

Tamkang University Academic Year 108, 1st Semester Course Syllabus

Course Title	TIME SERIES	Instructor	YA-MEI, CHANG
Course Class	TLSXM1A MASTER'S PROGRAM, DEPARTMENT OF STATISTICS, 1A	Details	<ul style="list-style-type: none"> ◆ General Course ◆ Selective ◆ One Semester
D e p a r t m e n t a l A i m o f E d u c a t i o n			
<p>I . Cultivate students with ability to conduct research on statistical theory.</p> <p>II . Cultivate students with ability for statistical programming.</p> <p>III . Cultivate students to become statistical professionals with management capabilities.</p> <p>IV . Cultivate students with international perspectives.</p>			
S u b j e c t D e p a r t m e n t a l c o r e c o m p e t e n c e s			
<p>A. Ability to conduct research of statistical theory.(ratio:40.00)</p> <p>B. Data analysis skills.(ratio:40.00)</p> <p>D. Logical thinking ability.(ratio:20.00)</p>			
S u b j e c t S c h o o l w i d e e s s e n t i a l v i r t u e s			
<p>2. Information literacy. (ratio:50.00)</p> <p>3. A vision for the future. (ratio:20.00)</p> <p>5. Independent thinking. (ratio:30.00)</p>			
Course Introduction	An introduction to time series and its application		

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	Time series data	Cognitive
2	Time series methods	Cognitive
3	Time series data analysis	Cognitive
4	Time series software application	Cognitive

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

No.	Core Competences	Essential Virtues	Teaching Methods	Assessment
1	ABD	2	Lecture, Discussion	Testing, Study Assignments, Report(including oral and written)
2	ABD	2	Lecture, Discussion	Testing, Study Assignments, Report(including oral and written)
3	ABD	2	Lecture, Discussion	Testing, Study Assignments, Report(including oral and written)
4	ABD	2	Lecture, Discussion	Testing, Study Assignments, Report(including oral and written)

Course Schedule

Week	Date	Course Contents	Note
1	108/09/09 ~ 108/09/15	Chapter 1 Characteristics of time series	
2	108/09/16 ~ 108/09/22	Chapter 2 Time series regression	
3	108/09/23 ~ 108/09/29	Chapter 2 Time series regression	

4	108/09/30 ~ 108/10/06	Chapter 2 Time series regression	
5	108/10/07 ~ 108/10/13	Chapter 3 ARIMA models	
6	108/10/14 ~ 108/10/20	Chapter 3 ARIMA models	
7	108/10/21 ~ 108/10/27	Chapter 3 ARIMA models	
8	108/10/28 ~ 108/11/03	Chapter 4 Spectral analysis and filtering	
9	108/11/04 ~ 108/11/10	Midterm	
10	108/11/11 ~ 108/11/17	Chapter 4 Spectral analysis and filtering	
11	108/11/18 ~ 108/11/24	Chapter 4 Spectral analysis and filtering	
12	108/11/25 ~ 108/12/01	Chapter 5 Additional time domain topics	
13	108/12/02 ~ 108/12/08	Chapter 5 Additional time domain topics	
14	108/12/09 ~ 108/12/15	Chapter 6 State-space models	
15	108/12/16 ~ 108/12/22	Chapter 6 State-space models	
16	108/12/23 ~ 108/12/29	Chapter 6 State-space models	
17	108/12/30 ~ 109/01/05	Final Report	
18	109/01/06 ~ 109/01/12	Final Report	
Requirement			
Teaching Facility	Computer, Projector		
Textbooks and Teaching Materials	Shumway and Stoffer (2011), Time series analysis and its application: with R examples (third edition)		
References			
Number of Assignment(s)	(Filled in by assignment instructor only)		
Grading Policy	◆ Attendance : 10.0 % ◆ Mark of Usual : 30.0 % ◆ Midterm Exam : 30.0 % ◆ Final Exam : 30.0 % ◆ Other () : %		

Note	<p>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 .</p> <p>※ Unauthorized photocopying is illegal. Using original textbooks is advised. It is a crime to improperly photocopy others' publications.</p>
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