Computer Programming Department
Business/Public Service Division
GREENVILLE TECHNICAL COLLEGE

COURSE SYLLABUS

Course Title: Advanced Java Programming
Course Number: CPT 237

Lecture hours per week: 3.0 **Lab/Clinic Hours:** **Semester credit hours:** 3.0

Prerequisite: CPT 236, MAT 109 or MAT 110 or higher

Catalog 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.

Purpose of the Course: This course introduces the student to advanced topics of the Java programming language. The course continues to explore Java's object-oriented programming approach to programming and stresses the inclusion of advanced concepts such as exceptions, streams, multi-threading and Swing class components for programming solutions that are more robust and reflect the current Java programming model. The goal is to expand the student's knowledge of the Java programming language and the programming techniques necessary for the creation of more advanced Java program development.

Require Text(s) or other materials :

1. Introduction to Java Programming, Eighth Edition, Brief Version, Y. Daniel Liang, Pearson/Prentice Hall; ISBN: 9780132130790
2. NOTE: Students in traditional classes must access Blackboard for course-related information. Students in hybrid and online classes will access their online content through Blackboard.

COLLEGE-WIDE STUDENT LEARNING OUTCOMES

1. Communication – Students will demonstrate the ability to use active reading and listening skills and to produce effective written and oral communication for varying audiences.
2. Information Technology and Technological Literacy – Students will demonstrate competency in using computer technology within a field of study.
3. Critical Thinking/Reasoning – Students will demonstrate the ability to apply the scientific method, mathematical processes, and research skills to analyze and solve problems/issues by using reflection and reasoning to justify conclusions.

4. Professional and Personal Responsibility – Students will demonstrate the ability to exhibit conduct, attitudes, and etiquette appropriate to the student's community and chosen career. Students will demonstrate the ability to manage time, to use effective interpersonal skills, and to display responsible behavior.

5. Diversity – Students will demonstrate the ability to recognize diversity and to demonstrate respectful conduct and attitudes toward all. Students will demonstrate the ability to explain how global issues impact life, work, and opportunities.

COMPUTER PROGRAMMING PROGRAM LEVEL STUDENT LEARNING OUTCOMES

Upon successful completion of the CPT/Programming program, the graduate will be able to:

1. Students will be able to analyze, design, develop, and document solutions that will satisfy the information needs of business users using established design methodologies and standards.
2. Students will be able to design, create, test, and document logical programming solutions to prescribed specifications following established standards and using current development environments and languages for application development and database management.
3. Students will be able to demonstrate the knowledge and ability to install and maintain microcomputer hardware and operating system software.
4. Students will be able to demonstrate the use of a minimum of three business application software packages.
5. Students will be able to demonstrate fundamental team building, project management, and presentation skills by participating in team projects that include team goals and values, a development methodology for documentation and coding, group presentations, and exposure to topics such as diversity, time management, and goal setting.
6. Students will be able to demonstrate the ability to take initiative, assume responsibility, and work under pressure with minimum supervision by successfully completing "hands-on" computer lab assignments.

CPT 237 COURSE OUTCOMES

Students who successfully complete this course will have demonstrated the skills required to accomplish the following objectives with a minimum competence level of 70 percent.

1. Students will be able to analyze, design, develop and document a group project using a design methodology and programming language standard.

2. Students will be able to demonstrate initiative by completing a project assignment with minimal direction and minimal supervision.

3. Students will be able to design, create and test programming solutions according to program specifications.

The objectives of the CPT 237 course are intended to meet the CPT/Programming program level student learning outcomes numbered 1, 2, 5, and 6 above.

CPT 237 – Main Topics

Topic 1	Applets and Multimedia
Topic 2	Graphical User Interfaces
Topic 3	Event Driven Programming

Test 1

Topic 4	Recursion
Topic 5	Exception Handling

Test 2

Topic 6	File Input and Output
Topic 7	Binary I/O

Test 3

Topic 8	Multithreading
Topic 9	Data Structures

Group Project

Final Exam

The Final exam will be administered on the Barton Campus and will be scheduled at a time determined by the department.

Tutoring is now available in the Business Division Student Lab located on the Barton Campus in the Engineering Building (Building 103), Room 113. The hours for tutoring are posted on door of Room 113; no appointment is necessary. There are no fees required for this service.

CPT 237 – Course Specific Requirements

There are no specific course requirements other than attachment 1.

CPT 237 – Evaluation and Grading Information

GRADING POLICY

Exams represent 50% of the final grade: 30% midterm tests, 20% final exam.

Lab assignments count 50% of the final grade.

1. Programming assignments will be 30 percent of the grade.
2. There will be one group project for 20 percent of the grade.
3. The following factors will be considered in grading assignments:
   a. The program must work correctly and produce the desired results.
   b. The program must use good style / good programming practices.
   c. Program must be efficient.
   d. Documentation should be clear and meaningful.

All assignments (i.e., labs, projects, research papers, etc.) for this course must be completed and submitted to the instructor by the due date established in order to receive credit for the assignment.

Final letter grades will be issued as follows:

A	=	90 - 100
B	=	80 - 89
C	=	70 - 79
D	=	60 - 69
F	=	0 - 59

READ THIS SYLLABUS CAREFULLY

You should read this syllabus carefully and ask your instructor about *any* aspects that you do not understand. The syllabus is an agreement between you and your instructor concerning course objectives, course content, grading, and other policies and procedures particular to this course. The above information is specific to the course. Three additional documents are provided as attachments and *are considered a part of this syllabus*:

Attachment I:

Each instructor will provide a supplement to this syllabus. The supplement will include: a week-by-week plan of instruction based on the section in which you are enrolled; your instructor's name, office hours and/or office location; and your instructor's contact information and recommended best methods to contact your instructor.

Attachment 2:

The Department responsible for developing and teaching has policies and procedures in place to assure quality instruction for all students. These are attached as "Departmental Policies and Procedures."

Attachment 3:

Please note that it is your responsibility to read the current Student Handbook included in Greenville Technical College's Catalog. (See website.) The Student Handbook addresses specific academic and student conduct policies and procedures. Excerpts from the Student Handbook representing the policies and procedures most often referred to in working with students are provided for your convenience as "Attachment 3."

Approved by: _____

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27 Jul 11
Date

This syllabus will remain in effect until revised or reviewed no later than August 2012.