



MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA  
(MACFAST)

Name of the students studied courses on experiential learning

MBA 2019-21 BATCH

1	Achsah Saji
2	Adithya R Nair
3	Aditya Varghese
4	Ajin Abraham John
5	Akash John Philip
6	Akhil P Anil
7	Aleena Sara John
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18	Ansu Achankunju
19	Anu Krishnan K
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21	Arunima R
22	Arya Ravi Sankar
23	Ashna Rajan
24	Aswin Ashok
25	Athira S Kumar
26	Athira V
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29	Benilda Varughese
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31	Blesswin Varghese
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35	Varghese
36	Christin Varghese
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73	Paul P Joy
74	Pranav M Nair
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76	Raichel K Jays
77	Rechsah Saji
78	Rejin Varghese Mathew
79	Reshma T R
80	Ria Jose





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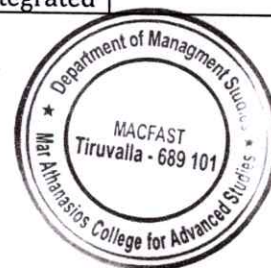
81	Rimcy M Yohannan
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		<b>Knowledge</b>	<b>No. of Credits</b>
<b>MB010202</b>	<b>MARKETING MANAGEMENT</b>	<b>S2 Working</b>	<b>Core Course 3</b>

<b>Course Objective</b>		
<b>1.</b>	<b>To introduce the key business function of Marketing with modern realities</b>	
<b>2.</b>	<b>To provide the participants conceptual framework of Marketing</b>	
<b>3.</b>	<b>To impart key insights into the practical aspects of Marketing in different type of Organisations</b>	
<b>Module No.</b>	<b>Title &amp;Contents</b>	<b>No. of Sessions LT (Indicative)</b>
<b>1.</b>	<b>INTRODUCTION TO MARKETING&amp;CAPTURING MARKETING INSIGHTS</b> 1.1 Marketing as the top line function in Organizations - New Marketing Realities - Company Orientation toward the Market place- Marketing Myopia - Marketing Management Tasks 1.2 Marketing as Creating, Communicating, and Delivering Value - Value chain - Customer satisfaction as the end of the value chain 1.3 Marketing Environment - Internal and External environment - Introduction to Marketing Research & Marketing Information System 1.4 Market Strategic Planning - Elements of Marketing Plan	<b>4 + 4</b>
<b>2.</b>	<b>ANALYZING BUYER BEHAVIOUR &amp; SELECTING MARKETS</b> 2.1 Types of Consumer Buying Behaviour - Factors affecting Buyer Behaviour - Buyer Roles - Consumer Buying Decision Process 2.2 An overview of Organizational Buying Decisions 2.3 Segmentation, Targeting & Positioning - Strategies 2.4 Tapping Global Markets 2.5 Competitive Strategies for Market	<b>3 + 3</b>
<b>3.</b>	<b>ELEMENTS OF MARKETING MIX 1 - PRODUCT DECISIONS</b> 3.1 Product - Product Levels - Customer Value Hierarchy 3.2 Product Classifications - Product & Service Differentiation - Product Systems & Mixes - Product Line Analysis 3.3 Product Life Cycle Strategies - Illustrations 3.4 An overview of Brand Management - Co-Branding, Ingredient Branding 3.5 Packaging & Labeling Decisions - Warranties & Guarantees 3.6 New Market Offerings - New Product Success & Failure - New Product Development Decision Process - Consumer Adoption Process	<b>4 + 3</b>
<b>4.</b>	<b>ELEMENTS OF MARKETING MIX 2 - DISTRIBUTION &amp; PROMOTION DECISIONS</b> 4.1 Distribution as a part of Value Delivery 4.2 Role of Marketing Channels - Channel Functions & Flows - Channel Levels - Channel Management Decisions -VMS & HMS - E-Commerce & M-Commerce 4.3 Introduction to Retailing & Wholesaling - Franchising - Teleshopping - Shopping through Internet 4.4 Communicating Value - Marketing Communication Mix - Steps in Developing Effective Communication Mix - Concept of Integrated	<b>4 + 2</b>





	Marketing Communications 4.5 Marketing Communication Mix Management – An overview	
5.	<b>MARKETING CONTROL – MODERN TRENDS IN MARKETING – CHALLENGES</b> 5.1 Marketing Implementation & Control – Marketing Metrics – Marketing Audit 5.2 Future of Marketing – Emerging Trends 5.3 Marketing Challenges in Globalized Era – Impact of Digitization & Information Technology on Marketing – Marketing through Social Network – Nano Marketing 5.4 Green Marketing	2 + 1

### Suggested readings

1. Kotler Philip, Keller Kevin, Koshy Abraham & Jha Mithileshwar, **MARKETING MANAGEMENT A South Asian Perspective** – Pearson Education 4th edition
2. Ramaswamy V.S. & Namakumari S, **MARKETING MANAGEMENT – Global Perspective, Indian context** – MacMillan 4<sup>th</sup> edition
3. Rajan Saxena - **MARKETING MANAGEMENT** – Tata McGraw Hill – 4<sup>th</sup> edition
4. Kotler Philip & Armstrong Gary, **Principles of Marketing (15th Edition)** – Pearson Prentice Hall
5. Etzel, MJ, BJ Walker and William J Stanton., **Marketing (Fourteenth Edition)**. McGraw Hill, 2007.
6. Neelamegham, S., **Marketing in India: Text and Cases (4/e)**. Vikas Publishing House, 2012.
7. Panda, Tapan K., **Marketing Management: Text and Cases Indian Context**. Excel Books India, 2009.

