



**ST ALOYSIUS COLLEGE, MANGALURU  
(AUTONOMOUS)**

**MASTER OF BUSINESS ADMINISTRATION  
(MBA)**

**CHOICE BASED CREDIT SYSTEM (CBCS)**

(With effect from 2021-22 onwards)

**ALOYSIUS INSTITUTE OF MANAGEMENT & INFORMATION TECHNOLOGY  
(AIMIT)**

**BEERI, MANGALORE – 575 022**

**[www.staloysius.edu.in](http://www.staloysius.edu.in)**

## **PREAMBLE**

The MBA curriculum is the result of constant innovation and continuous review by the faculty with help from practitioners in the industry and valuable feedback from alumni and students. The Programme revolves around the principle that world-class business leaders are not mass-produced; they are nurtured and developed with personalized care and attention, in small work groups and teams, and in a practical, application-oriented user-friendly environment. It prepares students to manage and lead in global business scenario which is getting increasingly complex and dynamic.

The programme design is inspired by current management principles and practice rather than ivory tower academics. The course material and design is oriented towards current and emerging issues in management. The curriculum undergoes a complete transformation every three years. In addition, it is adapted significantly every year to keep it abreast with the current business environment.

The program comprises of three components: the Hard Core subjects, the Soft Core subjects and Summer Internship Project. The Hard Core programme focuses on rigorous grounding in the rudiments of every discipline in management and the development of a common foundation of business knowledge and management theory. The Soft Core programme aims at providing rich conceptual and analytical skills in the areas of specialization. It allows students to choose a bouquet of courses that interest them and develop proficiency in the areas of their choice. Five areas of specialization areas offered namely Marketing, Finance, Human Resource, Operations Management and Business Analytics.

Following the first year programme, students undertake summer training using a Problem Centric Approach for a period of six to eight weeks. The Summer Internship Programme is a powerful source of practical managerial insights, validation of management concepts, and valuable market knowledge. A project report is submitted at the end of the internship period followed by Viva Voce.

The entire programme spanning over four semesters includes 92 credits ranging between 4 credits for Hard Core and 3 credits for soft Core courses. Students are given choices to select both Hard and Soft Core courses and thus equip themselves with necessary skills needed to face a competitive and uncertain tomorrow.

## **VISION**

To foster excellence in leadership and management, inculcating an inbuilt spirit of Magis, sustainable entrepreneurship, and innovation for business, government and society

## **MISSION**

- Offering programmes with intellectual depth, abundant resources and individual attention to develop budding managers who are socially responsible and environmentally conscious
- Creating innovative global leaders rooted in Jesuit ethos and Indian societal values
- Transforming individuals to be ethically sound intrapreneurs and entrepreneurs

**The requirements to be fulfilled for the award of MBA Degree**

MBA - AIMIT									
SEM	Hard Core			Soft Core			Others		TOTAL
	No of Papers	Credits	Total Credits	No of Papers	Credits	Total Credits	Project	Credits	
<b>I</b>	4	4	16	2	3	6			22
<b>II</b>	4	4	16	2	3	6			22
<b>III</b>	2	5	10	4	3	12			22
<b>IV</b>	2	5	10	4	3	12	1	4	26
<b>TOTAL</b>	<b>12</b>		<b>52</b>	<b>12</b>		<b>36</b>	<b>1</b>	<b>4</b>	<b>92</b>

**Regulations Governing the “Add on Courses”**

**Academic Year 2021 Onwards**

**Eligibility for Admission:** All students enrolled for the MBA programme are eligible and required to pursue the Add on courses offered by the Department.

**Hours of Instruction:** There shall be 20 hours of input for theory papers and at least 25 hours for practicals Add-ons. These hours may be distributed for different components such as lectures, seminars, tutorials, project work, presentations and any other modes of instruction that respective add on courses may demand and will **NOT** necessarily be inbuilt within the regular working time table of 9 A.M. to 5 P.M.

**Period for Completion of the Add on Courses:** The candidates shall complete the add-on course in the semester in which it is offered and/or reckoned for that respective Semester marks card.

**Grading:** The courses will be graded as **C** – Completed or **NC** – Not Completed. Those who have satisfactorily completed the course will be graded as V/G/S:

**V-** Very Good 81% to 100%

**G-** Good 61% to 80%

**S-** Satisfactory 40% to 60%

Those who do not satisfactorily complete the course will be declared as “Not Complete” (Below 40%).

Candidates who have not satisfactorily completed the course will NOT be provided another opportunity to complete the course **unless for extraordinary reasons/ circumstances.**

**Attendance:** Each “add-on-course” shall be treated as an independent unit for the purpose of attendance. A student shall attend a minimum of 75% of the total instruction hours in a

particular paper including tutorials and seminars. There is no provision for condonation of shortage of attendance and the students failing to get the minimum attendance will be declared as “Not Completed” the course.

