

Tamkang University Academic Year 111, 2nd Semester Course Syllabus

Course Title	INFORMATION VISUALIZATION	Instructor	CHIA-LING CHANG
Course Class	TABXB2P DEPARTMENT OF INFORMATION AND LIBRARY SCIENCE, 2P	Details	<ul style="list-style-type: none"> ◆ Blended Course ◆ Selective ◆ One Semester ◆ 2 Credits
Relevance to SDGs	SDG4 Quality education SDG8 Decent work and economic growth SDG10 Reducing inequalities		
Departmental Aim of Education			
Our mission is to educate and train library and information professionals.			
Subject Departmental core competences			
A. To understand concepts relating to library and information science and to grasp the relevant trends.(ratio:5.00) B. To acquire professional abilities to develop, organize, preserve and integrate all sorts of information resources.(ratio:15.00) C. To understand concepts relating to information technology and systems, and be able to put them in use.(ratio:20.00) D. To acquire communication and coordination skills required for the information services. (ratio:20.00) E. To acquire management skills required by different types of libraries and information organizations.(ratio:10.00) F. To acquire professional skills to manage electronic documents and archives.(ratio:20.00) G. To acquire integration ability of library services and traditional publishing.(ratio:5.00) H. To acquire integration ability of library services and digital publishing.(ratio:5.00)			
Subject Schoolwide essential virtues			
1. A global perspective. (ratio:5.00) 2. Information literacy. (ratio:20.00) 3. A vision for the future. (ratio:5.00) 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:20.00)

8. A sense of aesthetic appreciation. (ratio:20.00)

Course Introduction

This course cultivates talents who use visualization tools to present and analyze data. The course ranges from an introduction to image communication to basic concepts of visualization, various data characteristics, and corresponding visualization analysis methods, to statistical methods used in data visualization. This class focuses on graphic narration and teaches students to quickly interpret and discover key issues from data. This course mainly uses Excel, PowerBI, word cloud, and other visualization tools.

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 will understand and be able to construct big data thinking	Cognitive
2	Students will be able to employ big data visualization.	Psychomotor
3	Students will interpret and understand information visualization.	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDGH	1234	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written), Activity Participation

2	FGH	345678	Lecture, Discussion	Testing, Study Assignments, Discussion(including classroom and online), Report(including oral and written)
3	CEFGH	1234567	Lecture, Discussion	Study Assignments, Discussion(including classroom and online), Report(including oral and written)

Course Schedule

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

Week	Date	Course Contents	Note
1	112/02/13 ~ 112/02/19	Introduction	
2	112/02/20 ~ 112/02/26	Information Visualization and Image Communication	
3	112/02/27 ~ 112/03/05	Image Communication 2	
4	112/03/06 ~ 112/03/12	Visualization in narrative statistics applications and examples	Online Asynchronous Instruction
5	112/03/13 ~ 112/03/19	Visualization in inferential statistics applications and examples	Online Asynchronous Instruction
6	112/03/20 ~ 112/03/26	Big Data analysis- interpreting and understanding data&Telling Stories with Data Visualization	
7	112/03/27 ~ 112/04/02	Midterm Group report 1	
8	112/04/03 ~ 112/04/09	Spring Festival	
9	112/04/10 ~ 112/04/16	Midterm Group report 2	
10	112/04/17 ~ 112/04/23	Midterm Exam Week	
11	112/04/24 ~ 112/04/30	Data processing with Excel and PowerBI 1	Online Asynchronous Instruction
12	112/05/01 ~ 112/05/07	Quantitative chart with Excel and PowerBI	Online Asynchronous Instruction
13	112/05/08 ~ 112/05/14	Big data analysis and data exploration with PowerBI	
14	112/05/15 ~ 112/05/21	Understand the meaning of the data through a variety of different visualization charts with PowerBI	
15	112/05/22 ~ 112/05/28	Group report 1	
16	112/05/29 ~ 112/06/04	Group report 2	

17	112/06/05 ~ 112/06/11	Comprehensive discussion	
18	112/06/12 ~ 112/06/18	Final Exam Week	
Requirement	<p>1. The textbooks are English textbooks (slides, data sets, but not including Excel and PowerBI)</p> <p>2. The explanation is only in Chinese, if it is unacceptable, please do not take this course.</p> <p>3. There are classroom activities in each class, which account for 30% of the whole semester. Even if you ask for leave on the same day, you must complete it. If you cannot accept it, please do not take this course. (But if you have any questions, welcome to discuss with the teacher.)</p> <p>4 There are no mid-term and final exams. The mid-term report accounts for 30%, the final group report accounts for 30%, classroom activities account for 30%, and the attendance rate accounts for 10%. If you can't accept it, please don't take this course.</p> <p>5. In the seventeenth week, the teacher will ask you to confirm the grades of the whole semester. If you do not raise any doubts to the teacher, it will be regarded as the default grades for the whole semester. After the seventeenth week, no grade changes will be accepted. If you cannot accept it, please do not Take this course.</p>		
Teaching Facility	Computer		
Textbooks and Teaching Materials	資料視覺化製作充滿說服力的資訊圖表·歐萊禮出版·		
References			
Number of Assignment(s)	(Filled in by assignment instructor only)		
Grading Policy	<p>◆ Attendance : 10.0 % ◆ Mark of Usual : % ◆ Midterm Exam : 30.0 %</p> <p>◆ Final Exam : 30.0 %</p> <p>◆ Other < assignments > : 30.0 %</p>		
Note	<p>1. This syllabus may be uploaded at the website of the Course Syllabus Management System at https://info.ais.tku.edu.tw/csp or through the link of the Course Syllabus Upload posted on the home page of the TKU Office of Academic Affairs http://www.acad.tku.edu.tw/CS/main.php</p> <p>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."</p> <p>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."</p> <p>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.</p> <p>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</p>		