Learning Outcomes	
1.	<b>The participants will be able to understand the framework of Marketing Function in Organisations</b>
2.	<b>The participants may be able to solve Strategic Marketing Problems</b>
3.	<b>At the end of this course, the participants will be able to specialise in various elements of Marketing</b>



Course Code	Course Title	Semester & Level of Knowledge	Type of Course & No. of Credits
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Course Code	Course Title	Semester & Level of Knowledge	Type of Course & No. of Credits
MB010101	MANAGEMENT CONCEPTS AND ORGANISATIONAL BEHAVIOUR	S1 Basic	Core Course 4
<b>Course Objective</b>			
1	<b>To provide the participants conceptual framework in Management functions and practices</b>		
2	<b>To provide basic insights into Individual and Group Behaviour in Organisations</b>		
3	<b>To introduce framework of Organisation Structure, Climate</b>		
Module No.	Title & Contents	No. of Sessions LT (Indicative)	
1.	<b>MANAGEMENT AND DECISION MAKING</b> 1.1 Changing Job of a Manager in the light of Technology & Digitization, Organisational & Managerial Ethics, Competitiveness, Security Threats – Managing Diversity 1.2 Role of Importance of Customers, Social Media, Innovation and Sustainability to Manager's Job 1.3 Decision Making Process – Decision Making Conditions of Certainty, Risk & Uncertainty 1.4 Decision Making Perspectives – Rationality, Bounded Rationality, Intuition, Evidence Based Management 1.5 Effective Decision Making – Big Data & Decision Making	5 + 1	
2.	<b>MANAGERIAL FUNCTIONS</b> 2.1 Planning –Types of Plans – Goals and Plans – Management by Objectives (MBO) – Contemporary Issues in Planning 2.2 Designing Organisational Structure – Departmentalisation – Cross Functional Teams – Mechanistic & Organic Structures – Contingency Factors affecting Structural Choice – An Overview of Contemporary Organisational designs 2.3 Importance of HRM – HRM Process 2.4 Leadership – Contingency Theories of Leadership – Contemporary Views of Leadership 2.5 Controlling – Control Process – Tools for Measuring Organisational Performance – Contemporary Issues in Control	5 + 1	
3.	<b>MANAGING INDIVIDUAL BEHAVIOUR</b> 3.1 Personality – MBTI – Big Five Model –Self-esteem – Self-monitoring – Proactiveness & Resilience 3.2 Attitudes & Its Components – Cognitive – Affective – Behavioural – Cognitive Dissonance Theory 3.3 Emotions & Emotional Intelligence – its Implications 3.4 Perception – Factors Influencing Perception 3.5 Learning – Operant Conditioning – Social Learning – Shaping as a Managerial Tool	5 + 1	
4.	<b>MOTIVATION</b> 4.1 Early Theories of Motivation –Needs Hierarchy Theory Theory X and theory Y – Two Factor Theory – Three Needs Theory 4.2 Contemporary Theories of Motivation – Reinforcement Theory – Expectancy Theory 4.3 Current Issues in Motivation – Motivating in Challenging	5 + 1	





	Economic Circumstances - Cross Cultural Motivational Challenges - Motivating Unique Group of Workers & Diverse Workforce 4.4 Motivating Professionals - Motivating Low Skilled Employees	
5.	<b>GROUP BEHAVIOUR &amp; CONTEMPORARY ORGANISATIONAL ISSUES</b> 5.1 Group - Stages of Group Development - Group Dynamics 5.2 Work Teams - Types - Creating Effective Work Teams 5.3 Managing Global Teams - Team Skills & Social Network 5.4 Managing Change - Types of Change - Resistance to Change - Changing Organisational Culture - Employee Stress 5.5 Creativity Vs Innovation - Stimulating & Nurturing Innovation - Managing Diversity - Types of Diversity	5 + 1

#### Suggested Readings

1. Stephen P. Robbins, Mary Coulter - Management 13<sup>th</sup> Edition - Pearson
2. Stoner J.A.F., Freeman R.E, Daniel R. Gilbert - Management - 6<sup>th</sup> Edition - Pearson
3. Aswathappa K. - Essentials of Business Administration - Himalaya Publishing House
4. Harold Koontz, Heinz Weihrich - Essentials of Management - McGraw Hill
5. Tripathy P.C., Reddy P.N. - Principles of Management - Tata McGraw Hill



Learning Outcomes	
1	The participants will get basic insights into Management concepts and Functions
2	At the end of this course, participants are expected to acquire basic knowledge about role of individual and group behaviour in organisations
3	The participants are expected to gain knowledge about recent trends in Managerial Process

