

## Tamkang University Academic Year 109, 1st Semester Course Syllabus

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| Course Title  | COMPUTER AND NETWORK SECURITY   | Instructor | FU-YI HUNG   |
| Course Class  | TQIDB3A<br>DIVISION OF APPLIED INFORMATICS,<br>DEPARTMENT OF INNOVATIVE INFORMATION<br>AND TECHNOLOGY (ENGLISH TAUGHT<br>PROGRAM), 3A   | Details    | <ul style="list-style-type: none"> <li>◆ Blended Course</li> <li>◆ Selective</li> <li>◆ One Semester</li> <li>◆ 3 Credits</li> </ul> |
| 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)<br>3. A vision for the future. (ratio:10.00)<br>5. Independent thinking. (ratio:20.00) |   |            |  |
| 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   | E                | 235               | Lecture          | Testing    |
| 2   | E                | 235               | Lecture          | Testing    |
| 3   | E                | 235               | Lecture          | Testing    |

**Course Schedule**

*Note for Blended Course : When utilizing weekly digital instruction, please fill in "Online Asynchronous Instruction".*

| Week | Date                     | Course Contents            | Note                             |
|------|--------------------------|----------------------------|----------------------------------|
| 1    | 109/09/14 ~<br>109/09/20 | Introduction               |                                  |
| 2    | 109/09/21 ~<br>109/09/27 | Introduction               |                                  |
| 3    | 109/09/28 ~<br>109/10/04 | Malware                    |                                  |
| 4    | 109/10/05 ~<br>109/10/11 | Malware                    |                                  |
| 5    | 109/10/12 ~<br>109/10/18 | Symmetric-Key Encipherment | Online Asynchronous Instruction: |
| 6    | 109/10/19 ~<br>109/10/25 | Symmetric-Key Encipherment |                                  |
| 7    | 109/10/26 ~<br>109/11/01 | Symmetric-Key Encipherment |                                  |

|                                  |  |   |                                 |
|----------------------------------|--|---|---------------------------------|
| 8                                | 109/11/02 ~<br>109/11/08   | Asymmetric-Key Encipherment                           | Online Asynchronous Instruction |
| 9                                | 109/11/09 ~<br>109/11/15   | Asymmetric-Key Encipherment                           |                                 |
| 10                               | 109/11/16 ~<br>109/11/22   | Midterm Exam Week                                     |                                 |
| 11                               | 109/11/23 ~<br>109/11/29   | Message Integrity and Message Authentication          |                                 |
| 12                               | 109/11/30 ~<br>109/12/06   | Message Integrity and Message Authentication          |                                 |
| 13                               | 109/12/07 ~<br>109/12/13   | User Authentication and Access Control                |                                 |
| 14                               | 109/12/14 ~<br>109/12/20   | User Authentication and Access Control                |                                 |
| 15                               | 109/12/21 ~<br>109/12/27   | Firewalls, Intrusion Detection and Prevention Systems |                                 |
| 16                               | 109/12/28 ~<br>110/01/03   | Firewalls, Intrusion Detection and Prevention Systems |                                 |
| 17                               | 110/01/04 ~<br>110/01/10   | Final Presentation                                    |                                 |
| 18                               | 110/01/11 ~<br>110/01/17   | Final Exam Week                                       |                                 |
| Requirement                      | <p>Cheating or plagiarism will receive a semester grade of zero for this course.<br/>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.<br/>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 |  |   |                                 |
| References                       | <p>Cryptography and Network Security, 1st ed, Behrouz Forouzan, McGraw-Hill Education, 2007</p> <p>Computer Security: Principles and Practice, 4th ed, William Stallings and Lawrie Brown, Pearson, 2017</p> <p>Introduction to Computer Security, 1st ed, Michael Goodrich and Roberto Tamassia, Pearson 2010</p> <p>CompTIA Security+ Study Guide: Exam SY0-501, 1st ed, Emmett Dulaney and Chuck Easttom, Sybex, 2017</p>   |   |                                 |
| Number of Assignment(s)          | 12 (Filled in by assignment instructor only)   |   |                                 |
| Grading Policy                   | <p>◆ Attendance :            %    ◆ Mark of Usual : 32.0 %    ◆ Midterm Exam : 28.0 %</p> <p>◆ Final Exam :    28.0 %</p> <p>◆ Other &lt;Assignments&gt; : 12.0 %</p>  |   |                                 |

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| Note | <ol style="list-style-type: none"><li>1. This syllabus may be uploaded at the website of the Course Syllabus Management System at <a href="https://info.ais.tku.edu.tw/csp">https://info.ais.tku.edu.tw/csp</a> or through the link of the Course Syllabus Upload posted on the home page of the TKU Office of Academic Affairs <a href="http://www.acad.tku.edu.tw/CS/main.php">http://www.acad.tku.edu.tw/CS/main.php</a></li><li>2. According to the Implementation regulations of distance education for junior college and above are prescribed pursuant to Article 2, "The distance learning course referred to in these Measures refers to more than one-half of the teaching hours in each subject."</li><li>3. According to the regulations of Tamkang University Enforcement Rules for digital teaching, Paragraph 2 and Article 3, the distance learning course of our school must be "The course of digital teaching with distance learning platform or synchronous video system in our school. Teaching Hours include course lectures, teacher-student interaction discussions, quizzes and other learning activities."</li><li>4. If there are any temporary course changes (including time changes and classroom changes of distance learning courses, blended courses), please make out an application according to regulations to the Office of Academic Affairs.</li></ol> <p><b>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</b></p> |
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