**Scheme of Examination:** There will be continuous evaluation of the “add on course” which will include a term end examination / continuous evaluation based on seminars, field work, assignment and other appropriate assessment tools.

**The following are the Add-on Courses:**

**Semester 1**

1. Hands -on using EXCEL
2. Rural Exposure

**Semester II**

3. Gavel Club
4. Hands -on using SPSS

**Semester III**

5. Integrated Management Lab
6. Personal Financial Planning

**Semester IV**

7. Entrepreneurship Development
8. Service Learning Project

SEMESTER: I								
Type	Code	Title	Instruction Hrs per Week	Duration of Exam	Marks			Credits
					IA	End Semester Exam	Total	
HARDCORE (4 Out of 6)	PH 301.1	Principles of Accounting	4	3	30	70	100	4
	PH 302.1	Organizational Behaviour	4	3	30	70	100	4
	PH 303.1	Economics for Managers	4	3	30	70	100	4
	PH 304.1	Statistics for Business Decisions	4	3	30	70	100	4
	PH 305.1	Principles of Strategic Management	4	3	30	70	100	4
	PH 306.1	Principles of Marketing	4	3	30	70	100	4
SOFTCORE (2 Out of 5)	PS 307.1	Contemporary Banking	3	3	30	70	100	3
	PS 308.1	Principles of Human Resource Management	3	3	30	70	100	3
	PS 309.1	Management Data Analytics	3	3	30	70	100	3
	PS 310.1	Executive Communication	3	3	30	70	100	3
	PS 311.1	Social Marketing	3	3	30	70	100	3
		<b>Total</b>			<b>180</b>	<b>420</b>	<b>600</b>	<b>22</b>

**SEMESTER: II**

Type	Code	Title	Instruction Hrs per Week	Duration of Exam	Marks			Credits
					IA	End Sem Exam	Total	
<b>HARDCORE (4 Out of 6)</b>	PH 301.2	Operations Management	4	3	30	70	100	4
	PH 302.2	International Business Environment	4	3	30	70	100	4
	PH 303.2	Business Research Methodology	4	3	30	70	100	4
	PH 304.2	Business Law	4	3	30	70	100	4
	PH 305.2	Cost and Management Accounting	4	3	30	70	100	4
	PH 306.2	Entrepreneurship Management	4	3	30	70	100	4
<b>SOFTCORE (2 Out of 5)</b>	PS 307.2	Corporate Financial Management	3	3	30	70	100	3
	PS 308.2	Leadership in Business Organizations	3	3	30	70	100	3
	PS 309.2	Services Marketing	3	3	30	70	100	3
	PS 310.2	Econometric Analysis	3	3	30	70	100	3
	PS 311.2	Systems Thinking for Managers	3	3	30	70	100	3
		<b>Total</b>			<b>180</b>	<b>420</b>	<b>600</b>	<b>22</b>

SEMESTER III									
Type	Code	Title	Instruction Hrs per Week	Duration of Exam	Marks			Credits	
					IA	End Sem Exam	Total		
HARD CORE	PH 301.3	Business Ethics	5	3	30	70	100	5	
	PH 302(a).3/ PH 302(b).3	Supply Chain Management [OR] Creativity and Innovation Management	5	3	30	70	100	5	
SOFTCORE (2 each in 2 areas of specialization)	FINANCE	PS 303(a).3	3	3	30	70	100	6	
		PS 303(b).3							Investment Analysis and Portfolio Management
		PS 303(c).3							Short Term Decision Making in Finance
		PS 303(d).3							International Financial Management
	HR	PS 304(a).3	3	3	30	70	100	6	
		PS 304(b).3							Industrial Relations
		PS 304(c).3							Organisational Change and Development
		PS 304(d).3							Talent Management
	MARKETING	PS 305(a).3	3	3	30	70	100	6	
		PS 305(b).3							Sales and Distribution Management
		PS 305(c).3							Rural Marketing
		PS 305(d).3							Strategic Brand Management
	OPERATIONS MANAGEMENT	PS 306(a).3	3	3	30	70	100	6	
		PS 306(b).3							Facility Location and Process Design
		PS 306(c).3							Inventory and Warehouse Management
		PS 306(d).3							Materials and Procurement Management
BUSINESS ANALYTICS	PS 307(a).3	3	3	30	70	100	6		
	PS 307(b).3							Financial Modeling	
	PS 307(c).3							People Analytics	
	PS 307(d).3							Data Driven Marketing	
		<b>Total</b>			<b>180</b>	<b>420</b>	<b>600</b>	<b>22</b>	