Course Code	Course Title	Semester & Level of Knowledge	Type of Course & No. of Credits
MB010102	BUSINESS COMMUNICATION	S1 Basic	Core Course 4
Course Objective			
	To familiarize the participants with the basics of business communication		
1	To make the participants appreciate the application of these concepts in business environment		
2	To sensitize the participants to non-verbal communication and effective utilization of the same.		
Module No.	Title & Contents	No. of Sessions LT (Indicative)	
1.	<b>INTRODUCTION TO COMMUNICATION</b> 1.1 Communication in a business environment 1.2 Types of communication, Principles of effective communication 1.3 Reading, listening and notemaking / notetaking skills	2+ 1	





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	3.3 Test for optimality (MODI Method)	
4.	<b>NETWORK ANALYSIS</b> 4.1 PERT & CPM – Time Estimation – Critical Path 4.2 Basic Concepts of Crashing 4.3 Resources Leveling – Resources Smoothing 4.4 Replacement Problems - Replacement of assets that deteriorate with time, Replacement of assets that fail completely.	6 + 3

5.	<b>DECISION THEORY AND SIMULATION</b> 5.1 Concept of Decision Making – Decision Making Environments 5.2 Simulation – Basic Concepts of Simulation – Monte Carlo Simulation – Scope & Limitations 5.3 Game Theory – Concept – Two Person Zero Sum Game – Pure & Mixed Strategy – Saddle Point	6 + 4
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### Suggested Readings

1. Sharma, J K. Operations Research: Theory and Applications (5/e). New Delhi: Laxmi Publications, 2013.
2. G. Srinivasan, Operations Research Principles and Applications – PHI Learning
3. R. Paneer Selvam – Operations Research – PHI Learning
4. Frederick S. Hillier, Gerald J. Lieberman – Operations Research: Concepts & Cases – Tata McGraw Hill
5. Rathindra P. Sen – Operations Research – PHI Learning
6. Vohra, N D. Quantitative Techniques for Management. Tata McGraw Hill Education, 2015
7. S. Kalavathy – Operations Research with C Programmes – Vikas Publishing House

Learning Outcomes	
1.	At the end of this Course, the participants may get basic insights into Applications of Operations Research in Managerial Decision Making
2.	The Participants will get familiar with Scientific Tools and Models in OR for analysing the Business
3.	The participants will be able to understand basics of Decision Science

Course Code	Course Title	Semester & Level of Knowledge	Type of Course & No. of Credits
MB010206	MANAGEMENT INFORMATION SYSTEMS AND CYBER SECURITY	S2 Basic	Core Course 3

Course Objectives		
1.	To understand the Importance of Information System in Business	
2.	To make the participants familiarize with the Information Technologies and Methods used for effective Decision making in an organization.	
3.	To understand the security and ethical issues in Information systems.	
Module No.	Title & Contents	No. of Sessions LT (Indicative)



1.	<b>FOUNDATION OF INFORMATION SYSTEM</b> 1.1 Information System - Components of information systems and IS activities 1.2 Roles of information systems and impact of IS on organization 1.3 Types of IS 1.4 Emergence of Digital Firm - Internet of things (IoT)	4 + 2
2.	<b>INFORMATION SYSTEM IN BUSINESS</b> 2.1 Business Information systems - Marketing Information System, Financial Information System, Manufacturing Information System and Human resource Information System 2.2 Transaction Processing System 2.3 Office automation system, KWS and GIS 2.4 Enterprise wide systems, E- Business Applications and E-governance	4 + 2
3.	<b>MANAGEMENT AND DECISION SUPPORT SYSTEM</b> 3.1 Decision Support Systems – Types – Web based DSS - GDSS 3.2 Management Information Systems – MIS Implementation 3.3 Expert systems-Knowledge based expert systems and Executive Information Systems 3.4 Artificial Intelligence Technologies 3.5 Data Mining and Data Warehousing	4 + 2
4.	<b>STRATEGIC ROLES OF IS</b> 4.1 Strategic Uses of Information Technology-IT in the value chain-Business change models- 4.2 Business Process Re-engineering (BPR)-BPR versus continuous improvement-Seeking and gaining competitive advantage 4.3 Drivers of IT investments-Measuring the value of IT investments-Justifying IT investments 4.4 Challenges of Strategic IS	4+ 2
5.	<b>CYBER SECURITY</b> 5.1 Securing Information Systems - System vulnerability and abuse. 5.2 Wireless security challenges - malicious software - hackers and cyber vandalism - computer crime and cyber terrorism. 5.3 Business values and ethics of security and control - firewalls – intrusion - detection systems - anti-virus software. 5.4 Securing wireless networks - encryption and public key infrastructure – ensuring system availability. 5.5 Security issues for cloud computing and the mobile digital platform.	4 + 2

**Suggested Readings:**

1. James A O'Brien, George M Marakas and Ramesh Behl, Management Information Systems, Ninth edition, Tata McGraw Hill Education Private Ltd, 2012
2. Kenneth C. Laudon and Jane Price Laudon, Management Information Systems – Managing the digital firm, 14 edition, PHI Learning / Pearson Education, PHI, Asia, 2012.
3. Robert Schultheis and Mary Summer, Management Information Systems – The Managers View, Tata McGraw Hill, 2008.
4. Rahul de, MIS in Business, Government and Society, Wiley India Pvt Ltd, 2012







