Course Syllabus

Course Number	210215
Credits	3 (2-3-6) Cr
Course Title	Programming Methodology
Faculty	Department of Computer Engineering, Faculty of Engineering
Semester/Year	2nd /2024
Instructors	Section 51-54, 61: Vishnu Kotrajaras (VKJ) Peerapon Vateekul (PVK) Chate Patanothai (CNP)
Conditions	Pre: 2110101
Status	Required
Curriculum	B.Eng.
Degree	Bachelor
Hours/Week	Mon, Wed, Fri
Course Description	This course aims at developing individual advanced programming skills. Students are required to have a basic programming background, such as data types, conditional and iterative control flows, creating and using subroutines (methods), and arrays. Important concepts focus in this course including object-oriented design, decomposition, encapsulation, abstraction, exception, thread, event-driven programming, and testing. Students will learn all the concepts through Java programming language along with good software engineering principles, such as Testing Driven Development (TDD) via JUnit-Test-Case. Emphasis is on good programming style and the built-in facilities of the Java language.
Learning/Behavioral Objectives	Students should: • Understand classes and objects. • Be able to use class methods and data from existing classes. • Be able to use Object-Oriented concepts including inheritance, polymorphism, and interface. • Be able to prevent unexpected errors by correctly using Java exception: try-catch and throws. • Be able to develop a responsive Graphical User Interface (GUI). • Be able to use JUnit-Test-Case.

Learning Contents

#	Wed	Title	Topic	Note
1	Mon 6 Jan	Lecture 0	Basic Java & Installation	Note: Please download the following software/libraries before coming to class: - JDK 22 (install) - Eclipse - JavaFX 22 - SceneBuilder 22 You can try version 23 but they have not been tested properly.
2	Wed 8 Jan	Lect 0 (cont)	Basic Java (cont)	View GitHub Tutorial
3	Fri 10 Jan	Lecture 1	OOP + Exception + Exercise 1	UML introduced, Exception usage (just use)
4	Mon 13 Jan	Lab1	GitHub, Exception, etc	
5	Wed 15 Jan	Lecture 2	Inheritance + JUnit+ Exercise 2	
6	Fri 17 Jan	Lab2	Inheritance	
7	Mon 20 Jan	Lecture 3	Abstract class + Exercise 3	
8	Wed 22 Jan	Lab3	Abstract class + Writing JUnit.	
9	Fri 24 Jan		Mock exercise (OO, Inheritance)	
10	Sat 25 Jan		Exam 01	8.00 – 10.30, 12.30 – 15.00
11	Mon 27 Jan	Lecture 4	Interface (Polymorphism) + Exercise 4	
12	Wed 29 Jan	Lab4	Interface lab	
13	Fri 31 Jan		Mock exercise (Abstract, Interface)	
14	Sat 1 Feb		Exam 02	8.00 – 10.30, 12.30 – 15.00
15	Mon 3 Feb	Lecture 5	GUI (Form; Fx) + Exercise 5	
16	Wed 5 Feb	Lab 5	GUI	
17	Fri 7 Feb	Lecture 6	Thread (activity at 10.30)	
18	Mon 10 Feb	Lab 6	Thread	

19	Wed 12 Feb		Holiday	Lecture 7 (optional) on video
20	Fri 14 Feb		Mock exercise (GUI, Thread)	
21	Sat 15 Feb		Final Exam	8.00 – 10.30, 12.30 – 15.00
21	Fri 7 March		Project submission	Both video and code must be submitted.

Teaching Methods Lecture, Lab session, TA office hour.

Media On-screen display of presentation slides and programming demonstration. Lecture videos are also available.

Assignments Assignments might be assigned by the instructor of each section.

LMS CourseVille (http://www.myCourseVille.com)
Registration code: GorillaWarrior
Discord: https://discord.gg/qnFXkUUrYj

Evaluation **Assessment of academic knowledge:**

- Lab Assignments 15 %
- Past Paper assignments 6 %
- Class attendance 5 %
- Project 14 %
- Exam01 20 %
- Exam02 20 %
- Final Exam 20 %

Scoring criteria In the scoring of each item used for student assessments, instructors will evaluate students' understanding based on students' program behavior, written answers, considering related learning/behavioral objectives as well as correctness of the submitted works.

Grading Letter grades will be assigned based on the total score percentage of each student according to the following table.

Score percentage range (From 100%)	*Letter grade*
[85,100]	A
[80,85)	B+
[75,80)	B
[70,75)	C+
[65,70)	C
[60,65)	D+
[50,60)	D
[0,50)	F

Required Textbook: -

Attendance Students with their attendance below 80% are prohibited from attending the final examination unless the instructors permit.