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	1st /2015
Instructors	Section 1: Vishnu Kotrajaras (VKJ); Room: ENG3-318 Section 2: Peerapon Vateekul (PVK); Room: ENG3-320 Lab: Computer Center
Conditions	-
Status	Required
Curriculum	B.Eng.
Degree	Bachelor
Hours/Week	3
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, synchronization, 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 Graphic User Interface (GUI) programming using Java Swing. • Be able to multi-tasking program by using threads. • Be able to use JUnit-Test-Case. • Be able to develop Application Programming Interface (API) documents via JavaDoc.

Learning Contents Computer Room: 218, 219, 220, 224

"*" refers to be in "computer lab"!

Week	Friday	Topic	Note
1	14/08/2015	Class Overview + Project Announcement Object & Class + JUnit	
*2	21/08/2015	Lab Preparation (lab0)	Exercise1
*3	28/08/2015	Object and class + JUnit (lab1)	Lab1
4	04/09/2015	Inheritance	Exercise2
*5	11/09/2015	Inheritance (lab2)	Lab2
6	18/09/2015	Interface and polymorphism + JUnit	Exercise3
*7	25/09/2015	Interface and polymorphism + JUnit (lab3)	Lab3
*8	29/09/2015	Midterm Exam (08.30AM-11.30AM)	
		Midterm (no class)	**(28/09 – 02/10)**
9	09/10/2015	Exception UI1: Components + Action Listener Project Reminder	Exercise4
*10	16/10/2015	Exception + UI1 (lab4)	Lab4
11	23/10/2015	**Chulalongkorn Day (no class)**	
12	30/10/2015	UI2: Graphics 2D + Audio + Input	Exercise5
*13	06/11/2015	UI2 (lab5)	Lab5
14	13/11/2015	Multithreading	Exercise6
*15	20/11/2015	Multithreading (lab6)	Lab6
16	27/11/2015	Project / Review	
*17	04/12/2015	Final Exam (08.30AM-11.30AM)	
		Final (no class)	**(30/11 – 15/12)**

Teaching Methods Lecture and in-class practice

Media On-screen display of presentation slides and programming demonstration

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

LMS CourseVille (http://www.myCourseVille.com)

Evaluation **Assessment of academic knowledge:**

• Assignments	15%
• Project	15%
• Midterm examination	35%
• Final examination	35%

Scoring criteria In the scoring of each item used for student assessments, instructors will evaluate students' understanding based on students' 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: 1. Ed Burnette, "Eclipse IDE Pocket Guide", O'Reilly Media, Inc. (August 12, 2005).
2. Deitel, Deitel, Listfield, Yaeger, Zhang, “Simply Java Programming: An Application-Driven Tutorial Approach”, Pearson (2004).
3. Cay S. Horstmann, Gary Cornell, “Core Java(TM), Volume I--Fundamentals (9th Edition)”, Prentice Hall. (December 07, 2012).
4. Cay S. Horstmann, “Object-Oriented Design and Patterns”, Wiley (June 2, 2005).
5. Cay S. Horstmann, “Big Java: Early Objects”, Wiley (2012)

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