

**Computer Programming Department**  
**Business/Public Service Division**  
**GREENVILLE TECHNICAL COLLEGE**

**COURSE SYLLABUS**

**Course Title:** Introduction to Java Programming

**Course Number:** CPT 236

**Lecture hours per week:** 3.0

**Lab/Clinic Hours:**

**Semester credit hours:** 3.0

**Prerequisite:** CPT 186 or CPT 187

**Catalog Course Description:** 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 the 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 Text(s):**

1. Introduction to Java Programming; Seventh Edition; Y. Daniel Liang; Pearson/Prentice Hall; ISBN: 9780136012672 OR Introduction to Java Programming, Eighth Edition – Brief Version, Y. Daniel Liang; Pearson/Prentice Hall; ISBN: 978-0132130790
2. A USB portable storage device such as a flash drive will be needed for storing coursework .
3. 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.

*Approved March 26, 2009*

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| <b>COMPUTER PROGRAMMING PROGRAM STUDENT LEARNING OUTCOMES</b> |
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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.

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| <b>CPT 236 COURSE OUTCOMES</b> |
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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.
8. Students will be able to identify the basic components of Java exceptions handling.

*The objectives of the CPT 236 course are intended to meet the CPT/Programming program competencies numbered 2 and 6 above.*

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| <b>CPT 236 – Main Topics</b> |
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**Topic 1** Introduction to Computers, Programs, and Java

**Topic 2** Elementary Programming

**Topic 3** Selections

**Topic 4** Loops

**Topic 5** Methods

**Topic 6** Arrays

**Test 1** (Topic 1 -6)

**Topic 7** Objects and Classes

**Topic 8** Strings and Text I/O

**Topic 9** Thinking in Objects

**Topic 10** Inheritance and Polymorphism

**Test 2** (Topic 1 – 10)

**Topic 11** Abstract Classes and Interfaces

**Topic 12** GUI Basics

**Topic 13** Event-Driven Programming

**Test 3 (Topic 1 - 13)**

**Topic 14** Creating User Interfaces

**Topic 15** Applets and Multimedia

**Final Exam (Comprehensive)**

**SPECIAL NOTE TO ONLINE STUDENTS:** The final exam for online students will be administered on the Barton Campus and will be scheduled at a time determined by the department.

**CPT 236 – Course Specific Requirements**

There are no specific course requirements other than attachment 1.

**CPT 236 – Evaluation and Grading Information**

**GRADING POLICY**

Exams represent 85 percent of the final grade: 60 percent tests and 25 percent final exam.

Lab assignments count 15 percent of the final grade.

1. A minimum of 10 programming assignments are required for the course.
2. Programming assignments will be assigned from selected chapters.
3. 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 be written in the style described in the text or described in class.
  - c. Write with compactness in mind.
  - 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.**

**NOTE: ALL TESTS AND EXAMS ARE RETAINED BY THE INSTRUCTOR.**

**Final letter grades will be issued as follows:**

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

**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 1:**

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:**

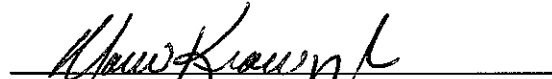
Please note that it is your responsibility to read the current Student Handbook included in Greenville Technical College's Catalog. (See website.) The Student Handbook addresses specific academic and student conduct policies and procedures. Excerpts from the Student Handbook representing the policies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

**Approved by:**



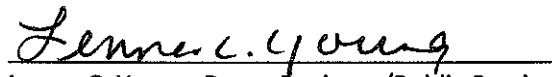
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**Approved by:**



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**13 Aug 10**  
**Date**

*This syllabus will remain in effect until revised or reviewed no later than August 2011.*