# Tamkang University Academic Year 108, 1st Semester Course Syllabus

| Course Title | DATA STRUCTURE & PROCESSING | Instructor | WU, SHIH-JUNG |
|---|---|---|---|
| Course Class | TQICB2A<br>DIVISION OF SOFTWARE ENGINEERING, DEPARTMENT OF INNOVATIVE INFORMATION AND TECHNOLOGY (ENGLISH-TAUGHT PROGRAM), 2A | Details | ◆ General Course<br>◆ Required<br>◆ One Semester |

Departmental Aim of Education

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:20.00)

8. A sense of aesthetic appreciation. (ratio:10.00)

| Course Introduction | This course focus on using c programming language to solve special problem for application and computer. It emphasizes data storage, fetch, algorithms design and complexity evaluation. |
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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 | Understanding the basic concepts for data structure | Cognitive |
| 2 | Promoting programming ability. | Cognitive |
| 3 | To possess the ability for algorithms design and evaluation. | Cognitive |

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

| No. | Core Competences | Essential Virtues | Teaching Methods | Assessment |
|---|---|---|---|---|
| 1 | A | 258 | Lecture | Testing |
| 2 | A | 258 | Lecture | Testing |
| 3 | A | 258 | Lecture | Testing |

## Course Schedule

| Week | Date | Course Contents | Note |
|---|---|---|---|
| 1 | 108/09/09 ~ 108/09/15 | Structures | |
| 2 | 108/09/16 ~ 108/09/22 | Structures | |
| 3 | 108/09/23 ~ 108/09/29 | Pointers | |
| 4 | 108/09/30 ~ 108/10/06 | Linked Lists | |
| 5 | 108/10/07 ~ 108/10/13 | Linked Lists | |
| 6 | 108/10/14 ~ 108/10/20 | Stacks and Queues | |
| 7 | 108/10/21 ~ 108/10/27 | Stacks and Queues | |
| 8 | 108/10/28 ~ 108/11/03 | Introduction to Binary Trees | |
| 9 | 108/11/04 ~ 108/11/10 | Introduction to Binary Trees | |

| 10 | 108/11/11 ~ 108/11/17 | Midterm Exam Week | |
|---|---|---|---|
| 11 | 108/11/18 ~ 108/11/24 | Introduction to Binary Trees | |
| 12 | 108/11/25 ~ 108/12/01 | Sorting | |
| 13 | 108/12/02 ~ 108/12/08 | Sorting | |
| 14 | 108/12/09 ~ 108/12/15 | Graphs | |
| 15 | 108/12/16 ~ 108/12/22 | Graphs | |
| 16 | 108/12/23 ~ 108/12/29 | Hashing | |
| 17 | 108/12/30 ~ 109/01/05 | Hashing | |
| 18 | 109/01/06 ~ 109/01/12 | Final Exam Week (Date:109/1/3-109/1/9) | |

| Requirement | 4 Tests needed. |
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| Teaching Facility | Computer |
| Textbooks and Teaching Materials | Data Structures In C by Noel Kalicharan (Aug 11, 2008) |
| References | Data Structures-related |
| Number of Assignment(s) | 6 　(Filled in by assignment instructor only) |
| Grading Policy | ◆ Attendance： 10.0 % ◆ Mark of Usual： % ◆ Midterm Exam： 30.0 % <br> ◆ Final Exam： 30.0 % <br> ◆ Other〈Exercises〉：30.0 % |
| Note | 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 . <br> **※Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.** |