اعتماد
NCAAA

T4
2020

Course Specifications

Course Title:	**PREDICTION OF BUSINESS**
Course Code:	**MGT 212**
Program:	**BSBA**
Department:	**Management**
College:	**College of Business Administration**
Institution:	**Prince Sattam Bin Abdulaziz University**

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A. Course Identification

1. Credit hours: 4	

2. Course type

a. University ☐ College ☑ Department ☐ Others ☐

b. Required ☐ Elective ☐

3. Level/year at which this course is offered: V / Third Year

4. Pre-requisites for this course (if any)**: Business Statistics-II (MGT 113)**

5. Co-requisites for this course (if any)**: N / A**

6. Mode of Instruction (mark all that apply)

No	Mode of Instruction	Contact Hours	Percentage
1	**Traditional classroom**	44	100
2	**Blended**		
3	**E-learning**		
4	**Distance learning**		
5	**Other**		

7. Contact Hours (based on academic semester)

No	Activity	Contact Hours
1	**Lecture**	44
2	**Laboratory/Studio**	
3	**Tutorial**	
4	**Others** (specify)	
	Total	44

B. Course Objectives and Learning Outcomes

Course Objectives: The overall objective of the course is to teach the student the importance of predicting the future for the purpose of planning and decision making via the use of quantitative tools. The following topics will be discussed: introduction to forecasting (its importance, usage and problems), forecasting methods: moving averaging methods, exponential smoothing methods, ARIMA models for stationary and non-stationary time series including estimation of parameters of the model, diagnostic checking and use of the model in forecasting time series.

Learning Outcomes:

* List methods for the analysis and synthesis of data using a range of mathematical techniques, supported by appropriate software to inform business decision.

* Recognize the process and practices for the effective management of organizations and decision making within them.

* Analyse, synthesize and apply the knowledge and understanding of concepts and theories described in the knowledge category above to business problems.

* Create, evaluate and assess arrange of options together with the capacity to apply ideas and knowledge to a range of business situations using appropriate quantitative and qualitative skill.

* Interpret; extrapolate, including data analysis, to issues and problems in business by applying numeracy and quantitative skill.

*Interpret accounting, business and economic data including material published in the business and financial press, in periodicals and on websites.

* Work effectively in groups and exercise leadership when appropriate

* Use basic mathematical and statistical techniques

2. Course Main Objective

- **Illustrate Quantitative forecasting and, Qualitative forecasting.**
- **Analyze Moving Averages and Exponential Smoothing.**
- **Illustrate forecasting with regression methods.**
- **Demonstrate the Time series decomposition**
- **Define ARIMA Models**

3. Course Learning Outcomes

	CLOs	Aligned PLOs
1	**Knowledge and understanding**	
1.1	List methods for the analysis and synthesis of data using a range of mathematical techniques, supported by appropriate software to inform business decision	K2
1.2	Recognize the process and practices for the effective management of organizations and decision making within them	K6
1.3		
1...		
2	**Skills :**	
2.1	Analyse, synthesize and apply the knowledge and understanding of concepts and theories described in the knowledge category above to business problems	C2
2.2	Create, evaluate and assess arrange of options together with the capacity to apply ideas and knowledge to a range of business situations using appropriate quantitative and qualitative skill.	C3

	CLOs	Aligned PLOs
2.3	Interpret, extrapolate, including data analysis, to issues and problems in business by applying numeracy and quantitative skill.	C4
2.4	Design models to analyse business problems and phenomena	C5
3	**Values:**	
3.1	Effective work in solving numerical exercises.	
3.2		
3.3		
3...		

C. Course Content

No	List of Topics	Contact Hours
1	**Introduction to Business Forecasting**: Quantitative forecasting, forecasting in business, forecasting in public sector, Forecasting and supply chain management, Collaborative forecasting, Qualitative forecasting, new product forecasting. Two simple naive models. Evaluating forecasts. The forecast process, Data considerations and Model selection: Data patterns trend seasonal and cyclical data. Exploring data pattern using autocorrelation analysis.	12
2	**Moving Averages and Exponential Smoothing:** Moving Average, Weighted Moving Average; Simple Exponential Smoothing; Introduction to Holt's exponential smoothing, Winter's exponential smoothing and Adaptive response rate single exponential smoothing.	8
3	**Introduction to forecasting with regression methods:** the bivariate regression model, steps in regression analysis, forecasting with simple linear trend, using a causal regression model to forecast, statistical evaluation of regression models, using the standard error of the estimate, serial correlation, heteroscedasticity, cross sectional forecasting. Forecasting with multiple regression: (using Excel/SPSS output sheet) the multiple regression model, selecting independent variables, forecasting with multiple regression model, statistical evaluation of multiple regression models, Serial correlation and the omitted variable problem, multicollinearity. Regression with differences. Introduction to curvilinear regression: Quadratic Trend Model, Exponential Trend Model.	12
4	**Time series decomposition:** The basic time series decomposition model, deseasonalizing the data, seasonal forecast and error. Finding seasonal indices, finding the long-term trend, measuring the cyclical component, the time series decomposition forecast. Business Cycle Indicators.	6
5	**ARIMA (Box-Jenkins)**: Type Forecasting Models: Moving average models, autoregressive models, mixed autoregressive and moving average models, ARIMA, the Box-Jenkins identification process.	6
Total		

