Tamkang University Academic Year 103, 2nd Semester Course Syllabus

Course Title	DATA PROCESSING	Instructor	FU-YI HUNG
Course Class	TQIAB1A DIVISION OF SOFTWARE ENGINEERING, DEPARTMENT OF INNOVATIVE INFORMATION AND TECHNOLOGY, 1A	Details	◆ Required ◆ One Semester ◆ 2 Credits

Academic Aim of Education

This is an introductory course of computer science. After completing this course, students should develop computer ethics, fundamental knowledge and ability to use computers efficiently and to meet the global information technology trends.

Schoolwide essential virtues

A. A global perspective.

B. Information literacy.

C. A vision for the future.

D. Moral integrity.

E. Independent thinking.

F. A cheerful attitude and healthy lifestyle.

G. A spirit of teamwork and dedication.

H. A sense of aesthetic appreciation.

Course Introduction	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 intellectual property, data storage, operations on data, logic gates and Boolean algebra, combinational logic analysis.

The Relevance among Teaching Objectives, Objective Levels and Schoolwide essential virtues

I.Objective Levels (select applicable ones) :

(i) Cognitive Domain : C1-Remembering, C2-Understanding, C3-Applying, C4-Analyzing, C5-Evaluating, C6-Creating

(ii) Psychomotor Domain : P1-Imitation, P2-Mechanism, P3-Independent Operation, P4-Linked Operation, P5-Automation, P6-Origination

(iii) Affective Domain : A1-Receiving, A2-Responding, A3-Valuing, A4-Organizing, A5-Charaterizing, A6-Implementing

II.The Relevance among Teaching Objectives, Objective Levels and Schoolwide essential virtues :

(i) Determine the objective level(s) in any one of the three learning domains (cognitive, psychomotor, and affective) corresponding to the teaching objective. Each objective should correspond to the objective level(s) of ONLY ONE of the three domains.

(ii) If more than one objective levels are applicable for each learning domain, select the highest one only. (For example, if the objective levels for Cognitive Domain include C3,C5,and C6, select C6 only and fill it in the boxes below. The same rule applies to Psychomotor Domain and Affective Domain.)

(iii) Determine the Schoolwide essential virtues that correspond to each teaching objective. Each objective may correspond to one or more Schoolwide essential virtues at a time. (For example, if one objective corresponds to three Schoolwide essential virtues: A,AD, and BEF, list all of the three in the box.)

No.	Teaching Objectives	Relevance	
		Objective Levels	Schoolwide essential virtues
1	To understand and implement the fundamental of intellectual property	C3	ABCE
2	To understand how data are represented and manipulated in a computer	C3	ABCE
3	To analyze and implement the fundamental properties of logic gates and Boolean algebra	C3	ABCE
4	To analyze and implement the combinational circuits	C4	ABCE

Teaching Objectives, Teaching Methods and Assessment

No.	Teaching Objectives	Teaching Methods	Assessment
1	To understand and implement the fundamental of intellectual property	Lecture, Practicum	Written test, Practicum, Participation
2	To understand how data are represented and manipulated in a computer	Lecture, Practicum	Written test, Practicum, Participation
3	To analyze and implement the fundamental properties of logic gates and Boolean algebra	Lecture, Practicum	Written test, Practicum, Participation
4	To analyze and implement the combinational circuits	Lecture, Practicum	Written test, Practicum, Participation

Course Schedule			
Week	Date	Subject/Topics	Note
1	104/02/24 ~ 104/03/01	Intellectual Property	
2	104/03/02 ~ 104/03/08	Intellectual Property	
3	104/03/09 ~ 104/03/15	Data Storage	
4	104/03/16 ~ 104/03/22	Data Storage	
5	104/03/23 ~ 104/03/29	Data Storage	
6	104/03/30 ~ 104/04/05	Operations on Data	
7	104/04/06 ~ 104/04/12	Operations on Data	
8	104/04/13 ~ 104/04/19	Logic Gates	
9	104/04/20 ~ 104/04/26	Logic Gates	
10	104/04/27 ~ 104/05/03	Midterm Exam Week	
11	104/05/04 ~ 104/05/10	Boolean Algebra and Logic Simplification	
12	104/05/11 ~ 104/05/17	Boolean Algebra and Logic Simplification	
13	104/05/18 ~ 104/05/24	Boolean Algebra and Logic Simplification	
14	104/05/25 ~ 104/05/31	Combinational Logic Analysis	
15	104/06/01 ~ 104/06/07	Combinational Logic Analysis	
16	104/06/08 ~ 104/06/14	Function of Combinational Logic	
17	104/06/15 ~ 104/06/21	Function of Combinational Logic	
18	104/06/22 ~ 104/06/28	Final Exam Week	
Requirement		Cheating or plagiarism will result in a failing grade in the course. 作弊或抄襲者學期成績為零分，並且依照校規懲處。	
Teaching Facility		Computer, Projector	
Textbook(s)		Digital Fundamentals, by Thomas L. Floyd, Prentice Hall, 10th Edition, 2009 Foundations of Computer Science, by Behrouz Forouzan and Firouz Mosharraf, Cengage Learning, 2nd Edition, 2007	

Reference(s)	Digital Design, by M. Morris Mano and Michael D. Ciletti, Prentice Hall, 5th Edition, 2012 Fundamentals of Logic Design, by Jr. Charles H. Roth and Larry L Kinney, CL Engineering, 6th Edition, 2010 計算機概論, B. Forouzan and F. Mosharraf 著, 林仁勇譯, 學銘圖書 - 歐亞書局, 第二版, 2008 數位邏輯設計, Thomas L. Floyd 著, 劉倫偉譯, 高立圖書, 2009
Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	◆ Attendance： % ◆ Mark of Usual：20.0 % ◆ Midterm Exam： 30.0 % ◆ Final Exam： 30.0 % ◆ Other〈Lab Exercises〉：20.0 %
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.**