Tamkang University Academic Year 109, 1st Semester Course Syllabus

Course Title	COMPUTER ORGANIZATION	Instructor	FU-YI HUNG
Course Class	TQICB3A DIVISION OF SOFTWARE ENGINEERING, DEPARTMENT OF INNOVATIVE INFORMATION AND TECHNOLOGY (ENGLISH-TAUGHT PROGRAM), 3A	Details	◆ General Course ◆ Selective ◆ One Semester

Departmental Aim of Education

Cultivate professional talents in developing and applying information system in various fields.

Subject Departmental core competences

E.   Capability of integrating information system(ratio:100.00)

Subject Schoolwide essential virtues

2. Information literacy. (ratio:70.00)

5. Independent thinking. (ratio:20.00)

7. A spirit of teamwork and dedication. (ratio:10.00)

Course Introduction	The goal of this course is to learn how a computer works and why it performs as it does. The focus of this course is on the interaction between hardware and software that includes instruction set architecture, arithmetic for computers, the processor, memory hierarchy and I/O devices.

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 computers are constructed by a set of functional units	Cognitive
2	To understand how computer functional units operate and interact	Cognitive
3	To understand how the factors affect computer performance	Cognitive
4	To understand how computations are performed at the machine level	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	E	257	Lecture	Testing
2	E	257	Lecture	Testing
3	E	257	Lecture	Testing
4	E	257	Lecture	Testing

Course Schedule

Week	Date	Course Contents	Note
1	109/09/14 ~ 109/09/20	Computer Abstractions and Technology	
2	109/09/21 ~ 109/09/27	Computer Abstractions and Technology	
3	109/09/28 ~ 109/10/04	Instructions: Language of the Computer	
4	109/10/05 ~ 109/10/11	Instructions: Language of the Computer	
5	109/10/12 ~ 109/10/18	Instructions: Language of the Computer	
6	109/10/19 ~ 109/10/25	Instructions: Language of the Computer	
7	109/10/26 ~ 109/11/01	Arithmetic for Computers	

8	109/11/02 ~ 109/11/08	Arithmetic for Computers	
9	109/11/09 ~ 109/11/15	Arithmetic for Computers	
10	109/11/16 ~ 109/11/22	Midterm Exam Week	
11	109/11/23 ~ 109/11/29	The Processor	
12	109/11/30 ~ 109/12/06	The Processor	
13	109/12/07 ~ 109/12/13	The Processor	
14	109/12/14 ~ 109/12/20	The Processor	
15	109/12/21 ~ 109/12/27	Large and Fast: Exploiting Memory Hierarchy	
16	109/12/28 ~ 110/01/03	Large and Fast: Exploiting Memory Hierarchy	
17	110/01/04 ~ 110/01/10	Large and Fast: Exploiting Memory Hierarchy	
18	110/01/11 ~ 110/01/17	Final Exam Week	

Requirement	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。 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。
Teaching Facility	Computer, Projector
Textbooks and Teaching Materials	Computer Organization and Design: The Hardware/Software Interface, by David Patterson and John Hennessy, Elsevier, 5th Edition, 2014.
References	Computer Organization and Architecture: Designing for Performance, by William Stallings, Prentice Hall, 11th Edition, 2018 計算機組織與設計, David Patterson and John Hennessy 著, 鍾崇斌 譯, 東華書局, 2015
Number of Assignment(s)	**12** (Filled in by assignment instructor only)
Grading Policy	◆ Attendance： 　 % ◆ Mark of Usual：32.0 % ◆ Midterm Exam： 28.0 % ◆ Final Exam： 28.0 % ◆ Other〈Assignments〉：12.0 %
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 . **※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.**