SEMESTER IV									
Type	Code	Title	Instruction Hrs per Week	Duration of Exam	Marks			Credits	
					IA	End Sem Exam	Total		
HARD CORE	PH 301.4	Corporate Governance	5	3	30	70	100	5	
	PH 302(a).4/ PH 302(b).4	Decision Making Models [OR] Knowledge Management	5	3	30	70	100	5	
	Project PH 303.4	Summer Internship Project	4	VIVA	30	70	100	4	
SOFTCORE (2 each in 2 areas of specialization)	FINANCE	PS 304(a).4	3	3	30	70	100	6	
		PS 304(b).4							Taxation for Managers
		PS 304(c).4							Project Financing and Appraisal
		PS 304(d).4							Derivatives and Risk Management
	HR	PS 305(a).4	3	3	30	70	100	6	
		PS 305(b).4							Labour Law
		PS 305(c).4							Staffing and Compensation Management
		PS 305(d).4							International Human Resource Management
	MARKETING	PS 306(a).4	3	3	30	70	100	6	
		PS 306(b).4							New Product Development
		PS 306(c).4							Retail Management and Visual Merchandising
		PS 306(d).4							Digital Marketing
	OPERATIONS MANAGEMENT	PS 307(a).4	3	3	30	70	100	6	
		PS 307(b).4							Purchase Management
		PS 307(c).4							Strategic Operations Management
		PS 307(d).4							Total Quality Management
PS 307(e).4		Project Financing and Appraisal							
BUSINESS ANALYTICS	PS 308(a).4	3	3	30	70	100	6		
	PS 308(b).4							Human Capital Analytics	
	PS 308(c).4							Marketing Analytics	
	PS 308(d).4							Business Process Analytics	
		<b>Total</b>			<b>210</b>	<b>490</b>	<b>700</b>	<b>26</b>	

**I SEMESTER MBA**  
**PS 309.1 MANAGEMENT DATA ANALYTICS**

Instruction hours: 40

Credits 03

Total Marks: 100

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**COURSE OBJECTIVES**

- To familiarize the learner with concepts of Data, Information Systems and Analytics
- To explore the fundamental concepts of Business Intelligence
- To understand how Information System is developed and implemented at various levels in the organization
- To learn the various techniques of data warehousing and mining data
- To use some of the basic analytical tools which freely available in excel

**COURSE OUTCOMES**

- To apply principles and skills of economics, marketing, and decision making to contexts and environments in data science
- To build and enhance business intelligence capabilities by adapting the appropriate technology and software solutions
- To acquire the ERP concepts for real world applications
- To understand Data Warehouse fundamentals and Data Mining principles
- To communicate effectively using Data Visualization with MS Excel

**PEDAGOGY**

This subject will be taught through interactive sessions with extensive use of real time data, invited talks, learning by doing, assignments and projects.

**UNIT I - DATA FOR BUSINESS ANALYTICS**

**8 Hours**

Introduction to the concept of Data, Big Data & Analytics, Business Analytics (BA): Evolution & Scope of BA, BA Model, Advantages & Challenges of BA. Data for Business Analytics: Data Sets and Databases; Metrics and Data Classification; Data Reliability and Validity.

**UNIT 2 - BUSINESS INTELLIGENCE (BI) CONCEPTS AND APPLICATION**

## **8 Hours**

Business Intelligence (BI), Pattern Recognition, Data Processing Chain, BI for Better Decisions, Decision Types, BI Tools and Skills, BI Applications

## **UNIT 3 - MANAGEMENT INFORMATION SYSTEMS (MIS)**

**8 Hours**

MIS: Introduction, Concepts, Scope, Characteristics, Structure and Types, Role of MIS in Global Business, Challenges of MIS, Business Applications of MIS in brief (e-Commerce, eBusiness, e-Governance), Enterprise Systems: ERP, CRM, SCM,

## **UNIT 4 - DATA WAREHOUSING AND MINING**

**8 Hours**

Design Considerations of Data Warehousing (DW), Development Approaches, DW Architecture, Data Mining: Data Cleansing and Preparation, Techniques (Overview), Best Practices, Data Visualization: Concepts and Overview, Text Mining and Web Mining: Concepts and Overview

## **UNIT 5 - ANALYTICS ON SPREADSHEETS**

**8 Hours**

Visualizing and exploring data, Analyzing Data with the Analysis ToolPak, Advanced Pivot Table & lookup functions, Programming Excel with VBA, Decision Models: Process of Decision Making; Basic concepts of Descriptive Decision Models; Predictive Decision Models; Prescriptive Decision Models.

