# Course Syllabus ICCS 203

1. Course Title Computer Programing II

2. Course Credit

3. Faculty Science, Department of Mathematics

4. Quarter

5. Instructor Assist. Prof. Nagul Cooharojananone

6. Course Condition Computer Programming I

7. Course Status Subject

8. Program name Bachelor Degree of Computer Science

9. Course Level Bachelor Degree

10. Hours per a week Lecture for 3 hours and Laboratory for 2 hours

11. Course Description

Object, Classes, Array, Array Lists, Cohesion, Couping, Interfaces, Polymorphism, Sorting, Searching and Data Structures

## 12. Course Outline

#### 12.1 Purpose

- 1. Students are able to understand the fundamentals of Java programming.
- 2. Students are able to understand the concepts of object oriented programming.
- 3. Students are able to implement datastructures using Java program.
- 4. Students are able to solve the problems using a Java Programming.

# 12.2 Outline (See a table)

# 12.3 Teaching Method

- 1. Lecture
- 2. Examination
- 3. Exercise

#### 12.4 Teaching Media

- 1. White board
- 2. Overhead projector
- 3. Computer

# 12.5 Evaluation: 100 points full score is classified into

Exercises
 Midterm
 Final
 Exercises
 40 points
 40 points

## 13. Reference Books

1. Cay S. Horstmann, BIG JAVA, 5<sup>th</sup> ed., Wiley.

Week	Topics
Week 1-3	Introduction to Objects and Classes Objects, Classes and Methods Declaring Variables Contructing Objects Fundamental Data Types Numbers Types Arithmetics Operations Calling Static Methods Decisions The if statement Iteration while Loops for Loops
	Nest Loops

Week 4-5 Week 6	Arrays and Array Lists Arrays Array Lists Designing Classes Cohesion and Couping Side Effects Scope Packages  Midterm Examination
Week 7	Interfaces and Polymorphism Using Interfaces for Algorithm Reuse Polymorphism Inner Classes Inheritance Inheritance Hierachies Overriding Methods Subclass Construction
Week 8	Input/Output And Execption Handling Reading and Writing Text Files Reading Text Input Throwing Exceptions Recursion Triangle Numbers Permutations Mutual Recursions
Week 9-10	Sorting and Searching Selection Sort Analyzing the Performance Searching An Introduction to Data Structures Using Linked Lists Abstract Data Types Stacks and Queues
Week 11	Advanced Data Structures Sets Maps Hash Tables Binary Search Tree Binary Tree Traversal