Course
Outline

A. Basic Information

Semester : Fall 2025

Course Code : CSE 282

Course Title : Programming Language II Java Lab

Credit : 1.0

Pre-requisite Courses :

Course Code	Course Title
CSE 161	Programming Language I
CSE162	Programming Language I Lab

Course Offering Department : Department of Computer Science and Engineering

Faculty : Ashraful Islam Paran

Class Schedule :

Course Code	Section	Room Number	Day	Start Time	End Time
CSE 282	7, 8, 9	SEU213A	Monday, Wednesday, Thursday	8:00	10:00

Consultation Schedule :

Day	Start Time	End Time	Duration
Sunday	13.30	16:30	3 hours

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B. Routine of Faculty

C. Course Details

1. Importance of the Course

Introduction to Programming Language II (Java) is one of the most important courses for undergraduate-level students. The course is designed not only to write programs in Java but also to emphasize logic build, high-level program structure, building algorithms from scratch, and, most importantly, problem-solving strategy. The Java programming language makes billions of software; for example, financial solutions-based software is entirely made with Java. Not only that, but many network companies nowadays make their software solutions using this programming language. So, by learning this language, students will know which place is suitable for them to reach their goals in the future.

2. Objectives

This course has a greater impact on practical fields, especially the software development section. Most companies are focused on Java-based software implementation, and this course will mainly highlight those sections. Students should learn about real-life programming problems and, more importantly, handle complex problems with suitable solutions. This course mostly stresses them to learn perplexing design patterns to solve problems.

3. Course Outcomes (COs)

At the end of the course, the students will be able to:

COs	Description	POs	Teaching-Learning Strategy	Assessment Strategy
CO1	Installed and configured Java development tools and frameworks, including IntelliJ IDEA and JavaFX.	PO5	Lectures, Active discussion, Solving logical problems.	**Formative**: - Essay Questions - Quiz - Viva voce **Summative**: - Final Examination
CO2	Implement object-oriented programming concepts (encapsulation, inheritance, polymorphism).	PO1	Lectures, Practice problems	**Formative**: - Essay Questions - Quiz - Viva voce **Summative**: - Final Examination
CO3	Designed and developed GUI applications using JavaFX and MVC architecture.	PO3	Lectures, Practice problems	**Formative**: - Essay Questions - Quiz - Viva voce **Summative**: - Final Examination
CO4	Apply exception handling and JDBC operations for robust and functional applications.	PO2	Lectures, Practice problems	**Formative**: - Essay Questions - Quiz - Viva voce **Summative**: - Final Examination

4. Course Outcomes (COs) and Program Outcomes (POs) Mapping

CO	PO											
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1					✓							
CO2	✓											
CO3			✓									
CO4		✓										

5. Tentative Lecture Plan

Sl no.	Lecture No.	Contents	Learning Outcome	Learning Resources
1	Lecture 1	Introduction to the course, Installation process, and project structure	Introduction to the course and course outline. The installation process of JDK, IntelliJ Idea, and Scene Builder. JavaFX project structure. Understanding about view, controller, and resource.	Course Outline & Class Lecture
2	Lecture 2	Introduction to JavaFX	Introduction, detailed understanding of JavaFX, design of a simple application using Scene Builder, detailed understanding of design components.	Class Lecture
3	Lecture 3	Scene Builder Container	A detailed understanding of component properties, containers, and their uses in different applications. Design a simple calculator and change properties using Scene Builder.	Class Lecture
4	Lecture 4	Controller	Introduction, detailed understanding of controller, connection between view and controller.	Class Lecture

5	Lecture 5	Page Navigation	Design a multi-page application and navigate between pages.	Class Lecture
6	Lecture 6	MVC Architecture	A detailed understanding of MVC architecture. Practical uses of MVC in real-life scenarios.	Class Lecture
7	Lecture 7	Database	Introduction, a brief understanding of the Database concept, the installation process of the database, and understanding of database data type. Mapping between Java and Database data types.	Class Lecture
8	Lecture 8	Database Queries	Introduction, a brief understanding of database queries (create, insert, select, update, and delete). Connection between Java and database.	Class Lecture
9	Lecture 9	Data Insert and Select operation	A detailed understanding of the database operation (data insert, and data select/retrieve) using JavaFX.	Class Lecture
10	Lecture 10	Data update and delete operation	A detailed understanding of the database operation (data update and delete) using JavaFX.	Class Lecture
11	Lecture 11	Review Class		Class Lecture
Final Exam Week				

6. Teaching and Learning Methods

- Online Learning Management System (Google Classroom)
- Lecture delivery in Physical Class
- Lecture materials in Google Classroom
- Discussion during class and counseling hours
- Sample codes provided during physical class and via Google Classroom

7. Assessment

i. Tentative Assessment Schedule

Serial	Assessment Type	Schedule	Comments
1.	Lab Performance Test	Week 6	Announcements will be given ahead of time.
2.	Lab Report	Week 11	Announcements will be given ahead of time.
3.	Final Exam	Week 12	Announcements will be given ahead of time.

ii. Tentative Weight Assessment

Assessment Tools	Percentage
Attendance	10%
Lab Performance	10%
Lab Report	20%
Viva	20%
Final Examination	40%
Total	**100%**

iii. Grading Policy

Obtained Marks		Letter Grade	Grade Point	Assessments
Minimum	**Maximum**			
80%	100%	4.00	A+	Outstanding
75%	79%	3.75	A	Excellent
70%	74%	3.50	A-	Very Good
65%	69%	3.25	B+	Good
60%	64%	3.00	B	Average

Obtained Marks		Letter Grade	Grade Point	Assessments
Minimum	Maximum			
55%	59%	2.75	B-	Below Average
50%	54%	2.50	C+	Poor
45%	49%	2.25	C	Very Poor
40%	44%	2.00	D	Passing
0%	39%	0.00	F	Fail

8. Lecture Materials

Lecture Notes	As provided during class
Text Book(s)	1. "The Complete Reference Java" by Herbert Schildt
Reference Book(s)	1. "How to Program" by Detail & Ditel
Online Resources	Resources as provided during class time

9. Aiding Materials for Learning

i. Internet Connectivity
ii. SEU official email ID.
iii. Should know how to use "Google Meet" and "Google Classroom."

10. Faculty Suggestions

- The dates and syllabus of the lectures, class tests, midterm, and final exams are already given here; however, announcements will be made ahead of time. There is **NO** provision for make-up class tests.
- The reading materials for each class may be given before that class so that students can have a cursory look at the materials. All materials (lecture notes, supporting reading materials, etc) will be made available through Google Classroom (classroom.google.com).

- Class participation is vital for a better understanding of the subject matter. The class will be conducted in an interactive environment where the teacher and the students must pose questions and discuss solutions for better understanding.
- Mobile phones or other devices **MUST** stay silent during class and exam periods.
- A student who cheats, plagiarizes, or furnishes false, misleading information in the course is subject to disciplinary action up to and including an F grade in the course and/or suspension/expulsion from the University.
- Students must maintain the code of conduct specified by SEU.
- The goal of any assignment is to give you practice in mastering the course material. Consequently, you are encouraged to collaborate on problem sets. In fact, students who form study groups generally do better on exams than do students who work alone.
- You must write up each problem solution by yourself without assistance. It is a violation of this policy to submit a problem solution that you cannot explain verbally to the course teacher.
- No collaboration whatsoever is permitted during the examination.