
Course Prefix/Number:	CPT 237
Course Title:	Advanced Java Programming
Lec Hours/Week	3.0
Lab Hours/Week	0.0
Hours/Semester	3.0

[Distance Learning Attendance/VA Statement](#)
[Textbook Information](#)

COURSE DESCRIPTION

This course is a study of advanced topics of the java programming language by building on a basic knowledge of the java language. Topics covered will include multi-threading, swing classes, swing event models, advanced layout managers, the javabean component model, network programming and server-side programming.

COURSE COMPETENCIES

Upon successful completion of this course, the student should be competent to complete the following tasks:

Module 1 - Introduction to Java Graphics, Event and Error Handling

- Explain the concept of Swing.
- Explain what GUI programming entails.
- Explain the relationship between AWT and Swing.
- Explain the components of Swing.
- Explain the concept of event handling.
- Explain the concept of error handling.
- Create a GUI Java application.
- Create a GUI Applet.

Module 2 – Collections, ArrayLists, Iterators, Interfaces, and Exceptions

- Create applications using Collections, ArrayLists, and Iterators.
- Describe the differences between Collections, ArrayLists, and Iterators.
- Create applications using Interfaces.
- Explain the Java exception hierarchy.
- Code programs that incorporate exception handling.
- Create programs that incorporate Threading

Module 3 – File and Database Processing

- Code programs that involve text file processing.
- Code programs that involve serializing data to files
- Solve problems requiring use of files.
- Create programs that connect to and manipulate databases.
- Explain SQL concepts.
- Solve problems requiring the use databases.
- Find and correct syntax and logic errors in programs containing file or database elements.

Module 4 – Web Applications

- Explain multi-tier applications.
- Install and administer Web server software.
- Create multi-tier applications using Java Server pages.

MINIMAL STANDARDS

Minimal standards of performance on all course competencies for receiving credit for the course and indicated by 60% overall accuracy on evaluation instruments that address the course competencies listed above. Required standards of performance on all course competencies for enrollment in subsequent higher-level computer technology courses are indicated by 70% overall accuracy on evaluation instruments that address the course competencies listed above.

COURSE REQUIREMENTS

Students are responsible for attending all schedule class meetings until they have completed all course requirements. Students are responsible for all material covered and for all assignments made in all classes. Any student caught cheating or involved in other academic dishonesty will be given a grade of zero and will be subject to further disciplinary action.

ATTENDANCE POLICY

The attendance policy as stated in the York Technical College Handbook will be enforced. Makeup tests will not be given for theory tests. If a student must miss a theory test, he/she will get a zero for that test. However, students have the option of taking the comprehensive final. The student's grade on the comprehensive final will replace his/her lowest theory test grade. It is the student's responsibility to schedule a time for a makeup hands-on test with his/her instructor.

EVALUATION STRATEGIES/GRADING

Module 1 (20% total) Test – 10% Program(s) / Homework – 10%	Module 2 (20% total) Test – 10% Program(s) / Homework – 10%	Grading Scale	
		90-100	A
Module 3 (30% total) Test – 10% Program(s) / Homework – 15%	Module 4 (30% total) Test – 10% *Program(s) / Homework – 15%	89-89	B
		70-79	C
		60-69	D
		Below 60	F

*Completion of Module 4 Program(s) is required to receive a grade for the course.

ENTRY-LEVEL SKILLS

A student entering this course should be familiar with structured programming concepts, have adequate flowcharting skills and be familiar with the Windows environment. They should possess elementary Java programming skills.

PREREQUISITES: CPT 236 – Minimum grade of “C”

CO-REQUISITES: None

Disabilities Statement: Any student who feels s/he may need an accommodation based on the impact of a disability should contact the Special Resources Office (SRO) at 803-327-8007 in the 300 area of Student Services. The SRO coordinates reasonable accommodations for students with documented disabilities.