GREENVILLE TECHNICAL COLLEGE

Business and Technology Division
Computer Technology
Course Syllabus
Introduction to Java Programming - CPT 236

Credit/Contact Hours:
3.0

Prerequisite:
CPT 186 or CPT 187. Computer Technology students must obtain a minimum grade of "C" in all CPT and IST courses.

Co-requisite:
None

Course This course is an introduction to Java programming. Topics will cover Java syntax and classes for use in the development of Java applications and applets.

Purpose of Course:
This course introduces the student to the Java programming language through the implementation of Java applications and applets. The course introduces an object-oriented programming approach to solving problems and stresses accepted software engineering techniques for the design of the programming solutions that consist of cohesive, readable, and reusable modules. The goal is to teach not only the Java language syntax but also a rational approach to Java application and applet program development by providing programming examples along with applicable lab assignments.

Required Texts:

1. ***Introduction to Java Programming,*** 10th edition, Brief Version, Y. Daniel Liang, Pearson, ISBN: 978-0-13-359220-7.
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.

Additional Materials:

There are no specific course requirements other than attachment 1.

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 demonstrate the ability to take initiative by completing a lab assignment with minimal supervision.
2. Students will be able to demonstrate the ability to work under pressure, and show responsibility by completing lab assignments.
3. Students will be able to demonstrate a basic proficiency in the use of Java syntax to include primitive data types, operators, selection statements, control statements, arrays, classes and methods.
4. Students will be able to demonstrate knowledge of naming conventions to include variable and class naming conventions.
5. Students will be able to demonstrate the input/output capabilities supported by the Java language.
6. Students will be able to demonstrate knowledge of object-oriented concepts including encapsulation, inheritance and polymorphism as it applies to Java classes.

7. Students will be able to create Java applets and Java applications to include GUI Swing components and event handling.

The objectives of the CPT 236 course are intended to meet the CPT program level student learning outcomes.

Program Student Learning Outcomes:

Upon successful completion of the Computer Technology Degree students will be able to:

1. Install computer and network hardware.
2. Install computer operating systems and application software.
3. Design, create and test computer programming solutions.
4. Demonstrate the ability to take initiative, assume responsibility, and work under pressure with minimum supervision by successfully completing "hands-on" computer assignments.
5. Analyze, troubleshoot, and correct computer related technical problems.

Revised August 2012

Greenville Technical College Core Competencies:

Communication Core Competency: Students will demonstrate effective written and oral communication skills to convey information, ideas, or opinions.

- Written Communication: Students will demonstrate effective written communication skills to convey information, ideas, or opinions.
- Oral Communication: Students will demonstrate effective oral communication skills to convey information, ideas, or opinions.

Critical Thinking Core Competency: Students will demonstrate effective reasoning, problem solving, or quantitative skills to develop an opinion or conclusion.

- Critical Reasoning: Students will employ inquiry, analysis, and synthesis of information to formulate and/or evaluate an opinion or conclusion.

- Problem Reasoning: Students will design and formulate a strategy to answer a question or achieve a desired goal.
- Quantitative Reasoning: Students will be able to analyze numerical information or observable facts resulting in informed conclusions.

Information Literacy Core Competency: Students will be able to locate, evaluate, and use information effectively from diverse sources.

Professionalism Core Competency: Students will demonstrate conduct and etiquette appropriate to the community and chosen career.

- Professionalism: Students will display professional conduct and work habits.
- Teamwork: Students will collaborate with others to accomplish a shared goal.

Instructional Agreement:
This syllabus is an agreement between the student and instructor concerning course objectives, course content, grading and other policies and procedures particular to the course as well as any posted program, departmental, and divisional policies. It is also the student's responsibility to become familiar with the Student Handbook/College Catalog found in the Student Resource area of Blackboard.

Grading Scale:
Grades will be calculated as follows:

Exams represent 80 percent of the final grade: 60 percent tests and 20 percent final exam.

Lab assignments count 20 percent of the final grade.

1. Programming assignments will be assigned from selected chapters.
2. The following factors will also be considered in grading programs:
    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

Course Policies:
The final exam for online students will be administered on the Barton Campus and will be scheduled at a time determined by the department.

Tutoring is available in the Business Division Student Lab located on the Barton Campus in the Engineering Building (Building103), 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.

Student Disability Services

All students who have a disability and need accommodations should visit, call, or email Student Disability Services at the beginning of each semester/term. Students are strongly encouraged to obtain their accommodation forms within the first two (2) weeks of class to ensure appropriate services. The office is located on Greenville Tech's Barton Campus in the Student Center (Building 105), Rm 113, and can be reached by phone at (864) 250-8202 or (864) 250-8408 or by email at **Sharon.Bellwood@gvltec.edu**. The Disability Services counselor is available to meet with students on satellite campuses by appointment.

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PLAN OF INSTRUCTION:

TOPIC

Topic 1 Introduction to Computers, Programs, and Java

Topic 2 Elementary Programming

Topic 3 Selections

Topic 4 Loops

Topic 5 Objects and Classes

Topic 6 Methods

Topic 7 Arrays

Topic 8 Advanced Object Oriented Concepts

Topic 9 Applets and Graphics

Topic 10 GUI Programming