## **LEARNING RESOURCES**

1. Damien, L. (2019). Data analytics: A comprehensive beginner's guide to learn the realms of data analytics.
2. Maheshwari, A. (2017). Data analytics. Chennai: McGraw Hill Education (India).
3. Evans, J. R. (2016). Business analytics: Methods, models, and decisions. New Delhi: Pearson Education Limited.
4. Goyal, D. (2014). Management information systems: Managerial perspectives (4th ed.). Vikas Publishing House.
5. Roebuck, K. (2015). Business Analytics: High-Impact Strategies - What You Need to Know: Definitions, Adoptions, Impact, Benefits, Maturity, Vendors. Atlantic Publishers & Distributors.
6. Jank, W. (2011). Business analytics for managers. Springer Publications.

**I SEMESTER MBA**  
**PS 310.1 EXECUTIVE COMMUNICATION**

Instruction hours: 40

Credits 03

Total Marks: 100

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**COURSE OBJECTIVES**

- To demonstrate understanding of the communication process and the importance of communication skills in business management
- To be acquainted with the tools for effective use of non-verbal communication
- To familiarize with the various types and formats of business messages
- To know the basic principles and components of letter writing
- To understand the basic of report writing and the organization of a formal report

**COURSE OUTCOMES**

- To develop strategies for improving organizational communication
- To effectively use verbal and non-verbal communication in business discourse
- To compose business messages by using appropriate formats of messages
- To formulate strategies for writing appropriate letters for various purposes
- To prepare a professional resume and cover letter

**PEDAGOGY**

Key business communication topics will be covered in easy to follow lectures which will then prompt analysis, synthesis evaluation & discussion. Diligent preparation & participation by the students is required so that the students may move efficiently from reviewing what they have learnt, to acquiring new information and skills, to applying their knowledge and skills to real life scenarios. The case study method will also be used so as to encourage reflection, integration of theory & practice & problem solving.

**UNIT 1 COMMUNICATION ENVIRONMENT – COMMUNICATION AT THE  
WORKPLACE** **8 hours**

Business communication foundations- Nature and process of communication, Importance of communication skills in Business Management, Types of communication, Communication Networks, Strategies for improving Organizational Communication, Communication in the

digital age

**UNIT 2 VERBAL AND NON-VERBAL COMMUNICATION** **8 hours**

Reading Skills - Speaking skills - Conversation Skills-Forms of Non-Verbal Communication-Types of Non-Verbal Communication-Interpreting Nonverbal Message, Tips for effective use of Nonverbal Communication, -Cross Cultural Communication-Effective Listening, Effective and Ineffective listening skills, Levels of Listening and Barriers to effective listening. Strategies for effective listening. Business presentations and public speaking- Group Discussions- Meetings and Conferences, Interviews –Fundamental principles of Interviewing - Preparation for and mastering the art of facing interviews.

**UNIT 3 FUNDAMENTALS OF BUSINESS WRITING** **8 hours**

Characteristics of Good writing- Writing-Improving Writing Skills-Five main stages of business writing- Introduction to Business Messages- Types of Business Messages-Direct and indirect approach to business messages- Writing and responding to messages- Various formats of messages.

**UNIT 4 BASIC PATTERNS OF BUSINESS MESSAGES** **8 hours**

The Nature of Business Messages; Directness in Good News and Neutral Messages; Indirectness in Bad News Messages; Indirectness in Persuasive Messages; Formats for Business Letters- Basic Principles-Components and strategies for letter writing- Routine Type; Sales Promotion, Persuasive Messages; Negative Messages; Job Applications. Basic Official Correspondence- Memos, Notices, Office Orders and Circulars.

**UNIT 5 BUSINESS REPORTS AND PROPOSALS** **8 hours**

Basics of Report Writing; Characteristics of Shorter Reports and Proposals; Basic and Subsidiary Parts of a Report; Organization and Content of a Long Formal Report; Strategies in the Job Search Process; Preparing a Professional Resume and Cover Letter, Business Etiquettes.

## **LEARNING RESOURCES**

1. Bhardwaj Kumkum (2019). Fundamentals of Business Communication, International Publishing House Pvt. Ltd., New Delhi.
2. Hory Sankar Mukerjee (2017) Business Communication Business Communication: Connecting at work: 2/e, Oxford University Press, New Delhi.
3. Verma Shalini (2015). Business Communication: Essential Strategies for 21<sup>st</sup> Century Managers, 2/e, Vikas Publishing House Pvt. Ltd. New Delhi.
4. P. D. Chaturvedi and Mukesh Chaturvedi (2013) Business Communication: Concepts, cases and applications, 3/e, Pearson Education, New Delhi.
5. Meenakshi Raman and Prakash Singh (2012) Business Communication, 2/e, OUP, New Delhi.