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SL.NO	REG.NO:	NAME
1	180401	Abin K Ninan
2	180402	Abin Thomas
3	180403	Adarsh Remesh
4	180404	Aiswarya B S
5	180405	Ajina Ahammed
6	180406	Akhil Jacob Thomas
7	180407	Aksa P Abraham
8	180408	Akshaykumar A R
9	180409	Alan Abraham
10	180410	Alan Anto
11	180411	Alen Cherian Chacko
12	180412	Alisha Elizabeth Anoop
13	180413	Alisha Elsa Charly
14	180414	Ancy Ann Chacko
15	180415	Anil Krishna Ananthu
16	180416	Anitha Thomas
17	180417	Anju G Krishna
18	180418	Ann Mary Varghese
19	180419	Aravind M
20	180420	Arvin Zachariah Johns
21	180421	Ashik Salim
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31	180431	Brijith Abraham
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33	180433	Christeena Moses Ali
34	180434	Devika B







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35	180435	Dimple Rose Boban
36	180436	Dona Rachel Achankunju
37	180437	Emmanuel Francis
38	180438	Feba Ann C Chacko
39	180439	Febin Abraham
40	180440	Gokul S Das
41	180441	Gopika Nair S
42	180442	Harisankar P
43	180443	Jack Antony
44	180444	Jain James
45	180445	Jaisa Monachen
46	180446	Jaison Joboy
47	180447	Jenson Jim
48	180448	Jibu Sunny
49	180449	Jiby John
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53	180453	Jisha Raj
54	180454	Jishin M Josy
55	180455	Jishnu J
56	180456	Jitheesh J B
57	180457	Jithin Easow George
58	180458	Joel Mathew Thomas
59	180459	Karthika Aniyan
60	180460	Keerthi Rajan
61	180461	Kiran Das
62	180462	Libin George
63	180463	Liji Joyson
64	180464	Liji Mathew
65	180465	Manu K Raju
66	180466	Mathew Jose
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68	180468	Mithin Madhu
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92	180493	Sherin Ann Oommen
93	180494	Sherin Mariam Philip
94	180495	Shibin Zacharia
95	180496	Shilpa Rachal Varghese
96	180497	Shine Modeyil Sunny
97	180498	Siby Paul Varghese
98	180499	Siji Maria Sebastian
99	180500	Sijo Daniel
100	180501	Sinu Saji
101	180502	Sneha Sebastian
102	180503	Sruthi Mohan
103	180504	Sruthi Sara Babu
104	180505	Sudheesh K S
105	180506	Sukanya Sabu
106	180507	Surabhi R Udayakumar
107	180508	Swathy S
108	180509	Teny Tomy
109	180510	Tom K Thomas
110	180511	V A Sulfa Shukoor
111	180512	Veena R Nair
112	180513	Vijo Vinu Cherian
113	180514	Yemeema Sabu





#### FOURTH SEMESTER

Course No	Title	Internal Evaluation Marks	External Evaluation Marks	Total Marks
CC21	Strategic Management	40	60	100
EC 1	ELECTIVE 7 (Major Specialization)	40	60	100
EC 2	ELECTIVE 8 (Major Specialization)	40	60	100
EC 3	ELECTIVE 9 (Minor Specialization)	40	60	100
CC22	Project & Comprehensive Viva Voce	-	200	200
	<b>Total</b>	<b>160</b>	<b>440</b>	<b>600</b>

#### CC21-STRATEGIC MANAGEMENT

##### Module I

Introduction to Strategic Management – Concept of Strategy, Process of Strategy, Strategic Framework; Vision, Mission, Objectives and Goals. Strategic Analysis – Environmental Analysis, Competitive forces, Internal analysis SWOT Analysis.

##### Module II

Business level strategies – Cost leadership, Differentiation, Focus. Corporate level strategies- Stability strategies, Expansion strategies – Intensification, Integration,

International expansion, Diversification strategies, Merger, Acquisitions, Strategic alliance, Turnaround strategies.

##### Module III

Implementation and Control –Leadership in Strategic Management; Portfolio Analysis, BCG Matrix, GEC Model, etc, Control Process Analysis and Follow-up Action for Control, Evaluation Strategy.

##### Module IV

Corporate Management; Corporate Policy, Corporate Governance, Top Management, Code and Laws of Corporate Management, Corporate Scenarios and Strategy; Strategies for Stable and Dynamic markets, Strategies for Global Markets.

##### Module V

IT and Strategy, R&D and Strategy, Knowledge Management – Knowledge Sources, Knowledge Creation, KM framework, Trends and Challenges in KM. Innovation and creativity, Innovation Culture. Building Creative Organization. Corporate Social Responsibility, Ethics and Values, Philanthropy.





## References

1. Glueck, W F and Lavch, L. R *Business policy and Strategic Management*, McGraw Hill, New Delhi.
2. Porter, E, Michael *Competitive Advantage – Creating and sustaining Superior Performance*. Free press London.
3. Shrivastava, R.M.(1999) *Management Policy and Strategic Management* Himalaya Publishing House, Mumbai.
4. A.C.Hax and NS, *Strategic Management: An Integrative Perspective*, Prentice Hall, India.
5. Gregory G.Dess and Alex Miller, *Strategic Management*, McGraw Hill. India



## MCA 507P PYTHON Programming Practicals

### UNIT I

Introduction: The Process of Computational Problem Solving, Python Programming Language, Python Data Types: Numbers, Expressions, Variables and Assignments, Strings, List, Python Standard Library, Imperative Programming: Python programs, Execution Control Structures, User-Defined Functions, Python Variables and Assignments, Parameter Passing.

