School of Business and Computer Technology Computer Technology Course Syllabus Advanced Java Programming CPT 237 Fall 2019

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Credit/Contact Hours:

3.0

Prerequisite:

CPT 236. Computer Technology students must obtain a minimum grade of "C" in all CPT and IST courses.

Co-requisite:

None

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 multithreading,

Swing classes, Swing event models, advanced layout managers, the JavaBean component model, network programming and server-side programming.

Purpose of 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, multithreading 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.

Required Texts:

<u>Introduction to Java Programming</u>, 10th edition, Brief Version, Y. Daniel Liang, Pearson.

ISBN: 9780133592207.

Additional Materials, Supplies, Equipment, and Technology (i.e. Webcams):

Students in traditional classes must access Blackboard for course-related information. Students in hybrid and online classes will access their online content through Blackboard.

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 Resources area of Blackboard.

Grading Scale:

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

Pass/Non-Pass Course Grade Option:

This course may be eligible for the Pass/Non-Pass Course Grade Option. A student must request this option prior to the withdrawal date of this course. If approved for this option, a grade of P will be assigned if the student earns a grade of C or higher. A grade of NP will be assigned for earning a D or F. Students are encouraged to talk with their instructor and meet with an advisor prior to requesting this option. Additional information may be found in the college catalog.

Instructional Continuity:

In the event of a disruption to the normal class schedule or planned activities for this course, alternate learning activities that may include other methods of instruction or locations may be implemented. If disruption occurs, your instructor will communicate through your GTC email (Gmail) account. Additionally, please make sure your contact information is accurate in GTC's emergency alert system (accessible in GTC4Me/Quick Access/GTC2me – Emergency Messaging).

Verification of Student in Online Classes:

Greenville Technical College is committed to student learning and the academic integrity of all courses. All GTC online courses are required to have at least one proctored learning activity that constitutes a significant percentage of the course grade, which may include a test, midterm, final exam, presentation or other assignment. Proctored is defined as an experience where an approved person ensures the identity of the student and monitors the learning activity. The proctored learning activity will be determined by the course instructor. The method of proctoring and any additional requirements, such as costs for students and/or trips to campus or approved testing center, will be explained in the course schedule/plan of instruction.

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 program level student learning outcomes.

PLAN OF INSTRUCTION:

TOPIC

Topic 1 Exception Handling

Chapter Test – Chapter 12

Topic 2 Swing GUI

Chapter Test – Chapter 14

Topic 3 JavaFX GUI

Chapter Test – Chapter 15, 16

Topic 4 File I/O

Chapter Test – Chapter 17

Topic 5 Multi-Dimensional Arrays

Chapter Test - Chapter 7, 8

Topic 6 Recursion

Chapter Test – Chapter 18

Topic 7 Sorting & Searching

Chapter Test – Chapter 7

Topic 8 Graphics

Chapter Test – Chapter 12

Final Exam Project

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

The instructor reserves the right to modify the Plan of Instruction by changing the sequence of text material or testing content.

Assessment of Student Learning:

Greenville Technical College is committed to continuous improvement of teaching and learning. Tests, assignments, and/or projects required in this course may be shared with college faculty and used for assessment purposes. Also, student input is necessary for improving instruction and is requested through course evaluations. Students will be notified when evaluations are available.

Administrative Withdrawals:

Students may be administratively withdrawn from this course for the following reasons:

- Not attending a course during the drop/add period including failure to meet the attendance criteria in an online course. In this case, a grade of WA will be assigned. This WA will not count as an attempt and will not affect GPA.
- For recorded absences exceeding 15% of the course contact hours prior to the withdrawal date. A grade of W will be assigned. For students who receive financial aid, this W will count as a course attempt but will not affect GPA.
- For non-attendance for 14 consecutive calendar days during any time in a semester (including non-class days, holidays, and weekends). A grade of FA (Failure due to Absences) will be assigned. For students who receive financial aid, this FA will count as a course attempt and will affect GPA. The college will use a grade point of zero for each credit hour to calculate the student's GPA.

Course Policies:

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.

Students with Disabilities:

Students with disabilities, including those who were served in Special Education (resource or tutorial), should contact Student Disability Services (SDS) to discuss their need for services and accommodations. *This must be done each term*. The main SDS office is located on the Barton Campus in the Student Center Building 105, office 113.

Students may reach staff by phone at (864) 250-8202 or via email to DisabilityServices@gvltec.edu. Appointments are available at all satellite campus locations. Please check the GTC website for more information concerning Student Disability Services. Visit http://gvltec.edu/disability-services for more information.

The college is committed to providing materials that are accessible to all students. However, if you experience any difficulty accessing materials, please notify your instructor immediately so that we can provide a solution. You may also contact Student Disability Services directly at (864) 250-8202 or by email at DisabilityServices@gvltec.edu.

Students who need a PDF reader to access course documents presented in PDF formats may download Adobe Reader from https://get.adobe.com/reader.

Blackboard Ally

Blackboard Ally is a tool to improve students' experiences within online courses. It enables students to convert files in a course to more accessible formats such as HTML, electronic braille, audio and more. For more information, refer to Blackboard Ally for Students located in Student Resources in the course menu.

Technology Statement:

Greenville Technical College is not responsible for personal technology or internet access. Problems with computers, devices, or internet access are not acceptable for late work. When completing gradable coursework online, be sure to access a secure, reliable internet connection (preferably hardwired).

All technical questions should be directed to technical support. For details, visit https://www.gvltec.edu/about_greenvilletech/tech_support.

Students can access due dates for all assignments and quizzes/tests on the Course Schedule/Plan of Instruction. All graded work is time-stamped when submitted, so your instructor can check the time of submission. In addition, you will receive a confirmation email message when you submit assignments via Blackboard. You must provide this confirmation information in case of any dispute regarding the submission.

Computer labs are available at multiple campus locations and offer various hours as well as staff who are available for assistance. For more information, please visit https://www.gvltec.edu/student_resources/computer_labs.

Student should use Microsoft Office programs or PDF format for submitting assignments in Blackboard. Students can access http://portal.office.com, log in with their <username>@my.gvltec.edu email address and Blackboard/GTC4me password, then follow the prompts to install Microsoft Office free of charge.

Starfish:

We care about your success! Greenville Technical College is proud to offer Starfish, a software tool designed to promote student success through coordination and communication between students, instructors, and support staff. The link to Starfish is located in Blackboard.

Inside Starfish, you will find your Student Success Team with your instructor, advisor, academic coach, and others you may be directly connected with at the college. Setting up your Starfish profile and completing the Starfish Intake form will provide your Success Team with valuable information to guide your success.

Throughout the semester, you may receive emails regarding your attendance, academic performance, or course grades. Additionally, faculty and staff may send kudos celebrating successes. It is important that you check your Greenville Technical College Gmail regularly for Starfish alerts and kudos.

FERPA Policy:

Because Greenville Technical College abides by FERPA privacy guidelines, personal email accounts may not be used for any College-related communication. Faculty and students must use the college Gmail system only.

Start, Stay, Succeed!