

Tamkang University Academic Year 110, 1st Semester Course Syllabus

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| Course Title | INTRODUCTION TO COMPUTER AND COMPUTATIONAL THINKING | Instructor | FU-YI HUNG |
| Course Class | TNUOB0F INFORMATION EDUCATION, OF | Details | <ul style="list-style-type: none"> ◆ General Course ◆ Required ◆ One Semester |
| Relevance to SDGs | SDG4 Quality education | | |
| Departmental Aim of Education | | | |
| <ul style="list-style-type: none"> I. Development of information literacy. II. Development of computer skills. III. Building up information ethics. IV. Training of independent thinking. | | | |
| Subject Schoolwide essential virtues | | | |
| <ul style="list-style-type: none"> 2. Information literacy. (ratio:80.00) 4. Moral integrity. (ratio:20.00) | | | |
| Course Introduction | <p>This course provides an introductory survey of computer science. Progress of this course follows a bottom-up arrangement of subjects that proceeds from the concrete to the abstract. Course materials in this semester includes Number Systems, Computer Organization, Computer Networks, Operating Systems, and Intellectual Property Rights.</p> | | |
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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 | To understand how data are represented and manipulated in a computer | Cognitive |
| 2 | To understand how operating systems coordinate a computer's internal activities | Cognitive |
| 3 | To understand how computers constitute networks and share information | Cognitive |
| 4 | To understand what are intellectual property rights and their applications | Cognitive |

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

| No. | Core Competences | Essential Virtues | Teaching Methods | Assessment |
|-----|------------------|-------------------|------------------|------------|
| 1 | | 24 | Lecture | Testing |
| 2 | | 24 | Lecture | Testing |
| 3 | | 24 | Lecture | Testing |
| 4 | | 24 | Lecture | Testing |

Course Schedule

| Week | Date | Course Contents | Note |
|------|--------------------------|---------------------------------------|------|
| 1 | 110/09/22 ~ 110/09/28 | Introduction | |
| 2 | 110/09/29 ~ 110/10/05 | Intellectual property | |
| 3 | 110/10/06 ~ 110/10/12 | Computer Programming - Number Systems | |
| 4 | 110/10/13 ~ 110/10/19 | Computer Programming - Number Systems | |
| 5 | 110/10/20 ~ 110/10/26 | Computer Programming - Data Storage | |
| 6 | 110/10/27 ~ 110/11/02 | Computer Programming - Data Storage | |

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| 7 | 110/11/03 ~ 110/11/09 | Computer Programming - Data Storage | |
| 8 | 110/11/10 ~ 110/11/16 | Operations on Data | |
| 9 | 110/11/17 ~ 110/11/23 | Midterm Exam Week | |
| 10 | 110/11/24 ~ 110/11/30 | Operations on Data | |
| 11 | 110/12/01 ~ 110/12/07 | Computer Organization | |
| 12 | 110/12/08 ~ 110/12/14 | Computer Organization | |
| 13 | 110/12/15 ~ 110/12/21 | Computer Organization | |
| 14 | 110/12/22 ~ 110/12/28 | Computer Networks | |
| 15 | 110/12/29 ~ 111/01/04 | Computer Networks | |
| 16 | 111/01/05 ~ 111/01/11 | Operating System | |
| 17 | 111/01/12 ~ 111/01/18 | Final Exam | |
| 18 | 111/01/19 ~ 111/01/25 | | |
| Requirement | <p>Cheating or plagiarism will receive a semester grade of zero for this course. 作弊或抄襲者學期總成績為零分。</p> <p>If a student's class absence reaches one-third of the total class hours (in a semester) for a particular course, the course instructor will notify the Office of Academic Affairs, and the student will not be allowed to take part in the remaining course examinations and will receive a semester grade (for that course) of zero. 學生對某一科目之缺課總時數達該科全學期授課時數三分之一。經該科教師通知教務處時即不准參加該科目之考試。該科目學期成績以零分計算。</p> | | |
| Teaching Facility | Computer, Projector | | |
| Textbooks and Teaching Materials | <p>Foundations of Computer Science, by Behrouz Forouzan, Cengage Learning, 4rd Edition, 2018</p> <p>Discovering Computers 2018: Digital Technology, Data, and Devices, by M. Vermaat, etc., 1st Edition, 2017</p> | | |
| References | <p>計算機概論, B. Forouzan and F. Mosharraf 著, 林仁勇等譯, 歐亞書局, 第四版, 2018</p> <p>Computer Science Illuminated, by Nell Dale and John Lewis, Jones and Bartlett Publishers, Inc., 7th Edition, 2019</p> | | |
| Number of Assignment(s) | 10 (Filled in by assignment instructor only) | | |
| Grading Policy | <p>◆ Attendance : 5.0 % ◆ Mark of Usual : 30.0 % ◆ Midterm Exam : 27.0 %</p> <p>◆ Final Exam : 28.0 %</p> <p>◆ Other (Assignments) : 10.0 %</p> | | |
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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>.

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