

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	2 nd / 2024
Instructors	Vishnu Kotrajaras (VKJ) Peerapon Vateekul (PVK) Chate Patanothai (CNP)
Conditions	Pre: 2110101
Status	Required
Curriculum	B.Eng.
Degree	Bachelor
Hours/Week	Wed, 13.00-16.00 (3 hours)
Course Description	<p>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.</p>
Learning/Behavioral Objectives	<p>Students should:</p> <ul style="list-style-type: none">• 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	8 Jan	Lecture 0	Basic Java	
2	15 Jan	Lecture 1	OOP + Exception + Exercise 1 Note: Please download the following software/libraries before coming to class: <ul style="list-style-type: none"> - JDK 22.0.2 (install) - Eclipse - JavaFX 22.0.2 - SceneBuilder 22 	UML introduced, Exception usage (just use)
3	22 Jan	Lab1	GitHub, Exception, etc	View GitHub Tutorial
4	29 Jan	Lecture 2	Inheritance + JUnit+ Exercise 2	
5	5 Feb	Lab2	Inheritance + JUnit + Exception	
6	12 Feb		Holiday	
7	19 Feb	Lecture 3	Abstract class + Exercise 3	
8	26 Feb	Lab3	Abstract class + Writing JUnit.	
9	5 March		Midterm (7 March 8.30-11.30)	
10	12 March	Lecture 4	Interface (Polymorphism) + Exercise 4	
11	19 March	Lab4	Interface lab + Exception	
12	26 March	Lecture 5	GUI (Form; Fx) + Exercise 5	
13	2 April	Lab 5	GUI	
14	9 April	Lecture 6	Event Handling + Thread + Exercise 6	
15	16 April		Holiday	
16	23 April	Lab 6	Thread	Lecture 7 on video (optional)
17	30 April		Final Exam (2 May 13.00-16.00)	
18	TBA		Project Presentation	

Teaching Methods Lecture, in-class practice, Lab session, a meeting with Personal Programming Tutor (PPT) every week.

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: HayaseMisa Discord: https://discord.gg/qnFXkUUrYj																		
Evaluation	<p>Assessment of academic knowledge:</p> <ul style="list-style-type: none"> • Lab Assignments 15 % • Past Paper assignments 6 % • Class attendance 5 % • Project 14 % • Midterm 30 % • Final 30 % 																		
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	<p>Letter grades will be assigned based on the total score percentage of each student according to the following table.</p> <table> <thead> <tr> <th><i>Score percentage range (From 100%)</i></th> <th><i>Letter grade</i></th> </tr> </thead> <tbody> <tr> <td>[85,100]</td> <td>A</td> </tr> <tr> <td>[80,85)</td> <td>B+</td> </tr> <tr> <td>[75,80)</td> <td>B</td> </tr> <tr> <td>[70,75)</td> <td>C+</td> </tr> <tr> <td>[65,70)</td> <td>C</td> </tr> <tr> <td>[60,65)</td> <td>D+</td> </tr> <tr> <td>[50,60)</td> <td>D</td> </tr> <tr> <td>[0,50)</td> <td>F</td> </tr> </tbody> </table>	<i>Score percentage range (From 100%)</i>	<i>Letter grade</i>	[85,100]	A	[80,85)	B+	[75,80)	B	[70,75)	C+	[65,70)	C	[60,65)	D+	[50,60)	D	[0,50)	F
<i>Score percentage range (From 100%)</i>	<i>Letter grade</i>																		
[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.																		