Tamkang University Academic Year 111, 2nd Semester Course Syllabus

Course Title	FLUID MECHANICS	Instructor	CHIEH-HSUN WU
Course Class	TECXB2A DEPARTMENT OF CIVIL ENGINEERING, 2A	Details	◆ General Course ◆ Required ◆ One Semester
Relevance to SDGs	SDG4 Quality education		

Departmental Aim of Education

Ⅰ. Cultivate students' professional knowledge of civil engineering and attitude towards self-learning to satisfy demands for employment and advanced studies.

Ⅱ. Cultivate students' abilities of engineering project execution and practical views of coordination.

Ⅲ. Cultivate students' information technology skills for innovation implementation.

Ⅳ. Cultivate students' engineering ethics, liberal arts mind, and global perspectives.

Subject Departmental core competences

A. Civil Engineering Professional Proficiency.(ratio:65.00)

B. Implementation and Information Processing Ability.(ratio:5.00)

C. Team collaboration and Knowledge Integration Ability.(ratio:25.00)

D. Globalization and Continuous Learning.(ratio:5.00)

Subject Schoolwide essential virtues

1. A global perspective. (ratio:7.00)

2. Information literacy. (ratio:22.00)

3. A vision for the future. (ratio:13.00)

4. Moral integrity. (ratio:7.00)

5. Independent thinking. (ratio:30.00)

6. A cheerful attitude and healthy lifestyle. (ratio:7.00)

7. A spirit of teamwork and dedication. (ratio:7.00)

8. A sense of aesthetic appreciation. (ratio:7.00)

Course Introduction	This is an introductory course in which the behavior of fluids at rest and in motion is to be presented and explored. The contents include those aspects of fluid properties, fluid statics, fluid kinematics, and fluid dynamics. Also addressed is the theoretical analysis of fluid flow, dimensional analysis, and modeling.

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 let the students understand the behavior of fluids at rest and in motion.	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCD	12345678	Lecture, Discussion	Testing, Study Assignments

Course Schedule

Week	Date	Course Contents	Note
1	112/02/13 ~ 112/02/19	Introduction	
2	112/02/20 ~ 112/02/26	Fluid Statics	
3	112/02/27 ~ 112/03/05	Fluid Statics	2/27-2/28 228 memorial days
4	112/03/06 ~ 112/03/12	Elementary Fluid Dynamics	
5	112/03/13 ~ 112/03/19	Elementary Fluid Dynamics	

6	112/03/20 ~ 112/03/26	Fluid Kinematics	
7	112/03/27 ~ 112/04/02	Fluid Kinematics	
8	112/04/03 ~ 112/04/09	Fluid Kinematics	4/3-4/7 study week
9	112/04/10 ~ 112/04/16	Fluid Kinematics	
10	112/04/17 ~ 112/04/23	Midterm Exam Week	
11	112/04/24 ~ 112/04/30	Finite Control Volume Analysis	
12	112/05/01 ~ 112/05/07	Finite Control Volume Analysis	
13	112/05/08 ~ 112/05/14	Finite Control Volume Analysis	
14	112/05/15 ~ 112/05/21	Finite Control Volume Analysis	
15	112/05/22 ~ 112/05/28	Similitude, Dimensional Analysis, and Modeling	
16	112/05/29 ~ 112/06/04	Similitude, Dimensional Analysis, and Modeling	
17	112/06/05 ~ 112/06/11	Similitude, Dimensional Analysis, and Modeling	
18	112/06/12 ~ 112/06/18	Final Exam Week	

Requirement	Show your effort!
Teaching Facility	Computer, Projector
Textbooks and Teaching Materials	"Brief Introduction to Fluid Mechanics" by Young
References	
Number of Assignment(s)	(Filled in by assignment instructor only)
Grading Policy	◆ Attendance： 10.0 % ◆ Mark of Usual：40.0 % ◆ Midterm Exam： 25.0 % ◆ Final Exam： 25.0 % ◆ Other〈 〉： %
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.**