

Subject Code	MM5413
Subject Title	Business Forecasting
Credit Value	3
Level	5
Pre-requisite/ Co-requisite/ Exclusion	NIL
Objectives	<p>Forecasting is used to predict the future events or conditions. Forecasts may be either subjective or objective. Due to the increasing availability of different types of data in business, forecasting methods become more and more important in different business situations. This course introduces the fundamentals of applying time-series analysis in supporting business forecast, planning and decision-making.</p> <p>This subject contributes to the achievement of the MSc BA Programme Outcome 1 (Understand the principles and practices of management, marketing, and ethics, and apply theories to solve business issues).</p>
Intended Learning Outcomes	<p>Upon completion of the subject, students will be able to:</p> <ol style="list-style-type: none"> Understand the importance of forecasting in making accurate decisions in business environments. Understand the basics in regression analysis, time-series analysis and their applications in forecasting. Understand how to handle the trend, seasonal and cyclical issues in forecasting analysis. Apply different forecasting methods for different forecasting and planning purposes. Understand the importance of management judgement in business forecasting and planning.
Subject Synopsis/ Indicative Syllabus	<ol style="list-style-type: none"> Characteristics of Data Time Series Regression (Linear, Exponential & Quadratic) Dummy Variable Regression for Modeling Seasonality Moving Average Exponential Smoothing Time Series Multiplicative Decomposition Introduction to ARMA, Box-JenKins Method, ARARMA, and AEP Filtering Management Judgement in Business Forecasting
Teaching/Learning Methodology	<p>The subject will be taught via lectures, and computer lab sessions with a variety of methods as its pedagogy to help students achieve the above learning outcomes.</p> <ol style="list-style-type: none"> General announcement and an opportunity for students to ask questions to address any unfinished thoughts from the previous class; Overview of the current class agenda and its relationship to past discussion; Extended period of students- or instructor-led discussion and practice of the assigned case or exercises. Collaborative learning strategies (learning via discussion in a small group) may be employed during part of this time;

	4. Lab sessions during tutorials to provide students hands-on experiences of using business analytics tools.						
Assessment Methods in Alignment with Intended Learning Outcomes	Specific assessment methods/tasks	% weighting	Intended subject learning outcomes to be assessed (Please tick as appropriate)				
			a	b	c	d	e
	1. Classroom Performance	20%	✓	✓	✓	✓	✓
	2. Individual Assignments	30%	✓	✓	✓	✓	✓
	3. Group Project	20%	✓	✓	✓	✓	✓
	4. Quizzes	30%	✓	✓	✓	✓	✓
	Total	100 %					
<p><i>Notes:</i></p> <ol style="list-style-type: none"> <i>Weighting of assessment methods/tasks in continuous assessment may be different, subject to each subject lecturer.</i> <i>To pass this subject, students are required to obtain Grade D or above in the overall subject grade.</i> <p>Explanation of the appropriateness of the assessment methods in assessing the intended learning outcomes:</p> <ol style="list-style-type: none"> Classroom performance includes the students’ active participation, feedback and contribution in class as well as classwork exercises and Q&A. Its purpose to assess students’ understanding of key technique in individual topics. Individual assignments will be used to assess individual students’ comprehensive power, critical thinking, analytical ability and written skill. Group project enables the students to work as a team to do a more in-depth study of a selected topic and apply the forecasting methods on real business situation. It is to assess their knowledge as well as their research, presentation and written skills. The quiz is a good tool to test students’ capability to handle data and apply the forecasting methods. <p>All above various methods are designed to ensure that all students taking this subject to have a balanced learning experience.</p>							
Student Study Effort Expected	Class contact:						
	▪ Lectures & tutorials						39 Hrs.
	Other student study effort:						
	▪ Preparation for lectures & take-home exercises						26 Hrs.

	<ul style="list-style-type: none"> ▪ Preparation of individual assignment / group project and presentation / quiz 	60 Hrs.
	Total student study effort	125 Hrs.
Reading List and References	<p><u>Reference Books:</u></p> <ol style="list-style-type: none"> 1. Wilson, J. Holton. <i>Business forecasting</i>. Tata McGraw-Hill Education. (latest version) 2. Hanke, John E., Arthur G. Reitsch, and Dean W. Wichern. <i>Business forecasting</i>. Vol. 9. Upper Saddle River, NJ: Prentice Hall. (latest version) 3. Diebold, Francis X. <i>Elements of forecasting</i>. South-Western College Pub. (latest version) 4. Bowerman, Bruce L., Richard T. O'Connell, and Anne B. Koehler. <i>Forecasting, time series, and regression: an applied approach</i>. (latest version) 5. Makridakis, Spyros, and Steven C. Wheelwright. <i>Forecasting methods for management</i>. (latest version). 	