Appendix - VII (A)

CURRICULUM AND SYLLABI FOR

MBA (FULL TIME) & MBA (EVENING - REGULAR) PROGRAMMES

(With effect from the Academic Year 2024-25)

According to Outcome Based Education

with Choice Based Credit System

COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY
KOCHI- 682022.

2024-25


COCHIN UNIVERSITY OF
SCIENCE AND TECHNOLOGY

CONTENTS

APPENDICES

MBA PROGRAMMES

COCHIN UNIVERSITY OF SCIENCE AND TECHNOLOGY

1. Preamble

The MBA programme provided by Cochin University of Science and Technology is tailored to shape students into adept future managers, well-versed in employing modern management methodologies to meet the standards set forth by the Government of India and Government of Kerala.

The updated curriculum elevates the MBA programme by integrating the Outcome Based Education (OBE) System, Choice Based Credit System (CBCS), and Grading System, aiming to enhance the educational experience and align with modern educational practices.

This newly introduced curriculum and training will equip management programme aspirants with comprehensive training aligned with the demands of Industry 5.0. This will significantly boost the employability of our graduates to meet the evolving human resources needs of the industry.

The revised curriculum and syllabi for both the two-year MBA Full-time and three-year MBA Evening-Regular Programmes have been implemented to start from the academic year 2024-25.

2. Scope

This curriculum and syllabi are applicable to the MBA (FT) and MBA (Evening-Regular) programmes of the School of Management Studies (SMS) of Cochin University of Science and Technology (CUSAT); and to the MBA (FT) programme offered by the recognised colleges of CUSAT.

3. Definition of Keywords

Choice Based Credit System (CBCS): As per the UGC Guidelines on Adoption of Choice Based Credit System and the CBCS implementation guidelines of CUSAT, the CBCS provides choice for students to select from the prescribed courses (core, elective or minor or soft skill courses).

Outcome Based Education (OBE): As per the Template of Outcome Based Education (OBE) Curriculum by UGC and implementation guidelines of CUSAT, OBE is starting with a clear picture of what is important for students to be able to do and achieve (Knowledge, Skill and Ability) then organizing the curriculum, instruction, and assessment to make sure this learning ultimately happens.

Credit Based Semester System (CBSS): As per the UGC Guidelines on Adoption of Choice Based Credit System and the CBCS implementation guidelines of CUSAT, under

the CBSS, the requirement for awarding a degree or diploma or certificate is prescribed in terms of number of credits to be completed by the students.

***Cumulative Grade Point Average (CGPA)*:** It is a measure of overall cumulative performance of a student over all semesters. The CGPA is the ratio of total credit points secured by a student in various courses in all semesters and the sum of the total credits of all courses in all the semesters. It is expressed up to two decimal places.

***MBA Programme*:** MBA programme means the MBA programme offered on full-time basis in the School of Management Studies, CUSAT and the recognised colleges/institutes of CUSAT; and the MBA Evening-Regular programme offered by the School of Management Studies, CUSAT. The MBA full-time programme, henceforth, will be known as MBA (FT) and the other one will be known as MBA (Evening-Regular).

PG Regulation: The regulations and guideline issued by CUSAT, from time to time, for the conducting master degree programmes in the University.

Regulations for Conducting Online Courses (MOOC): The regulations and guidelines issued by CUSAT, from time to time, for the conduct MOOC courses as part of Undergraduate and Postgraduate programmes of CUSAT.

Core Course (CC): means a course that the student admitted to a particular programme must successfully complete in order to receive the Degree and which cannot be substituted by any other course. Core courses ensure that students have a common base of knowledge and skills necessary to advance in their chosen field.

Elective Course (EC): Elective course means a course, which can be substituted by equivalent courses from the same or other Departments/Schools. Elective courses are optional courses that students can choose to take based on their interests, career goals, or academic requirements. Elective courses often cover specialised topics within a field of study, advanced subjects, or interdisciplinary areas that complement a student's primary knowledge framework.

