Tamkang University Academic Year 114, 1st Semester Course Syllabus

Course Title	INTRODUCTION TO INFORMATION SECURITY	Instructor	FU-YI HUNG
Course Class	TEIDB4A DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM), 4A	Details	◆ General Course ◆ Selective ◆ One Semester ◆ 2 Credits
Relevance to SDGs	SDG4 Quality education		

Departmental Aim of Education

Ⅰ. Comprehend professional knowledge.

Ⅱ. Acquire mastery of Practical Skills.

Ⅲ. Establish creative achievement.

Subject Departmental core competences

A. Programming and application ability.(ratio:10.00)

B. Mathematical reasoning ability.(ratio:30.00)

C. Implementing computer systems ability.(ratio:30.00)

D. Computer networking application skills.(ratio:10.00)

E. Professional skills for information technology (IT) industry.(ratio:20.00)

Subject Schoolwide essential virtues

1. A global perspective. (ratio:10.00)

2. Information literacy. (ratio:20.00)

3. A vision for the future. (ratio:10.00)

4. Moral integrity. (ratio:20.00)

5. Independent thinking. (ratio:10.00)

6. A cheerful attitude and healthy lifestyle. (ratio:10.00)

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

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

	Course Introduction	This course provides the basic principles and standards of computer and network security. It includes the following topics: computer security technology and principles, management issues, cryptographic algorithms and internet security.

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 should be able to understand and apply the fundamental security technology and principle	Cognitive
2	Students should be able to understand and apply the cryptographic algorithms	Cognitive
3	Students should be able to understand and apply the security management architecture	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDE	12345678	Lecture	Testing
2	ABCDE	12345678	Lecture	Testing
3	ABCDE	12345678	Lecture	Testing

Course Schedule

Week	Date	Course Contents	Note
1	114/09/15 ~ 114/09/21	Introduction	

2	114/09/22~ 114/09/28	Malware	
3	114/09/29~ 114/10/05	Malware	
4	114/10/06~ 114/10/12	Symmetric-Key Encipherment	
5	114/10/13~ 114/10/19	Symmetric-Key Encipherment	
6	114/10/20~ 114/10/26	Symmetric-Key Encipherment	
7	114/10/27~ 114/11/02	Asymmetric-Key Encipherment	
8	114/11/03~ 114/11/09	Asymmetric-Key Encipherment	
9	114/11/10~ 114/11/16	Midterm Exam Week	
10	114/11/17~ 114/11/23	Asymmetric-Key Encipherment	
11	114/11/24~ 114/11/30	Message Integrity and Message Authentication	
12	114/12/01~ 114/12/07	Message Integrity and Message Authentication	
13	114/12/08~ 114/12/14	User Authentication and Access Control	
14	114/12/15~ 114/12/21	User Authentication and Access Control	
15	114/12/22~ 114/12/28	Firewalls, Intrusion Detection and Prevention Systems	
16	114/12/29~ 115/01/04	Final Week of Diverse Assessments	
17	115/01/05~ 115/01/11	Final Week of Diverse Assessments/Flexible Teaching Week for Teachers	
18	115/01/12~ 115/01/18	Flexible Teaching Week for Teachers	
Key capabilities		Information Technology	
Interdisciplinary		STEAM course (S:Science, T:Technology, E:Engineering, M:Math, A field:Integration of Art and Humanist)	
Distinctive teaching			

Course Content	Computer programming or Computer language (students have hands-on experience in related projects)
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。
Textbooks and Teaching Materials	Using teaching materials from other writers:Textbooks Name of teaching materials: Computer Security: Principles and Practice, 5th ed, William Stallings and Lawrie Brown, Pearson, 2023
References	Cryptography and Network Security, 1st ed, Behrouz Forouzan, McGraw-Hill Education, 2007 Computer Security: Principles and Practice, 4th ed, William Stallings and Lawrie Brown, Pearson, 2017 Introduction to Computer Security, 1st ed, Michael Goodrich and Roberto Tamassia, Pearson 2010 CompTIA Security+ Study Guide: Exam SY0-501, 1st ed, Emmett Dulaney and Chuck Easttom, Sybex, 2017
Grading Policy	◆ Attendance： 　 % 　◆ Mark of Usual：50.0 % 　◆ Midterm Exam： 20.0 % ◆ Final Exam： 20.0 % ◆ Other〈ClassroomPerformance〉：10.0 %
Note	This syllabus may be uploaded at the website of Course Syllabus Management System at https://web2.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. ※"Adhere to the concept of intellectual property rights" and "Do not illegally photocopy, download, or distribute." Using original textbooks is advised. It is a crime to improperly photocopy others' publications.