

[별첨1-2. 강의탑재신청서]

서강 OCW 강의탑재 신청서

※ 하단에 기재해 주신 내용이 OCW 홈페이지에 공개됩니다.

1. Introduction to Education

과목명(국문)/영문명/과목번호
경영환경에서의 시계열자료분석과 예측(캡스톤디자인) Time series data analysis and forecasting under business environment (capstone design) MGT4206
대상학년
2~4학년
강의소개
경영환경에서 사용되는 많은 시계열 자료를 통계적 기법을 활용하여 다루는 방법을 학습한다. 다양한 시계열 분석기법으로 1) 다중회귀분석 2) 분해모델, 3) ARMA 모델, 4) ARIMAX 모델, 5) 스펙트럴 분석을 학습한다. 다양한 숙제와 실제 자료를 이용한 중간 프로젝트 및 기말 팀 프로젝트를 통해서 수업시간에 학습한 분석 방법을 직접 적용해 보고, 발표 및 피드백 시간을 통해서 명확한 이해를 돕는 시간을 갖는다.
과목 카테고리
※ 해당 카테고리에 <input checked="" type="checkbox"/> 체크해 주십시오. 중복선택은 불가합니다. (교양과목은 General Education 선택) Humanities (<input type="checkbox"/>), General Education (<input type="checkbox"/>), Social Sciences (<input type="checkbox"/>), Natural Sciences (<input type="checkbox"/>), Engineering (<input type="checkbox"/>), Economics (<input type="checkbox"/>), Business (<input checked="" type="checkbox"/>), Communication (<input type="checkbox"/>), Law (<input type="checkbox"/>)

2. About Professor

교수소개
<ul style="list-style-type: none"> ○ 교수명: 김 명 석 ○ E-mail : ○ 기 타: 경영학과 비즈니스 애널리틱스 전공분야 교수

3. Syllabus

I. Course Description

1. Description							
This course is an introduction to the use and limitation of mathematical and statistical techniques in management contexts. Several statistical techniques are covered and examined for application in quantitative decision-making. The main purpose of the course is to provide useful information and methodology for the actual statistical data analysis. There are two aspects to meeting these goals. Homework materials or class projects will include practical examples with tremendous savings in many areas.							
2. Prior learning contents							
Business Statistics (You do not need any rigorous statistical analysis background) You will learn and review from basic statistics in the class.							
3. Course Format(%)							
Lecture	Discussion	Experiment/Practice	Field study	individual/T	Others/ Extra		
70%	30%	%	%	%	%		
4. Evaluation(%)							
mid-term exam	final team project	Quiz	Presentation	mid-project	Assignments	Participation	Others/ Extra
%	30%	%	%	20%	40%	10%	%

II .

Course Purpose

<p>Knowledge: The education of the following statistical techniques: (1) Multiple Regression Model (2) Logistic Regression Model (3) Decomposition Model (Trend, Seasonality), (4) Auto Regressive Integrated Moving Average (ARIMA) Model, (5) ARMA with exogeneous variable (ARMAX) model, (6) Spectral Analysis</p>
<p>Skill: You will learn how statistical techniques above are actually used in practice. Homework materials or class projects will include practical examples with tremendous savings in many areas.</p>
<p>Attitude: The course covers globalization through various international case studies to resolve problems. Also the course emphasizes ethical standards to protect professional integrity and to minimize ethical breaches. Finally, the course pursues the Excellencies in a view of professional analyst by introducing practical data analysis with statistics computer software as well as statistical theories.</p>

III. Course Format

Total 4~6 Homeworks

Mid-term project: **Individual based project** (Multiple regression or logistic regression analysis)

Final project: **Team project** (Time series data analysis):
presentation (10%) +final report (20%)

IV. Course Requirements

Business Statistics.

Even though you do not have any rigorous statistical background, you do not need to worry about it. You will learn from the basic in this course step by step. At the end of this course, you will be able to handle data and know how to analyze the data.

V. Course Policy

Attendance Policy:

You are expected to attend class on a regular basis and are responsible for all material discussed in class. Any student with more than three unexcused absences may be dropped from the class. Any necessary absence occurring while a student is representing the Business School in some official way will be considered an excused absence.

Homework Policy:

1. You are encouraged to discuss the homework problems with your class mates, but should try to solve them for yourself.
2. If you hand-in your homework without enough explanation to your answers, you will receive only partial scores.
3. You will receive partial scores for the late hand-ins.

Cheating:

Cheating will not be tolerated. Anyone caught due to the cheating will be immediately removed from the class list and receive an "F" for the course with a disciplinary punishment.

VI. Materials and References

1. Class materials and class related announcements will be uploaded at Sogang Cyber Campus before the class (<http://cybernet.sogang.ac.kr/>).

2. References:

- [1] Tsay, R.S. (2005), Analysis of Financial Time Series, Wiley, New Jersey, USA.
- [2] Doane, D.P., Seward, L.E. (2007), Applied Statistics in Business and Economics (Ch. 14), McGraw Hill, Boston, USA.
- [3] Casella, G., Berger R.L. (1990) Statistical Inference, Duxbury, California, USA.
- [4] Cryer, J.D., Chan, K. (2008) Time Series Analysis with Applications in R, Springer, New York, USA.

VII. Course schedule(chapters)

Before Mid-term:

- 1) Review of statistics
- 2) Simple & multiple regression analysis techniques,
- 3) Logistic regression model
- 4) Introduction of time series data analysis

After Mid-term:

- 5) Decomposition model
- 6) Autoregressive model
- 7) ARIMA model
- 8) ARMAX model
- 9) Spectral analysis

4. Etc

강의노트는 사이버캠퍼스에서 다운로드 가능하며, OCW로 공대되어 있음