

Tamkang University Academic Year 109, 2nd Semester Course Syllabus

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| Course Title | JAVA PROGRAMMING | Instructor | HUANG-WEN HUANG |
| Course Class | TQICB2A DIVISION OF SOFTWARE ENGINEERING, DEPARTMENT OF INNOVATIVE INFORMATION AND TECHNOLOGY (ENGLISH-TAUGHT | Details | ◆ General Course ◆ Selective ◆ One Semester |
| Relevance to SDGs | PROGRAM), 2A SDG4 Quality education SDG9 Industry, Innovation, and Infrastructure | | |
| D e p a r t m e n t a l A i m o f E d u c a t i o n | | | |
| Cultivate professional talents in developing and applying information system in various fields. | | | |
| Subject Departmental core competences | | | |
| A. Capability of computer program coding, process planning, and problem solving(ratio:100.00) | | | |
| Subject Schoolwide essential virtues | | | |
| 2. Information literacy. (ratio:70.00) 5. Independent thinking. (ratio:10.00) 7. A spirit of teamwork and dedication. (ratio:10.00) 8. A sense of aesthetic appreciation. (ratio:10.00) | | | |
| Course Introduction | The purpose of this course is to introduce Java programming language, which is an another high level programming language. This course contents include Java basic, class and object, Java applet and graphics, control statements, array and some important object-oriented concepts such as inheritance, polymorphism and interface. In lectures, we will do many examples and exercises to illustrate the Java. | | |
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The correspondences between the course's instructional objectives and the cognitive, affective, and psychomotor objectives.

Differentiate the various objective methods among the cognitive, affective and psychomotor domains of the course's instructional objectives.

I. Cognitive : Emphasis upon the study of various kinds of knowledge in the cognition of the course's veracity, conception, procedures, outcomes, etc.

II. Affective : Emphasis upon the study of various kinds of knowledge in the course's appeal, morals, attitude, conviction, values, etc.

III. Psychomotor: Emphasis upon the study of the course's physical activity and technical manipulation.

| No. | Teaching Objectives | objective methods |
|-----|---|-------------------|
| 1 | Students are able to get familiar with Java programming language. | Cognitive |
| 2 | Students are able to understand Java operators, basics and statements. Particularly it is based on object-oriented methodology. | Cognitive |
| 3 | Students are able to learn Java Applet which is used in webpage design. | Cognitive |
| 4 | Students are able to understand Java control statements in programs. | Cognitive |
| 5 | Students are able to understand Java graphics and user interface design. | Cognitive |
| 6 | Students are able to practically write Java programs in classes. | Cognitive |
| 7 | Enhancing students' ability to write read and speak technical English especially in Java programming language. | Psychomotor |

The correspondences of teaching objectives : core competences, essential virtues, teaching methods, and assessment

| No. | Core Competences | Essential Virtues | Teaching Methods | Assessment |
|-----|------------------|-------------------|------------------|---|
| 1 | A | 2 | Lecture | Testing, Study Assignments, Report(including oral and written) |
| 2 | A | 2 | Lecture | Testing |
| 3 | A | 2 | Lecture | Discussion(including classroom and online) |
| 4 | A | 2 | Lecture | Study Assignments, Report(including oral and written) |
| 5 | A | 2 | Lecture | Testing, Discussion(including classroom and online), Report(including oral and written) |
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| 6 | A | 5 | Lecture | Testing |
| 7 | A | 78 | Lecture | Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written) |

Course Schedule

| Week | Date | Course Contents | Note |
|------|--------------------------|--|--|
| 1 | 110/02/22 ~ 110/02/28 | Introduction to programming and the Java language (1); | |
| 2 | 110/03/01 ~ 110/03/07 | Programming building blocks – Java Basics (2); | Shown in the Parentheses are corresponding sections in the textbook. |
| 3 | 110/03/08 ~ 110/03/14 | Object-Oriented programming, part 1: using classes (3); | |
| 4 | 110/03/15 ~ 110/03/21 | The string class (3.7);Math class (3.13);JOptionPane Dialog boxes (3.16); | |
| 5 | 110/03/22 ~ 110/03/28 | Introduction Applets and Graphics (4) | |
| 6 | 110/03/29 ~ 110/04/04 | Flow of control: selection (5) | |
| 7 | 110/04/05 ~ 110/04/11 | Flow of control: looping (6) | |
| 8 | 110/04/12 ~ 110/04/18 | Object-oriented programming: user-defined classes (7) | |
| 9 | 110/04/19 ~ 110/04/25 | In-Class Exercises | |
| 10 | 110/04/26 ~ 110/05/02 | Midterm Exam Week | |
| 11 | 110/05/03 ~ 110/05/09 | Single-Dimensional arrays (8) | |
| 12 | 110/05/10 ~ 110/05/16 | Multidimensional arrays (9) | |
| 13 | 110/05/17 ~ 110/05/23 | Object-oriented programming: inheritance, polymorphism and interfaces (10) | |
| 14 | 110/05/24 ~ 110/05/30 | Exceptions and input/output operations (11) | |
| 15 | 110/05/31 ~ 110/06/06 | Graphical user interfaces (12) | |
| 16 | 110/06/07 ~ 110/06/13 | Graphical user interface making up (12.1) | |
| 17 | 110/06/14 ~ 110/06/20 | In-Class exercises | |
| 18 | 110/06/21 ~ 110/06/27 | Final Exam Week | |

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| Requirement | Grading policy may vary according to circumstances when school starts. |
| Teaching Facility | Computer, Projector |
| Textbooks and Teaching Materials | Julie Anderson, Herve Franceschi, "Java 6 Illuminated An Active Learning Approach" 2nd ,Jones and Bartlett Publications Inc.2008 |
| References | 1. Walter Savitch," Absolute Java" 3rd, Pearson International Edition 2008. 2. Gary J. Bronson "Object-Oriented program development using Java" ,2006, Thomson course technology, enhanced edition. |
| Number of Assignment(s) | 6 (Filled in by assignment instructor only) |
| Grading Policy | <p>◆ Attendance : 10.0 % ◆ Mark of Usual : 10.0 % ◆ Midterm Exam : 25.0 %</p> <p>◆ Final Exam : 25.0 %</p> <p>◆ Other 〈Homework and project〉 : 30.0 %</p> |
| Note | <p>This syllabus may be uploaded at the website of Course Syllabus Management System at http://info.ais.tku.edu.tw/csp or through the link of Course Syllabus Upload posted on the home page of TKU Office of Academic Affairs at http://www.acad.tku.edu.tw/CS/main.php .</p> <p>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</p> |