### UNIT II

Text Files: Strings, Formatted Output, Files, Errors and Exception Handling, Execution and Control Structures: if Statement, for Loop, Two Dimensional Lists, while Loop, More Loop Patterns, Additional Iteration Control Statements, Containers and Randomness: Dictionaries, Other Built-in Container Types, Character Encoding and Strings, Module random, Set Data Type.

### UNIT III

Object Oriented Programming: Fundamental Concepts, Defining a New Python Class, User-Defined Classes, Designing New Container Classes, Overloaded Operators, Inheritance, User-Defined Exceptions, Namespaces: Encapsulation in Functions, Global versus Local Namespaces, Exception Control Flow, Modules and Namespaces.

### UNIT IV

Objects and Their Use: Software Objects, Modular Design: Modules, Top-Down Design, Python Modules, Recursion: Introduction to Recursion, Examples of Recursion, Run Time Analysis, Searching, Iteration Vs Recursion, Recursive Problem Solving.

### UNIT V

Graphical User Interfaces: Basics of tkinter GUI Development, Event-Based tkinter Widgets, Designing GUIs, OOP for GUI, The Web and Search: The World Wide Web, Python WWW API, Database Programming in Python.

### Reference

1. Ljubomir Perkovic, "Introduction to Computing Using Python: An Application Development Focus", Wiley, 2012.
2. Charles Dierbach, "Introduction to Computer Science Using Python: A Computational Problem-Solving Focus", Wiley, 2013.
3. Allen B Downey, "Think Python", O'Reilly, 2012
4. Dr. Varghese Paul, Dr. Anjana S. Chandran, "Introduction To Computing And Problem Solving"



A handwritten signature in blue ink, appearing to be "Anjana S. Chandran".

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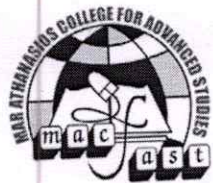
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7	902057	Anaswara P Mohan
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9	902059	Anjana P Nair
10	902060	Anjana S Nair
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13	902063	Ann Mary Anto
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28	902078	Geni Susan Skaria



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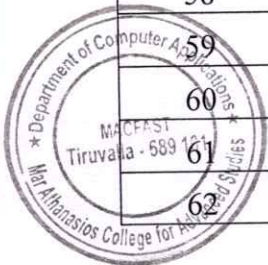


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62	902112	Sreelakshmy S Nair



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66	902116	Subi Maria Antony
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70	902120	Vineesh V
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72	902122	Vyshakh B



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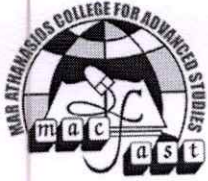
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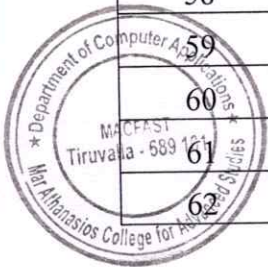


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## MCA 305T OBJECT ORIENTED ANALYSIS & DESIGN

### UNIT-I

- UML Diagram - ATM Transaction (Case Study)

AN OVERVIEW OF OBJECT ORIENTED SYSTEMS DEVELOPMENT: Introduction, Two Orthogonal Views of the Software, Object Oriented Systems Development Methodology, Why an Object Orientation? WHY WE MODEL: The Importance of Modeling, Principles of Modeling, Object Oriented Modeling

INTRODUCING THE UML: An overview of the UML, A Conceptual Model of the UML, Architecture, Software Development Life Cycle

### UNIT-II

BASIC STRUCTURAL MODELING: Classes, Relationships, Common Mechanisms, and diagrams, class diagrams ADVANCED STRUCTURAL MODELING: Advanced classes, advanced relationships, Interfaces, Types and Roles, Packages, Object Diagrams

### UNIT-III

BASIC BEHAVIORAL MODELING: Interactions, Interaction diagrams, Use cases, Use case diagrams, Activity Diagrams ADVANCED BEHAVIORAL MODELING: Events and signals, state machines, processes and Threads, time and space, state chart diagrams.

### UNIT-IV (11 Lectures)

ARCHITECTURAL MODELING I: Component, Deployment, Component diagrams and Deployment diagrams ARCHITECTURAL MODELING II: Patterns and Frameworks, Collaborations, Systems and Models.

### UNIT-V

CASE STUDY: Bank ATM Application, Railway Reservation System.

### REFERENCES:

- Grady Booch, James Rumbaugh, Ivar Jacobson, "The Unified Modeling Language User Guide", 2nd Edition, Pearson Education, 2007.
- Ali Bahrami, "Object Oriented Systems Development using the unified modeling language", 1st Edition, TMH, 2008.
- Meilir Page-Jones, "Fundamentals of Object Oriented Design in UML", 1st Edition, Pearson Education, 2006.
- Pascal Roques, "Modeling Software Systems Using UML2", 1st Edition, WILEY Dreamtech, 2007.
- Atul Kahate, "Object Oriented Analysis & Design", 1st Edition, TMH, 2007.
- Mark Priestley, "Practical Object-Oriented Design with UML", 2nd Edition, TMH, 2005.
- Craig Larman, "Applying UML and Patterns: An introduction to Object", Object Oriented Analysis and Design and Unified Process, 3rd Edition, Pearson Education, 2007.



