritance
- Further Abstraction Techniques
- Building GUI’s
- Handling Errors
- Designing Applications
- A Case Study

Disclaimer

The provisions contained in this syllabus do not constitute a contract between the student and El Centro College. These provisions may be changed at the discretion of the Coordinator/Instructor. When necessary, appropriate notice of such changes will be given to the student.

The instructor-of-record may provide additional information to enhance the course to meet the needs of the enrolled students, provided that the enhancements do not conflict with the official course syllabus.

Policies

Students should click on the links below and read all of these policies.

General institutional policies
Course-related institutional policies