**II SEMESTER MBA**  
**PH 306.2 ENTREPRENEURSHIP MANAGEMENT**

Instruction hours: 50

Credits 04

Total Marks: 100

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**COURSE OBJECTIVES:**

- To comprehend the concept of entrepreneurship, and gain an in-depth understanding on the traits and qualities of successful entrepreneurs and their contribution to Economic Development
- To get an understanding on how to identify problems or opportunities, develop creative solutions and build a viable business model
- To help acquire necessary knowledge related to the legal formalities and the entrepreneur's capital to start up a business
- To study the elements of a Business Plan and learn how to conduct feasibility analysis to prepare business plan for new ventures.
- To develop knowledge about key challenges facing the entrepreneur at different stages of the entrepreneurial voyage

**COURSE OUTCOMES:**

- To develop the spirit of entrepreneurship among the young management graduates and contribute towards the Economic Development
- To develop next generation innovators, intrapreneurs, entrepreneurs and change-makers
- To direct the budding entrepreneurs to start up their own venture following the legal formalities and be equipped with the required capital.
- To formulate and present the business plans in a professional manner to all the stakeholders.
- To be able to effectively manage the various stages of growth of an entrepreneurial firm

**PEDAGOGY**

The sessions will include theory, practical exercises, assignments, case discussions, seminars and group discussions in the class.

## **UNIT I: INTRODUCTION TO ENTREPRENEURSHIP DEVELOPMENT 10 hrs.**

Entrepreneurship: Concept and Definitions; Entrepreneurship and Economic Development; Classification and Types of Entrepreneurs; Traits/Qualities of an Entrepreneurs; Factors Affecting Entrepreneurial Growth – Economic, Non-Economic Factors, EDP Programmes, Entrepreneurial Training, Manager Vs. Entrepreneur, Family run Business. Role of Women Entrepreneurship, Rural Entrepreneurship, Social Entrepreneurship.

## **UNIT II: CREATIVITY, INNOVATION AND METHODS TO INITIATE**

### **VENTURES**

**12 hrs.**

Entrepreneurial imagination and creativity, Creative Process, Developing Creativity, Impediments to creativity. Sources of Innovative ideas, types of Innovation, Principles of Innovation, and Using Design thinking for need based product or services.

Creating New Ventures: New-New approach, new old approach. Examination of the financial picture, Checklist for estimating startup expenses. Acquiring an established entrepreneurial venture; Franchising.

## **UNIT III: LEGAL CHALLENGES FOR THE ENTREPRENEURIAL VENTURE AND ENTREPRENEUR'S CAPITAL 8 hrs**

Intellectual Property Protection-Patents, Copyrights, Trademarks .Legal structures for Entrepreneurial Ventures, Bank funding, Government Policy packages, Venture Capitalists, Angel Investors. Institutions that facilitate Entrepreneurship and Entrepreneurship Development.

## **UNIT IV: FORMULATION OF ENTREPRENEURIAL PLAN 15 hrs**

The Challenges of New-Venture Start -ups, Start -ups in India, Pitfalls in selecting new venture, Critical factors for New-Venture Development, Reasons for new Ventures failure. Feasibility analysis-Technical feasibility, marketability, Organizational feasibility, Competitive analysis, Lean Canvas as tool for developing innovative business, Investor pitch deck, Business Plan preparation for new ventures, Elements of a Business Plan.

## **UNIT V: MANAGING AND GROWING AN ENTREPRENEURIAL FIRM 5 hrs**

Creating a Sales Script for Business, Business Storytelling, Unique Marketing Issues: Selecting a Market and Establishing a Position, Segmenting the market, selecting a Target



Market, Establishing Unique Position, Key Marketing Issues for new Ventures, Selling Benefits Rather than Features, Establishing a Brand

Preparing for Business Growth, Reasons for growth, Managing growth, Knowing and Managing the Stages of Growth, Challenges of Growth, Day-to-Day Challenges of Growing a Firm, Ethical Decisions in Business, Controlling Costs in business, adapting the business in the Midst of Change,

### LEARNING RESOURCES

1. Kuratko, D. F. (2016). *Entrepreneurship: Theory, process, and practice*. Cengage Learning.
2. Barringer R. Bruce, Ireland R. Duane (2019) *Entrepreneurship*, 6/e Pearson, South Asia.
3. Burns, P., & Dewhurst, J. (2016). *Small business and entrepreneurship*. Macmillan International Higher Education.
4. La Counte Scott(2019).*The Keynote Pitch Deck: Creating a Pitch Deck That Wows Investors and Raises the Money You Need to Soar*. SL Editions
5. Muhammad Mashhood Alam(2019)*Transforming an Idea Into a Business with Design Thinking: The Structured Approach from Silicon Valley for Entrepreneurs and Leaders* ,Routledge/productivity press(Taylor &Francis Group)