D. Teaching and Assessment

1. Alignment of Course Learning Outcomes with Teaching Strategies and Assessment Methods

	NQF Learning Domains And Course Learning Outcomes	Course Teaching Strategies	Course Assessment Methods
1.0	**Knowledge**		
1.1	List methods for the analysis and synthesis of data using a range of mathematical techniques, supported by appropriate software to inform business decision @K-2	• Class lectures.	• Quizzes • Assignments • Exams
1.2	Recognize the process and practices for the effective management of organizations and decision making within them @K-6	• Class lectures	• Assignment • Exams
2.0	**Cognitive Skills**		
2.1	Analyse, synthesize and apply the knowledge and understanding of concepts and theories described in the knowledge category above to business problems@C-2	• Class lectures	• Quizzes • Assignments • Exams
2.2	Create, evaluate and assess arrange of options together with the capacity to apply ideas and knowledge to a range of business situations using appropriate quantitative and qualitative skill@C-3	• Class lectures • Mini projects	• Exams • Assignments • Rubric
2.3	Interpret, extrapolate, including data analysis, to issues and problems in business by applying numeracy and quantitative skill@C-4	• Class lectures • Solving numerical questions • Mini projects	• Exams • Assignments • Rubric
2.5	Interpret accounting, business and economic data including material published in the business and financial press, in periodicals and on websites@C-7	• Class lectures • Mini projects	• Assignments • Rubric
3.0	**Interpersonal Skills & Responsibility**		
3.1	Work effectively in groups and exercise leadership when appropriate	• Mini projects	• Rubric
4.0	**Communication, Information Technology, Numerical**		
4.1	Use basic mathematical and statistical techniques	• Class lectures • Solving numerical questions • Mini projects	• Assignment • Exams • Rubric
5.0	**Psychomotor (Not Applicable)**		

2. Assessment Tasks for Students

#	Assessment task*	Week Due	Percentage of Total Assessment Score
1	Assignments	At least 3 Assignments	10
2	Mid Term Examination-1	5th	15
3	Mid Term Examination-2	10th	15
4	Quizzes	At least 3 Quizzes	10
5	Final Examination	13th	50
6	Total		100

*Assessment task (i.e., written test, oral test, oral presentation, group project, essay, etc.)

E. Student Academic Counseling and Support

Arrangements for availability of faculty and teaching staff for individual student consultations and academic advice:

Office hours: 6 hrs/week

F. Learning Resources and Facilities

1.Learning Resources

Required Textbooks	**J. Holton Wilson and Barry Keating (2007), Business Forecasting, Fifth Edition, McGraw Hill International, New York**
Essential References Materials	***John E. Hanke and Dean W. Wichern (2009) Business Forecasting, Ninth Edition, Pearson-Prentice Hall, N.J.** ***Farouk Benghezal (2011), Statistics for Business, Arab world Edition, Pearson Education Limited (Chapter 17)**
Electronic Materials	http://www.excel-easy.com/basics.html http://www.tutorialspoint.com/excel/ https://support.office.com/en-us/article/Excel-2013-videos-and-tutorials-aaae974d-3f47-41d9-895e-97a71c2e8a4a http://www.sama.gov.sa/en-us/EconomicReports/Pages/default.aspx http://www.stats.gla.ac.uk/steps/glossary/time_series.html http://www.itl.nist.gov/div898/handbook/pmc/section4/pmc4.htm http://home.ubalt.edu/ntsbarsh/Business-stat/opre504.htm http://www.statsoft.com/textbook/basic-statistics/
Other Learning Materials	**Multimedia associated with the text book and the relevant websites and MS Excel**

2. Facilities Required

Item	Resources
Accommodation (Classrooms, laboratories, demonstration	Class room

Item	Resources
rooms/labs, etc.)	
Technology Resources (AV, data show, Smart Board, software, etc.)	Smart Board
Other Resources (Specify, e.g. if specific laboratory equipment is required, list requirements or attach a list)	

G. Course Quality Evaluation

Evaluation Areas/Issues	Evaluators	Evaluation Methods
Teaching Evaluation	Students	Indirect
Course Evaluation	Students	Indirect
Learning Resource evaluation	Students	Indirect
Achievements of Learning Outcomes	Students	Indirect
Faculty Evaluation	Head of the Department	Direct
Peer-evaluation	Peer faculty Member	Direct

Evaluation areas (e.g., Effectiveness of teaching and assessment, Extent of achievement of course learning outcomes, Quality of learning resources, etc.)
Evaluators (Students, Faculty, Program Leaders, Peer Reviewer, Others (specify)
Assessment Methods (Direct, Indirect)

H. Specification Approval Data

Council / Committee	
Reference No.	
Date	