Tompkins Cortland Community College

Master Course Syllabus

Course Discipline and Number: CIS 225 **Year: 2024-2025**

Course Title: JAVA **Credit Hours: 3**

I. Course Description: This course is an in-depth study of the JAVA programming language, designed for students who have programming experience. Prerequisites: CIS 108 or CSCI 160. 3 Cr. (3 Lec.) Spring semester.

I. Additional Course Information:

- This is a required course for the Computer Information Systems major.

III. Student Learning Outcomes

Upon successful completion of this course, students will be able to:

1. Create and run a simple sequential Java program.
2. Create programs that use conditional and/or repetition statements in Java.
3. Perform input/output and manipulate strings in a Java program.
4. Create classes and methods in Java.
5. Create and manipulate data in an array in Java.
6. Use inheritance and polymorphism in Java.
7. Implement exception handling and dynamic data structures in a Java program.
8. Use keyboard/scanner streams and/or file input/output in a Java program.

IV. Tompkins Cortland General Education & SUNY Competency Goals

☒ Critical thinking (Tompkins Cortland GE Goal; SUNY Competency)
Students will be presented with Object Oriented terminology and methodology as a design paradigm and introduced to online knowledge bases and shown techniques for implementing previously written modules. They will practice and develop problem solving skills that encompass all areas of the software development life cycle. Students will be encouraged to share viewpoints and approaches to problem solving.

☐ Social/Global Awareness

☒ Information Management
Students will use current language encoding schemes employed in modern software engineering.

☐ This course does not address either of these Tompkins Cortland or SUNY General Education Goals.

V. Essential Topics/Themes

- Sequential programming
- Conditional and/or repetition statements
- Input/output and strings
- Classes and methods
- Data arrays
- Inheritance and polymorphism
- Exception handling
- Dynamic data structures
- Keyboard/scanner streams
- File input/output

VI. Methods of Assessment/Evaluation

Method	% Course Grade
• Class discussions	20%
• Programming projects (minimum of 5 required)	80%

VII. Text – required; not used for more than one course

1. JAVA: An Introduction to Problem Solving and Programming, 6th Edition. Savitch, Walter, Pearson-Prentice Hall: 2012; ISBN: 0-13-216270-9 and 978-0-13-216270-8

Editions listed are current as of date of syllabus. More recent editions may be used.

VIII. Bibliography of Supplemental Materials

1. Java: An Introduction to Computer Science and Programming, Savitch, Walter, Latest Edition, © 2000 Pearson Education.

2. Java: How to Program & Cyber Classroom Letter, Deitel, H. M., 3rd Bk & CD edition, © 1997: Prentice Hall.

3. Head First Java, 2nd edition, Sierra, Kathy and Bates, Bert © 2005: O'Reilly Media, Inc.

4. Java in a Nutshell, 6th edition, Flanagan, David © 2005: O'Reilly Media, Inc.

Editions listed are current as of date of syllabus. More recent editions may be used.

IX. Other Learning Resources

Audiovisual: No resources specified

Electronic: Students must download, install, and configure Java, Java Runtime Environment, and an IDE like Eclipse (www.eclipse.org) or NetBeans. Browser with Internet and a zip utility will be required.

Other: No resources specified

Attendance Policy: *To maintain good grades, regular attendance in class is necessary. Absence from class is considered a serious matter and absence never excuses a student from class work. It is the responsibility of all instructors to distribute reasonable attendance policies in writing during the first week of class. Students are required to comply with the attendance policy set by each of their instructors. Students are not penalized if they are unable to attend classes or participate in exams on particular days because of religious beliefs, in accordance with Chapter 161, Section 224-a of the Education Law of the State of New York. Students who plan to be absent from classroom activity for religious reasons should discuss the absence in advance with their instructors. See college catalog for more information.*

Services for Students with Disabilities: *It is the College's policy to provide, on an individual basis, appropriate academic adjustments for students with disabilities, which may affect their ability to fully participate in program or course activities or to meet course requirements. Students with disabilities should contact the Coordinator of Access and Equity Services, to discuss their particular need for accommodations. All course materials are available in alternate formats upon request.*

Academic Integrity: *Every student at Tompkins Cortland Community College is expected to act in an academically honest fashion in all aspects of his or her academic work: in writing papers and reports, in taking examinations, in performing laboratory experiments and reporting the results, in clinical and cooperative learning experiences, and in attending to paperwork such as registration forms.*
Any written work submitted by a student must be his or her own. If the student uses the words or ideas of someone else, he or she must cite the source by such means as a footnote. Our guiding principle is that any honest evaluation of a student's performance must be based on that student's work. Any action taken by a student that would result in misrepresentation of someone else's work or actions as the student's own — such as cheating on a test, submitting for credit a paper written by another person, or forging an advisor's signature — is intellectually dishonest and deserving of censure.
Several degree programs offer student-learning opportunities (such as internships, fieldwork, and clinical experiences) outside the standard classroom setting. As part of the learning process, students must understand and engage in conduct that adheres to principles guiding employment within the professional workplace. These behaviors include, but are not limited to, academic integrity, accountability, reliability, respect, use of appropriate language and dress, civility, professional ethics, honesty, and trustworthiness. Disciplinary action may be initiated for inappropriate conduct occurring while participating in any course-related project or event.