**II SEMESTER MBA**  
**PS 310.2 ECONOMETRIC ANALYSIS**

Instruction hours: 40

Credits 03

Total Marks: 100

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**COURSE OBJECTIVES**

- To introduce the core concepts and techniques in econometrics, with a special focus on the classical linear regression model
- To understand the assumptions upon which different econometric methods are based and their implications
- To understand necessary hypothesis tests of the linear regression model
- To study the validation and the interpretation of linear regression model
- To provide hands on experience using STATA, E-Views, and R

**COURSE OUTCOMES**

- To translate business problems into formal testable hypothesis within regression model
- To construct linear regression equations to model business decision making problems
- To draw inference from estimated regression results
- To identify and develop solutions to the problems that results from violating the assumptions of classical regression model
- To estimate and validate linear regression models using E-Views, STATA and R

**PEDAGOGY**

The methodology includes class lectures and practical sessions using E-Views, STATA, and R.

**UNIT I: THE NATURE ECONOMETRIC ANALYSIS**

**(6 Hours)**

Econometrics- Specification of the Econometric Model, population regression function and sample regression function- Simple Regression- multiple regression, interpretation of regression coefficients, correlation and causation. Nature of variables and implication for measurement. Types of regressions.

## **UNIT II: SINGLE EQUATION SIMPLE REGRESSION MODELS (10 Hours)**

Two variable regression analysis-The problem of estimation-The method of Ordinary Least Square (OLS); Assumptions underlying OLS- BLUE properties of OLS.

Measure of goodness of fit -  $r^2$ , measure of precision- variance and standard errors of OLS estimators.

Problem of inference-Hypothesis testing.-Null and alternative hypotheses in regression; t statistic and test of significance, and confidence interval approach.

Trend regression

## **UNIT III: SINGLE EQUATION MULTIPLE REGRESSION MODELS (10 HOURS)**

Extension of two variable regression- Multiple regression analysis- Estimation- OLS estimators of partial regression coefficients. Multiple coefficient of determination  $R^2$  and Adjusted  $R^2$ . Variance and standard error of the estimators.

Hypothesis testing- Hypothesis testing about individual regression coefficients - t statistic.

Testing the overall significance of the sample regression- F test.

## **UNIT IV: VIOLATION OF THE ASSUMPTIONS OF LEAST SQUARE METHOD- DETECTION AND REMEDIAL MEASURES (7 HOURS)**

BLUE property of OLS

Multicollinearity – Nature of multicollinearity; Detection of multicollinearity, remedial measures.

Heteroscedasticity – Nature of heteroscedasticity; Detection of heteroscedasticity, remedial measures.

Autocorrelation – Nature of the problem of autocorrelation; detecting autocorrelation, remedial measures.

## **UNIT V: ESTIMATION AND VALIDATION OF REGRESSION MODEL USING E-VIEWS AND STATA AND R (PRACTICAL) (7 Hours)**

Running simple and multiples regression. Hypothesis testing, validating the model and detecting and correcting the violation of OLS assumptions.

## LEARNING REFERENCES

1. Gujarati, D.N., Porter D.C., & Pal, M. (2019). *Basic Econometrics* (6 ed.), New Delhi: McGraw Hill Publications.
2. Studenmund, A. H. (2017). *A Practical Guide to Using Econometrics* (7 ed.), England: Pearson Education Ltd.
3. Brooks, C. (2019). *Introductory Econometrics for Finance*, (4 ed.). Cambridge University Press.
4. Bhaumik, S. K. (2015). *Principles of Econometrics: A Modern Approach Using E-Views*. Oxford Publications.
5. Wooldridge, J. (2018). *Introductory Economics: A Modern Approach* (7 ed.). Cengage Learning.

**III SEMESTER MBA  
(BUSINESS ANALYTICS SPECIALIZATION)  
PS 307(a).3 FINANCIAL MODELING**

Instruction hours: 40

Credits 03

Total Marks: 100

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**COURSE OBJECTIVES**

- To learn and apply the concept of time value of money and its implications in day to life.
- To study and develop personal financial models like EMI calculation, preparation of loan repayment schedule, etc.
- To study various sources of corporate financing and estimating their costs.
- To study and employ models used in typical finance and investments practice.
- To model the impact of corporate events on the share prices.

**COURSE OUTCOMES**

- To perform accurate financial calculations with the help of packages like MS Excel and R.
- To create interactive financial models which help in quick decision making.
- To scrutinize the dividend payment pattern of the corporations and their implications.
- To construct the financial statements and to predict the future financial positions of the companies.
- To analyze the implications of corporate events on the share prices and to take informed investment decisions.

**PEDAGOGY**

This course includes class Lectures, Group Discussions, Seminars and Projects.