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## MCA 206P DATA BASE MANAGEMENT SYSTEM

### Introduction to MySQL Database

#### Installation of MySQL

- Table Design- Using foreign key and Normalization
- Practice SQL Data Definition Language(DDL) commands
- Table creation and alteration(include integrity constraints such as primary key, referential integrity constraints, check, unique and null constraints both column and table level
- Other database objects such as view, index, cluster, sequence, synonym etc.
- Practice SQL Data Manipulation Language (DML) commands
- Row insertion, deletion and updating
- Retrieval of data
- Simple select query
- Select with where options (include all relational and logical operators)
- Functions: Numeric, Data, Character, Conversion and Group functions with having clause.
- Set operators
- Sorting data
- Sub query (returning single row, multiple rows, more than one column, correlated sub query)
- Joining tables( single join, self join, outer join)
- Data manipulations using date functions
- User defined functions in a query
- Hints in queries to optimize performance
- Manage ODBC/JDBC connections
- Practice Transaction Control Language (TCL) commands ( Grant, revoke, commit and save point options)
- Usage of triggers, functions and procedures using PL/SQL constructs
- 10 PL/SQL Programs to be developed demonstrating PL/SQL Concepts
  
- Development of a Databases using MySQL that could be used with one of the following application:
  - Payroll Information
  - Student Information System
  - Library Information System etc.
  
- Backup and restore databases;
- Query optimization in a database



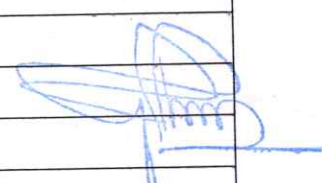
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2	193240910230	Aji S Varghese
3	193240910231	Akhil A.K
4	193240910232	Akshaya Baiju
5	193240910233	Amala Vijayan
6	193240910234	Anand Raj
7	193240910235	Anandhu R Nair
8	193240910236	Anit Maria Abraham
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24	193240910252	Nandu krishnan
25	193240910253	Pooja Prasad
26	193240910254	Princy sara Chacko
27	193240910255	Riji Mary Rajan

  
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32	193240910260	Vishnupriya S
33	193240910261	Vivek T Varghese
34	193240910262	Vrinda M Rajan



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## MCA 107 - PC HARDWARE LAB

1. Identification of PC Components and Assembling the PC
2. Installation of Operating Systems and formatting the Hard Disk
3. Replacing and fitting of Hard Disk and Floppy Disk on PC
4. Identification of different cards in the PC
5. Setting of jumpers for Interrupt Request on mother Board
6. PC Tools and its use
7. Disc Managers and it's use
8. Virus removal and disc scan
9. Connecting input devises and installing their driver software
10. Replacing and fitting Processors, Motherboards and Memory.

### Text Book :

The Complete Reference – PC Hardware – Craig Zacker & John rourke, Edition 2001 Tata McGraw Hill



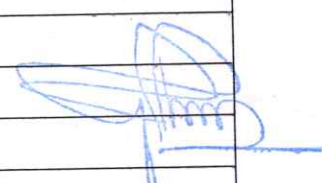
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SCHOOL OF BIOSCIENCES

Names of the students studied course on experiential learning through project work/field  
work/internship


2019-20

Programme: M.Sc. Biotechnology  
Course: BT020105 Lab course I

M.Sc. Biotechnology (2019-21 batch)

SI.. NO	ROLL No.	NAME OF STUDENT
1.	190011012422	ABIYA ANN MATHEW
2.	190011012423	AISWARYA SURESH
3.	190011012424	ANJALI T
4.	190011012425	APARNA TOM
5.	190011012426	ARATHI RAGHAVAN
6.	190011012427	ARATHI SAJI
7.	190011012428	BINI SAN GEORGE
8.	190011012429	DEVIKA PRADEEP
9.	190011012430	JAYALAKSHMI T.L
10.	190011012431	PARVATHI SURESH
11.	190011012432	SHRUTHI M
12.	190011012433	TEENA SUSAN SAM
13.	190011012434	THASNEEM NISSAM BABU



  
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8. Bioinformatics - A Student's Companion. Syed Ibrahim, K. et al, Springer Pub. ISBN-10: 9811018561.

9. Protein Bioinformatics: From Protein Modifications and Networks to Proteomics  
Editors Wu, Cathy, Arighi, Cecilia, Ross, Karen (Eds.) ISBN 978-1-4939-6783-4. – Springer.

