

Tamkang University Academic Year 111, 1st Semester Course Syllabus

Course Title	BIG DATA MINING	Instructor	PEI-YU CHENG
Course Class	TGLXM0A ELECTIVES COURSES BY COLLEGE OF BUSINESS AND MANAGEMENT-MASTER, 0A	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Selective ◆ One Semester
Relevance to SDGs	SDG4 Quality education		
Departmental Aim of Education			
<ul style="list-style-type: none"> I. Acquisition of professional knowledge. II. Learning effective self-planning. III. Theoretical application of practical matters. IV. Interpersonal communication and teamwork. V. Analysis of problems and recommendations. VI. Awareness of Ethics as a global citizen. 			
Subject Departmental core competences			
<ul style="list-style-type: none"> A. Students can demonstrate that they have program advanced knowledge of business and management.(ratio:20.00) B. Students can demonstrate that they have analytical and problem-solving capability. (ratio:40.00) C. Students can demonstrate their oral and written communication skills.(ratio:20.00) D. Students can demonstrate team and interpersonal skill.(ratio:10.00) E. Students are able to demonstrate effective considerations of ethical issues in business situation.(ratio:10.00) 			
Subject Schoolwide essential virtues			
<ul style="list-style-type: none"> 1. A global perspective. (ratio:5.00) 2. Information literacy. (ratio:30.00) 3. A vision for the future. (ratio:20.00) 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 mainly teaches students the theoretical foundations of Big Data Analysis and tools; through a series of data analysis examples, it cultivates students' ability to solve real problems through big data analysis and data mining.

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	Learn big data analysis and tools and how to perform data analysis using the libraries and tools.	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABCDE	12345678	Lecture, Discussion, Publication, Practicum, Experience, Imitation	Study Assignments, Report(including oral and written), Activity Participation

Course Schedule

Week	Date	Course Contents	Note
1	111/09/05 ~ 111/09/11	Course Introduction	
2	111/09/12 ~ 111/09/18	Introduction to Data Analysis & Setup the Development Environment	

3	111/09/19 ~ 111/09/25	Python Fundamentals (1)	
4	111/09/26 ~ 111/10/02	Python Fundamentals (2)	
5	111/10/03 ~ 111/10/09	Statistics Fundamentals	
6	111/10/10 ~ 111/10/16	Data Manipulations (1)	
7	111/10/17 ~ 111/10/23	Data Manipulations (2)	
8	111/10/24 ~ 111/10/30	Data Filtering and Cleaning (1)	
9	111/10/31 ~ 111/11/06	Data Filtering and Cleaning (2)	
10	111/11/07 ~ 111/11/13	Libraries and Tools for Data Analytics (1)	
11	111/11/14 ~ 111/11/20	Libraries and Tools for Data Analytics (2)	
12	111/11/21 ~ 111/11/27	Libraries and Tools for Data Analytics (3)	
13	111/11/28 ~ 111/12/04	Libraries and Tools for Data Analytics (4)	
14	111/12/05 ~ 111/12/11	Visualization (1)	
15	111/12/12 ~ 111/12/18	Visualization (2)	
16	111/12/19 ~ 111/12/25	Team Project	
17	111/12/26 ~ 112/01/01	Team Project	
18	112/01/02 ~ 112/01/08	Final Product Presentation	
Requirement			
Teaching Facility		Computer, Projector	
Textbooks and Teaching Materials			
References			
Number of Assignment(s)		6 (Filled in by assignment instructor only)	
Grading Policy		◆ Attendance : 15.0 % ◆ Mark of Usual : 45.0 % ◆ Midterm Exam : % ◆ Final Exam : % ◆ 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>.

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