

TRINE

UNIVERSITY

COURSE SYLLABUS

COURSE TITLE: Object Oriented Programming in JAVA **TERM & YEAR:** Fall 2020 Term I

COURSE & SECTION NUMBER: IS 5103

TIME & PLACE: Online

NUMBER OF CREDIT HOURS: 3

OFFICE HOURS: By Appointment

COURSE DESCRIPTION: Intended for both first-time programmer and professionals. This course begins with methods and algorithm development using Java, to advanced array concepts, inheritance, and polymorphism across different object types. After some basic syntax and program structure are examined, more advanced topics include exception handling; building GUIs; multithreading, and Swing classes will be covered.

PREREQUISITES: None.

REQUIRED TEXT: Farrell, J. (2019). Java Programming, 9th Edition. Cengage. MindTap Programming for Java Programming 6 Months ISBN-10: 1337397105 ISBN-13: 9781337397100

LEARNING OUTCOMES: Upon completion of this course, the student should be able to:

1. Use a Java IDE to write, run, debug, and modify programs.
2. Understand Java syntax and develop algorithms.
3. Develop problem-solving skills and evaluate error-handling approaches.
4. Learn the principles of object-oriented programming with usage of classes, inheritance, polymorphism, interfaces.
5. Gain experience with Graphic User Interface (GUI) development.
6. Understand multithreading and concurrency
7. Integrate relational database technologies.
8. Be exposed to the SDLC (software development lifecycle) to understand how software applications are authored in industry.

COURSE REQUIREMENTS:

ATTENDANCE/PARTICIPATION:

All students are expected to abide by the attendance policy set forth by the instructor in each class. Attendance may be registered at the beginning, end of class or on return from break; and may be deducted for tardiness. Lack of attendance may impact course grades and Academic standing. Should more than two (2) unexcused absences accumulate the student will be academically dropped from the course. When possible, students must provide advance notice of absences, as well as relevant documentation regarding absences, to the instructor as soon as possible following the illness or event that led to the absence. Any arrangement to make up work because of class absence is the responsibility of the student. The instructor, who will explain the evaluation (grading) statement at the beginning of the term, determines the effect of absences upon grades.

Students enrolled in hybrid/seated classes that require only one meeting day per semester/term are required to attend the entire day scheduled for the seated component of the course. Students who are absent from this scheduled meeting for any portion of the day will be administratively withdrawn from the course.

DUE DATE REQUIREMENTS:

Trine University's academic philosophy is to provide each adult student with an opportunity to actively learn and demonstrate competencies needed in today's high-performance workplace. Just as in the workplace, ***it is expected that you will complete ALL assignments and assessments by the due date in order to receive full credit.*** The due date for all postings and assignments is **11:55 P.M. EST (Indianapolis Time)**, on the date listed in the course Submission Schedule.

Late assignments **WILL NOT BE ACCEPTED**; please plan accordingly.

If timely submission of an assignment becomes challenging for a student due to a legitimate reason, an advance notice must be sent to the Instructor with the reason for the delay and documentation when appropriate. The grading of these assignments will be at the Instructor's discretion.

GRADING/EVALUATION

Assignments	Points
Programming Exercises	16,300
Debugging Exercises	5,600
Final Exam	120
Total	22,020

GRADING SCALE:

The method of grading graduate students is the letter grade system (A, B, C, F). Courses in which grades below "C" are earned cannot be used in fulfillment of degree requirements.

Letter Grade	Percentage Range
A	93-100%
B+	87-92%
B	81-86%
C+	75-80%
C	70-74%
F	Below 70%

COURSE CALENDAR/SCHEDULE:

Weeks	Readings	Activities	Due
Week 1 8/24-8/30	Read Unit 1: Creating Java Programs	Programming Exercises 1-6 to 1-12 Programming Exercises 2-4 to 2-16 Debugging Exercises 1-1 to 1-4	ALL DUE 8/30
	Read Unit 2: Using Data	Debugging Exercises 2-1 to 2-4	11:55pm
	Read Unit 3: Using Methods,	Programming Exercises 3-4A to 3-13 Programming Exercises 4-1 to 4-11	ALL DUE
	Week 2 8/31-9/6	Classes & Objects Read Unit 4: More Object Concepts	Debugging Exercises 3-1 to 3-4 Debugging Exercises 4-1 to 4-4 Programming Exercises 5-1 to 5-10
Week 3 9/7-9/13	Read Unit 5: Making Decisions Read Unit 6: Looping	Programming Exercises 6-1A to 6-15 Debugging Exercises 5-1 to 5-4 Debugging Exercises 6-1 to 6-4	ALL DUE 9/13 11:55pm
	Read Unit 7: Characters, Strings, and the StringBuilder Read Unit 8:	Programming Exercises 7-1 to 7-12 Programming Exercises 8-1 to 8-12B Debugging Exercises 7-1 to 7-4	ALL DUE 9/20
	Week 4 9/14-9/20	Arrays Read Unit 9: Advanced Array Concepts	Debugging Exercises 8-1 to 8-4 Programming Exercises 9-1A to 9-10
Week 5 9/21-9/27	Read Unit 10: Introduction to Inheritance	Programming Exercises 10-1 to 10-10 Debugging Exercises 9-1 to 9-4 Debugging Exercises 10-1 to 10-4	9/27 11:55pm
	Week 6 Read Unit 11: Advanced Inheritance Concepts	Programming Exercises 11-1 to 11-13 Programming Exercises 12-1 to 12-12 Debugging Exercises 11-1 to 11-4	ALL DUE 9/28-10/4 10/4
Week 7 10/5-10/11	Read Unit 12: Exception Handling	Debugging Exercises 12-1 to 12-4	11:55pm
	Read Unit 13: File Input & Output Read Unit 14: Introduction to Swing Components	Programming Exercises 13-1 to 13-10 Programming Exercises 14-1 to 14-10 Debugging Exercises 13-1 to 13-4 Debugging Exercises 14-1 to 14-4	ALL DUE 10/11

11:55pm

Programming Exercises 15-1 to 15-12
Debugging Exercises 15-1 to 15-4
Final Exam – Covering Weeks 1-8

Week 8 Read Unit 15: Using Java FX &
10/12-10/17 Scene Builder

****WEEK 8 EXERCISES ARE FOR
PRACTICE ONLY AND WILL NOT
BE COUNTED TOWARDS YOUR
GRADE****

**FINAL
EXAM DUE
10/17
11:55pm**