10. Physics in Biology and Medicine. Paul davidovitis. Academic Press ISBN:  
**9780128137161**

### **BT020105 LABORATORY COURSE 1**

**Number of Hours / Week: 10**

**Credits: 4**

**Course outcome: The students are able to understand :the basic principles of preparation of solutions . The detection, assay and purification of biological compounds. Design experiments and analyse results. Handling of required equipments. (Biochemistry, Cell biology & Genetics).**

1. Preparation of solutions:

- Percentage solutions, Molar and Normal solutions ,Dilution of Stock solutions

2. Preparation of buffers using the Henderson Hasselbach equation

3. Spectrophotometric experiments:

Verification of Beer Lambert's law, Quantitative estimation of reducing sugars by Dinitrosalicylic acid method, Quantitative estimation of Methionine by Nitroprusside method, estimation of protein- Biuret, Lowry, Bradford Method, Estimation of Cholesterol by Zak's method, Estimation of DNA, Estimation of RNA.

4. Chromatographic techniques

- Separation of amino acids by Paper chromatography (Descending /Ascending)
- Separation of Plant pigments by Thin layer chromatography

6. SDS PAGE.

5. Extraction of Polysaccharides (Starch, Glycogen), Proteins, from appropriate source:

- Quantification of isolated polysaccharide (anthrone method), protein and lipids
- Saponification value, iodine value, of fat sample

6. Identification of mitotic cell cycle stages, problems in Genetics.



7. Problems in biostatistics

**Reference:**

1. An Introduction to Practical Biochemistry. David T Plummer *ISBN-13: 978-0070841659*.
2. Biochemical Methods. S. Sadasivam and A Manickam. New Age International Publishers
3. Biochemical Calculations: Irwin H Segel. Wiley Pub. *ISBN-13: 978-0471774211*
4. Principles of Genetics: M J Gardner, John Wiley and sons.





MAR ATHANASIOS COLLEGE FOR ADVANCED STUDIES TIRUVALLA  
Thiruvalla - 689101

**SCHOOL OF BIOSCIENCES**

**Name of Students who studied courses with experiential learning (2019-20)**

Programme: M.Sc. Biotechnology  
Course: BTPG15 LABORATORY COURSE III

M.Sc. Biotechnology (2018-20 batch)

Sl.No.	ROLL No.	NAME OF STUDENT
1.	180011009238	ABHIRAMI S
2.	180011009239	AMALA ANTONY
3.	180011009240	ANCY ALFRED
4.	180011009241	ANZILA ASHARAF
5.	180011009242	ATHIRA R THANKAM
6.	180011009243	JENIE MARY VARGHESE
7.	180011009244	PHEBA ANN VARGHESE
8.	180011009245	TASNEEM
9.	180011009246	VINEETH K V



  
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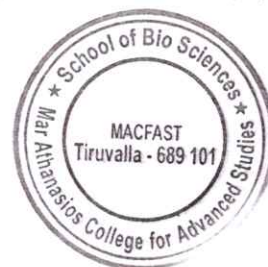


## **BTPG15 Laboratory course III**

**Number of Hours / Week: 10**

**Credits: 4**

1. Bacteriological examination of water. MPN Method
2. Bacteriological examination of food and milk sample
3. Fermentative production of wine and estimation of alcohol content
4. Fermentative production through Solid state fermentation
5. Immobilisation of microbial cells for enzyme production
6. Estimation of COD
7. Estimation of BOD
8. Bioreactor studies for waste management
9. Biogas production
10. Composting techniques
11. Mushroom cultivation
12. Fermentative production of industrially useful enzyme
13. Plant tissue culture techniques
14. Surface sterilization
16. Callus culture
17. Anther culture
18. Emryo culture
19. Protoplast isolation
20. Somatic Hybridization





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**SCHOOL OF BIOSCIENCES**

**Names of the students studied course on experiential learning (2019-20)**


Programme: M.Sc. Food Technology & Quality Assurance

Course: FQ010206 FOOD ADDITIVES AND PACKAGING TECHNOLOGY

M.Sc. Food Technology & Quality Assurance (2019-21 batch)

Sl. No.	ROLL No.	NAME OF STUDENT
1.	190011014489	ABHIRAM .S
2.	190011014490	AHMAD TIYEB YOSOFI
3.	190011014491	ANAKHA MURALI
4.	190011014492	ANJU MARIA JOSE
5.	190011014493	ANNS K FRANCIS
6.	190011014494	ANU VIJAYAN
7.	190011014495	ANUPAMA U
8.	190011014496	ATHIRA .P
9.	190011014497	BHAGYALEKSHMI M T
10.	190011014498	CHINJU LIDIYA JOY
11.	190011014499	CHINJU SHAJI
12.	190011014500	CHITRA .K.R
13.	190011014501	CHRISTY JOHNSON
14.	190011014502	DEVADAS. M.P
15.	190011014503	GANGA S
16.	190011014504	GIPSON JOSEPH
17.	190011014505	GOPIKA S
18.	190011014506	GREVIN S KURIAN
19.	190011014507	JEEMOL THOMAS
20.	190011014508	MEENU MANOJ
21.	190011014509	NIDAL IBRAHIM
22.	190011014510	RENI CHACKO
23.	190011014511	REVATHI PADMAKUMAR
24.	190011014512	REVATHY .V.S
25.	190011014513	RIYA ELZA PHILIP
26.	190011014514	RYNE PEREIRA
27.	190011014515	SANDRA S.P
28.	190011014516	SHOBAL JOSE
29.	190011014517	THRIDEEP T. NAIR
30.	190011014518	VELGIN RAJ
31.	190011014519	VISHNU S KUMAR
32.	190011014520	WAHIDULLAH FAIZ



