Tamkang University Academic Year 114, 1st Semester Course Syllabus

Course Title	AIR TRANSPORTATION	Instructor	CHIEH-YU HSIAO
Course Class	TLTXM1A MASTER'S PROGRAM, DEPARTMENT OF TRANSPORTATION MANAGEMENT, 1A	Details	◆ General Course ◆ Selective ◆ One Semester ◆ 3 Credits
Relevance to SDGs	SDG3 Good health and well-being for people SDG8 Decent work and economic growth SDG9 Industry, Innovation, and Infrastructure SDG11 Sustainable cities and communities		

Departmental Aim of Education

Ⅰ. To understand basic transportation theories.

Ⅱ. To familiarize with practical procedures of solving problems.

Ⅲ. To enhance language expression and interpersonal communication.

Ⅳ. To expand ability of system analysis and interdisciplinary integration.

Ⅴ. To develop transportation ethics and humanistic quality.

Subject Departmental core competences

A. To obtain basic ability of research on transportation theories.(ratio:30.00)

B. To obtain ability to practically solve problems.(ratio:25.00)

C. To obtain ability of language expression and interpersonal communication.(ratio:10.00)

D. To obtain ability of transportation system analysis and interdisciplinary integration. (ratio:30.00)

E. To develop transportation ethics, humanistic quality, and innovative thinking.(ratio:5.00)

Subject Schoolwide essential virtues

1. A global perspective. (ratio:20.00)

2. Information literacy. (ratio:20.00)

3. A vision for the future. (ratio:15.00)

4. Moral integrity. (ratio:5.00)

5. Independent thinking. (ratio:20.00)

6. A cheerful attitude and healthy lifestyle. (ratio:5.00)

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

8. A sense of aesthetic appreciation. (ratio:5.00)

Course Introduction	This course introduces fundamental knowledge of air transportation for students. The main topics include the components of the air transportation system, analyses of air market supply and demand, airport planning and management, airline operations and management, and regulations on air transportation. After finishing the course, students are expected to have a better understanding of the air transportation system, and be able to solve aviation related problems by applying the introduced knowledge and skills.

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 learn the knowledge of Air Transportation.	Cognitive
2	To apply appropriate methods to analyze and solve air transportation problems.	Psychomotor

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ACD	1235	Lecture, Discussion, Practicum	Testing, Study Assignments, Discussion(including classroom and online)
2	ABCDE	12345678	Lecture, Discussion, Publication, Practicum	Testing, Study Assignments, Discussion(including classroom and online), Practicum, Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note

1	114/09/15～ 114/09/21	Course introduction (課程簡介); The components of the air transportation system (空運系統組成要件)	
2	114/09/22～ 114/09/28	Characteristics and developments of the aviation industry (航空運輸產業特性與發展)	
3	114/09/29～ 114/10/05	Civil aviation authorities, Freedom rights, Aircraft (重要民航組織、航權、航空器)	
4	114/10/06～ 114/10/12	Air navigation sevices (飛航管制)	
5	114/10/13～ 114/10/19	Air transportation supply and demand analyses (航空運輸供給與需求分析)	
6	114/10/20～ 114/10/26	Analyses and forecasts for air transportation markets (航空運輸市場分析與預測)	
7	114/10/27～ 114/11/02	Airport planning (機場規劃)	
8	114/11/03～ 114/11/09	Airport design and planning for the ground access system (機場設計、機場地面運輸規劃)	
9	114/11/10～ 114/11/16	Airport capacity and delay analyses (機場容量與延滯分析)	
10	114/11/17～ 114/11/23	Airport demand management (機場需求分析與管理)	
11	114/11/24～ 114/11/30	Midterm Exam (期中考試)	
12	114/12/01～ 114/12/07	Economic characteristics of airlines; Fleet planning and scheduling (航空公司經濟特性、航空公司機隊與排程規劃)	
13	114/12/08～ 114/12/14	Airline costs and pricing; Airline revenue management (航空公司定價與成本、航空公司營收管理)	
14	114/12/15～ 114/12/21	Economic, safety, and environmental regulations (航空運輸經濟、安全管制與永續議題)	
15	114/12/22～ 114/12/28	Pricing and subsidy for air services (航空運輸定價與補貼)	
16	114/12/29～ 115/01/04	Final Project Presentations and Discussions (期末報告與檢討)	
17	115/01/05～ 115/01/11	Final Project Presentations and Discussions (期末報告與檢討)	
18	115/01/12～ 115/01/18	Field Trip: Time and Location to be Determined (參訪：時間地點待定)	

Key capabilities	self-directed learning International mobility Information Technology Problem solving Interdisciplinary
Interdisciplinary	STEAM course (S:Science, T:Technology, E:Engineering, M:Math, A field:Integration of Art and Humanist) Competency-based education 'competency exploration' sustained competency or global issues STEEP (Society, Technology, Economy, Environment, and Politics)
Distinctive teaching	Special/Problem-Based(PBL) Courses
Course Content	Logical Thinking Green Energy Sustainability issue
Requirement	
Textbooks and Teaching Materials	Self-made teaching materials:Presentations, Handouts Name of teaching materials: References including but not limited to: 1. de Neufville, R. & A. Odoni, Airport Systems Planning, Design, and Management, McGraw-Hill, 2013. 2. IATA, Introduction to Air Transportation Distance Learning Manual, Montreal, 2005. 3. Vasigh, B., K. Fleming & T. Tacker, Introduction to Air Transport Economics: from Theory to Applications, Ashgate Pub., 2018. 4. Doganis, R., Flying off Course: the Economics of International Airlines, Routledge, 2009. 5. Young, S. & A. Well, Airport Planning and Management, McGraw-Hill Professional, 7 edition, 2019. 6. 馮正民、賈凱傑、方志文、葉文健，航空運輸管理，滄海書局，2015。
References	1. J. G. Wensveen, Air Transportation: A Management Perspective, Ashgate Publishing, 2015. 2. Horonjeff, R., F. X. McKelvey, W. Sproule &, S. Young, Planning and Design of Airports, McGraw-Hill, 2010. 3. 張有恆，航空運輸學，華泰文化，2023。
Grading Policy	◆ Attendance： 10.0 % ◆ Mark of Usual：30.0 % ◆ Midterm Exam： 30.0 % ◆ Final Exam： % ◆ Other〈Final Project〉：30.0 %
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.