**UNIT 1: CORPORATE FINANCE MODELS**

**8 hours**

Basic Financial Analytics- Overview- Present value and net present value, Internal Rate of Return and Loan tables, Multiple Internal Rate of Return, flat payment schedules, future values and applications, continuous compounding, discounting using dated cash flows

**UNIT 2: COST OF CAPITAL****6 hours**

Calculating Cost of Capital- Overview; Cost of Debt and WACC, Computing cost of debt and WACC, using CAPM to determine the cost of equity

**UNIT 3: DIVIDEND MODEL ANALYSIS****6 hours**

The Gordon Dividend Model, Adjusting the Gordon Model to account for all cash flows to equity, Supernormal growth and the Gordon Model

**UNIT 4: FINANCIAL STATEMENT MODELLING****10 Hours**

Introduction, free cash flow- Measuring the cash flows, using the free cash flow to value the firm and its equity- Sensitivity Analysis; Project Finance- Debt repayment Schedules

**UNIT 5: EVENT STUDIES****10 hours**

Background of an event study, A fuller Event Study- Impact of announcements on stock prices, using Two- Factor Model of Returns for an Event Study

**LEARNING RESOURCES**

1. Shamsuddin Aasha (2015) Financial Modelling Manual: A comprehensive but succinct step-by-step guide to building a financial forecast model in Excel, BG Consulting.
2. Pandey I M (2015) Financial Management, 11/e, Vikas Publishing House.
3. Fairhurst Danielle Stein (2015) Using Excel for Business Analysis: A Guide to Financial Modelling Fundamentals, John Wiley & Sons (India) Ltd. New Delhi.
4. Benninga Simon (2014) Financial Modelling, 4/e, Massachusetts Institute of Technology, USA.
5. Murugappan Palani (2014) Financial Modelling and Analysis using Microsoft Excel for non -finance personnel, Blue Micro Solutions.
6. Day Alastair (2012) Mastering Financial Modelling in Microsoft Excel, A Practitioner's Guide to Applied Corporate Finance, 3/e, Pearson Education.

**III SEMESTER MBA  
(BUSINESS ANALYTICS SPECIALIZATION)**

**PS 307(d).3 FORECASTING ANALYTICS**

Instruction hours: 40

Credits 03

Total Marks: 100

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**COURSE DESCRIPTION:**

The course aims at understanding the nature of time series data, identifying appropriate time series model for a given data, and estimate time series model and produce forecast from them using E-Views and R.

**COURSE OBJECTIVES:**

- To understand the nature and the components of time series data
- To learn data driven forecasting techniques
- To describe the issues related to fitting AR, MA and ARMA models
- To study multivariate and volatility time series models
- To gain hands-on experience on modelling time series techniques using E-views/R

**COURSE OUTCOMES**

- To disentangle the components of time series data
- To construct data driven models of forecasting, such as naïve models, moving average models and exponential smoothing models
- To build and validate stationary time series models
- To apply multivariate and volatility models for forecasting, such as VAR, Granger Causality, ARCH and GARCH Models
- To construct and evaluate time series models using E-Views/R

**PEDAGOGY:**

The methodology includes Class lectures and practical on a variety of datasets using E-Views and R software.

## **UNIT 1: INTRODUCTION TO TIME SERIES ECONOMETRICS (6 Hours)**

Time series data- Nature of time series data, components of time series data- trend, seasonality, cyclical movements and Irregular fluctuation. Time series decomposition- Additive and multiplicative models

Approaches to Forecasting- Qualitative and Quantitative methods

## **UNIT 2: TIME SERIES FORECASTING- DATA DRIVEN MODELS (9 hours)**

Time series forecasting- Deterministic models – Naïve model, Simple average method, moving average method, exponential smoothing method, Exponential Smoothing Adjusted for Trend: Holt's Method, Exponential Smoothing Adjusted for Trend and seasonal Variation: Holt-Winter Method. Forecasting evaluation- Mean Absolute Deviation (MAD), Mean Absolute Percentage Deviation (MAPE), and Mean Squared Error (MSE).

## **UNIT 3: MODEL BASED FORECASTING TECHNIQUES (9 Hours)**

Trend regression and Trend regression with seasonality

Stationary and non-stationary series. Tests of stationarity and transforming non-stationary time series data.

Univariate time series models- Autoregressive, and Moving Average (ARMA) modelling of time series. The Box-Jenkins Methodology- Identification, estimation, diagnostic checking and Forecasting

## **UNIT 4: MULTIVARIATE AND VOLATILITY TIME SERIES MODELS (9 Hrs)**

Vector Auto Regression (VAR) and Granger Causality models

Volatility models – Nature of volatility in financial time series.

Modelling volatility- Autoregressive Conditional Heteroscedasticity Models (ARCH) and Generalized Autoregressive Conditional Heteroscedasticity Models (GARCH). Symmetric and asymmetric GARCH Models.