  
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## FQ010206-FOOD ADDITIVES AND PACKAGING TECHNOLOGY

Credits: 4

108 Hours

### OBJECTIVES

To provide knowledge on various methods used for analysis of additives in food and also to gain practical skill in packaging and to determine the efficiency of packaging

#### Food Additives

1. Estimation of iodine in iodized salt	8 hrs
2. Estimation of Saccharine	8 hrs
3. Estimation of sodium benzoate	8 hrs
4. Estimation of sulphur dioxide	8 hrs
5. Estimation of salt by Mohr's method	8 hrs
6. Estimation of chlorophyll	8 hrs
7. Estimation of carotenoids	8 hrs
8. Estimation of propyl gallate	8 hrs
9. Estimation of sorbic acid	8 hrs
10. Qualitative test for gums	8 hrs

#### Food Packaging

##### Testing of packaging materials

• Bursting strength	3 hrs
• Puncture resistance	3 hrs
• Drop test	3 hrs
• Identification of plastics	4 hrs
• Thickness	3 hrs
• Water vapour transmission rate	3 hrs
• Gas transmission rate	3 hrs
• Tear strength	3 hrs
• Migration test	3 hrs







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**SCHOOL OF BIOSCIENCES**

**Names of the students studied course on experiential learning (2019-20)**

Programme: M.Sc. Food Technology & Quality Assurance

Course: FT 3MPP 717 Practical-Processing Technology of Animal-based Foods

**M. Sc. Food Technology & Quality Assurance (2018-20 batch)**

Sl.No.	ROLL No.	NAME OF STUDENT
1.	180011014383	ABHIJITH R S
2.	180011014384	AISHWARYA S
3.	180011014385	AJITH PA
4.	180011014386	AJMAL KALLAR MOIDU
5.	180011014387	AKSHAYA C
6.	180011014388	ALEENA SARA MATHEW
7.	180011014389	ANJALI R
8.	180011014390	ANJU MARIAM SEBASTIAN
9.	180011014391	ANOOJA ANILKUMAR
10.	180011014392	ATHIRA S
11.	180011014393	GOKUL SHAJI
12.	180011014394	GOPIKA S PILLAI
13.	180011014395	HARIKRISHNA
14.	180011014396	JENCY RAJAN
15.	180011014397	JERIN V GEORGE
16.	180011014398	JESTIN JAMES
17.	180011014399	JOBIN S
18.	180011014400	JOEL TOM JOSE
19.	180011014401	MEERA TS
20.	180011014402	NAINA ANNA OOMMEN
21.	180011014403	PS SWATHI
22.	180011014404	PRIYA ABY PYNADATH
23.	180011014405	RAKHITH R
24.	180011014406	RESHMADAS M
25.	180011014407	ROWENA SUSAN PRADEEP
26.	180011014408	SHANTO V THOMAS
27.	180011014409	SILPA MARY JOHN
28.	180011014410	SOUMYA THOMAS
29.	180011014411	SREELEKSHMI S
30.	180011014412	SRUTHY DEVADAS S



  
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## FT 3MPP 717: Practical- Processing Technology of Animal-based Foods

Credits 2

72 h

### OBJECTIVES

To provide a balanced methodology to the principles and techniques that is important in the processing of food

#### Preparation of milk based products

30 h

- Preparation of Ice cream
- Preparation of Sreekhand
- Preparation of Kalakand
- Preparation of Paneer
- Preparation of Gulab jamun
- Preparation of Rasagula
- Preparation of Peda
- Preparation of Kheer
- Preparation of Khoa
- Preparation of Kulfi
- Preparation of Dahi
- Preparation of Rabri
- Preparation of Malai
- Preparation of Buttermilk and Lassi
- Preparation of Basundi
- Preparation of Yogurt
- Preparation of Whey beverage

#### Preparation of meat based products

22 h

- Preparation of Bacon
- Preparation of Sausage
- Preparation of Meat Kofta
- Preparation of Meat cutlet
- Preparation of Barbequed chicken
- Preparation of Meat roll
- Preparation of Meat jerky

#### Preparation of egg based products

10 h

- Preparation of Fried Egg
- Preparation of Scrambled Egg
- Preparation of Egg Burji
- Preparation of plain omlette
- Preparation of Fluffy omlette
- Preparation of Scotch egg



- Preparation of Meringues
- Preparation of Souffles
- Preparation of Mayonnaise
- Preparation of Custard

#### **Preparation of fish based foods**

**10 h**

- Preparation of Fish curry
- Preparation of Fish rolls
- Preparation of Fish mollee
- Preparation of fish fingers
- Preparation of Prawn pickle
- Preparation of fish cake

#### **Reference**

- Srivastava, R.PO and Kumar, S. Fruit and vegetable preservation, International Book distribution Company, Lucknow, 1994.
- Srilakshmi, B. Food Science. New Age International Publishers, New Delhi, 2003.
- Subalakshmi, G and Udipi, S.A. Food processing and preservation. New Age International Publishers, New Delhi, 2001.
- Girdhari Lal, Siddappa G.S., Preservation of fruits and Vegetables.,1998

