# Tamkang University Academic Year 113, 1st Semester Course Syllabus

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| Course Title | DISTRIBUTED NETWORKS | Instructor | SHENGZHI HUANG |
| Course Class | TEIBM1A<br>MASTER'S PROGRAM, DEPARTMENT OF COMPUTER SCIENCE AND INFORMATION ENGINEERING (ENGLISH-TAUGHT PROGRAM), 1A | Details | ◆ General Course<br>◆ Selective<br>◆ One Semester<br>◆ 2 Credits |
| Relevance to SDGs | SDG9 Industry, Innovation, and Infrastructure | | |

## Departmental Aim of Education

Ⅰ. Cultivate the ability to conduct independent research and problem solving.

Ⅱ. Strengthen creativity and research capacity.

Ⅲ. Build profound professional knowledge in computer science and information engineering.

Ⅳ. Engage in self-directed lifelong learning.

## Subject Departmental core competences

A. Independent problem solving ability.(ratio:20.00)

B. Independent innovative thinking ability.(ratio:20.00)

C. Research paper writing and presentation ability.(ratio:20.00)

D. Research & development (R&D) ability in information engineering.(ratio:20.00)

E. Project execution and control ability.(ratio:10.00)

F. Lifelong self-directed learning ability.(ratio:10.00)

## Subject Schoolwide essential virtues

1. A global perspective. (ratio:10.00)

2. Information literacy. (ratio:20.00)

3. A vision for the future. (ratio:20.00)

4. Moral integrity. (ratio:10.00)

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)

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| Course Introduction | This course explores the principles and practices of distributed networks, focusing on the design, implementation, and management of network systems that operate across multiple, interconnected devices. Students will gain a deep understanding of how distributed networks function, including key concepts such as network topologies, protocols, data consistency, and fault tolerance. Also, this course will share the information about the update-to-date research progress by asking students to read selected papers in this research areaI |

**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 | This course will teach the knowledge of distributed computer network systems, including fundamental, platforms, networking and applications. | Cognitive |

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

| No. | Core Competences | Essential Virtues | Teaching Methods | Assessment |
|---|---|---|---|---|
| 1 | ABCDEF | 12345678 | Lecture, Discussion | Testing, Report(including oral and written) |

Course Schedule

| Week | Date | Course Contents | Note |
|---|---|---|---|
| 1 | 113/09/09 ~ 113/09/15 | Introduction to distributed network systems | |
| 2 | 113/09/16 ~ 113/09/22 | Introduction to distributed network systems | |
| 3 | 113/09/23 ~ 113/09/29 | Distributed network system architectures | |
| 4 | 113/09/30 ~ 113/10/06 | Distributed network system architectures | |
| 5 | 113/10/07 ~ 113/10/13 | National Day (Holiday) | |

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| 6 | 113/10/14 ~ 113/10/20 | Distributed network system architectures | |
| 7 | 113/10/21 ~ 113/10/27 | Distributed network processed | |
| 8 | 113/10/28 ~ 113/11/03 | Distributed network processed | |
| 9 | 113/11/04 ~ 113/11/10 | Midterm Exam | |
| 10 | 113/11/11 ~ 113/11/17 | Distributed network communication models | |
| 11 | 113/11/18 ~ 113/11/24 | Paper study and presentation of selected topics | |
| 12 | 113/11/25 ~ 113/12/01 | Paper study and presentation of selected topics | |
| 13 | 113/12/02 ~ 113/12/08 | Paper study and presentation of selected topics | |
| 14 | 113/12/09 ~ 113/12/15 | Paper study and presentation of selected topics | |
| 15 | 113/12/16 ~ 113/12/22 | Paper study and presentation of selected topics | |
| 16 | 113/12/23 ~ 113/12/29 | Paper study and presentation of selected topics | |
| 17 | 113/12/30 ~ 114/01/05 | Paper study and presentation of selected topics | |
| 18 | 114/01/06 ~ 114/01/12 | Flexibility | |

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| 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 | Logical Thinking |
| Requirement | |
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| Textbooks and Teaching Materials | Self-made teaching materials:Presentations<br>Using teaching materials from other writers:Textbooks<br>Name of teaching materials:<br>Distributed Systems 4th edition<br>(https://www.distributed-systems.net/index.php/books/ds4/) |
| References | |
| Grading Policy | ◆ Attendance： 20.0 % ◆ Mark of Usual： % ◆ Midterm Exam： 40.0 %<br>◆ Final Exam： %<br>◆ Other〈presentation〉：40.0 % |
| 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 .<br>**※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.** |