## **UNIT 5: TIME SERIES ANALYSIS WITH E-VIEWS & R (PRACTICAL) (7 Hours)**

Running deterministic, stochastic, multivariate and volatility models in E-views and R



## LEARNING RESOURCES

1. Brooks, C. (2019) *Introductory Econometrics for Finance*, 4e, Cambridge University Press.
2. John. E. Hanke & Dean W. Wichern (2015) *Business Forecasting* 9e. PHI Learning Private Ltd.
3. Gujarati, D.N., Porter D.C., & Pal, M. (2019) *Basic Econometrics*, 6e, McGraw Hill Education Pvt. Ltd: New Delhi.
4. Studenmund, A. H. (2017). *A Practical Guide to Using Econometrics*, 7e, Pearson Education Ltd: England.
5. Enders, W. (2018). *Applied Econometrics Time Series* (4 ed.). Wiley Publications

**IV SEMESTER MBA  
(BUSINESS ANALYTICS SPECIALIZATION)**

**PS 308(a).4 FINANCIAL ANALYTICS**

Instruction hours: 40

Credits 03

Total Marks: 100

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**COURSE OBJECTIVES**

- To provide in-depth and practical knowledge of financial analytics with special importance to capital market analytics and a few derivative product analytics.
- To develop students with quantitative and analytical skills in corporate financing and capital market.
- To get acquaintance with different software packages that help to technical analysis.
- To understand the practical difficulties while making investment decisions.
- To analyze and apply analytical skills on the real time financial market data.

**COURSE OUTCOMES**

- To become expert in different software packages in technical analysis and to guide others.
- To inculcate the problem solving ability whenever need arises in the area investment management.
- To become self-reliant investors and traders in financial products.
- To obtain an attractive career in the field of investment analysis.
- To create awareness among the investing community about the fraudulent investment tips providers.

**PEDAGOGY**

This subject will be taught through interactive sessions with extensive use of real time data, invited talks, learning by doing, assignments and projects.

**UNIT 1: CAPITAL MARKET ANALYTICS** **6 hours**

Dow theory and Elliot Wave Theory Principles of Dow Theory - Significance of Dow Theory - Problems with Dow Theory - Elliot Wave - Introduction - Fundamental Concept – After Elliott

**UNIT 2: CANDLE STICK ANALYTICS** **9 hours**

Introduction to technical analysis- Different methods of charting - Candlestick analysis – One Candle Pattern, Two Candle Pattern, Three Candle Pattern, Importance of volume - Support and resistance Analysis- Real Time Data Analysis.

**UNIT 3: PATTERN ANALYSIS** **9 hours**

Head and shoulders, Double top and Double Bottom, Rounded Top and Bottom- Gap Analysis Continuation patterns - pennant and wedges - rectangle and flags analysis- Real Time Data Analysis.

**UNIT 4: INDICATORS AND OSCILLATORS ANALYTICS** **8 hours**

Indicators- Simple Moving Average, Exponential Moving Average- Signals: Moving Average Price Crossover, Multiple Moving Averages. Relative Strength Index (RSI)- Momentum-Divergence-Stochastic- William %R- Moving Average Convergence/Divergence (MACD)- Money Flow Index- Bollinger Band Analysis.

**UNIT 5: OPTION PRICING ANALYTICS** **8 hours**

Factors affecting option prices, assumptions, notations, pricing formulae, use of statistical tables, Binomial Model of Option Pricing, The Black-Scholes Model, Binomial Model of Option Pricing v/s The Black-Scholes Model.

## **LEARNING RESOURCES**

1. Kevin S (2016) Security Analysis and Portfolio Management, 2/e, PHI Learning Pvt. Ltd, New Delhi.
2. Pandey I M (2015) Financial Management, 11/e, Vikas Publishing House.
3. Robert D. Edwards, W.H.C. Bassetti, and John Magee (2013) Technical Analysis of Stock Trends, 10/e, CRC Press.
4. Pandya Falguni H. (2013) Security Analysis and Portfolio Management, Jaico Publishing House.
5. Adam Grimes (2012) The Art and Science of Technical Analysis: Market Structure, Price Action and Trading Strategies, John Wiley & Sons.
6. Khatri Dhanesh Kumar (2010) Security Analysis and Portfolio Management, Macmillan.
7. Jamasandekar Mandar (2018) Trading and Technical Analysis Course, Vision Books Pvt. Ltd.
8. Kathlawala Rajiv (2017) How to profit from technical analysis: Beginners' Guide, Vision Books Pvt. Ltd.
9. Bennet Mark J and Hugen L Dirk (2016), Financial Analytics with R, Cambridge University Press.