***MOOC Courses*:** The online courses that fully satisfy the guidelines of the Regulations for Conducting Online Courses (MOOC) of CUSAT.

4. MBA Programme Objective

The objective of the MBA programme is to equip students with essential knowledge and skills required for excelling in Industry 5.0 by imparting the right blend of knowledge, perspectives, analytical, decision-making and digital skills needed to provide leadership to organisations competing in a world increasingly characterised by diverse workforce, rapid technological change, and a fiercely competitive global marketplace.

The MBA programme focuses on preparing students for careers in management, leadership and entrepreneurial ventures in both the private and public sectors worldwide.

Students will acquire comprehensive foundation in business and management, global business environment and latest tools & techniques for judicious intelligent decision making & creative problem solving in the VUCA world.

5. MBA Graduate Attributes

This curriculum and syllabi incorporate the following graduate attributes outlining the key competencies and qualities students will acquire to excel in their academic pursuit and beyond.

1) Knowledge
2) Creativity
3) Digital skills
4) Teamwork
5) Communication
6) Leadership
7) Responsible decision making
8) Integrity

6. Programme Educational Objectives (PEOs)

The Programme Educational Objectives (PEOs) are broad statements which describe the career and professional achievements that the programme will help the graduates to achieve within the first few years after graduation.

PEO1: Skill Acquisition

Students will establish themselves as effective professionals by solving real life complex managerial problems by integrating management theories and practices to perform strategic analysis with attention to team work, effective communication, critical thinking, decision-making, problem solving and digital skills in an increasingly global, technology-oriented, diverse and changing business environment. The course will also develop valuable life skills of students and transform them to a holistic personality so that they are enabled to think independently, argue critically, solve problems and communicate effectively at a level which reflects their competency.

PEO2: Creativity, Innovation and Entrepreneurship

Students will be motivated to bring out the best in them and foster creativity, innovation and entrepreneurial capabilities to be effective change agents. Management graduates desirous of self-employment should be able to start their own business ventures or demonstrate their entrepreneurial capabilities for their employer organisation and drive the businesses through multifaceted skills.

PEO3: Employability

Students will develop professional and innovation skills that qualify them for immediate employment and life-long learning in advanced areas of management and related fields. The

course also equips the youngsters with conceptual and interpersonal and social skills and social purpose for managerial decision-making and its execution in real situations.

PEO4: Higher Studies, Academics and Research

Students will demonstrate their ability to learning and apply new skills and added competencies. Management graduates with academic interest and aptitude should be actively pursuing advanced studies and engaged in research, teaching-learning or consultancy assignments

Students will demonstrate their ability to learn and apply new skills and added competencies. Management graduates with academic interest and aptitude would actively pursue advanced studies and engage in research, teaching-learning and consultancy assignments

PEO5: Well informed, Ethical and Committed Professionals

Students will be provided with an educational foundation that prepares them for excellence in leadership roles to explore and develop social, legal and ethical responsibilities for a successful career in society, business and industry. Management graduates will become socially responsible and value-driven citizens committed to ethical and sustainable development, contributing to the management profession and the community.

7. Programme Outcomes (POs)

Programme outcomes are narrower statements that describe what students are expected to be able to do by the time of completion of MBA Programme.

PO1 Knowledge: Students should be able to apply knowledge of management theories and practises and apply appropriate techniques, resources, analytical tools, modern management and digital technologies for the management of complex business activities to enhance organizational efficiency and create innovative business solutions in the present Industry 5.0 environment.

PO2 Critical Thinking and Problem Solving: Students should be able to apply the perspective of their chosen concentrated area of study to develop fully-reasoned opinions on such contemporary issues as the need for innovation, integrity, leading and managing change, globalization, and technology management.

PO3 Teamwork: Students should be able to determine the effectiveness with which goals are defined and achieved in team environments, to assess the contributions made by themselves as well as by their peers within those environments, and to identify and resolve conflicts. Students should also, able to function effectively as an individual, as a member or leader in diverse teams, and in multidisciplinary settings.

PO4 Communication and Presentation Skills: Students should be able to demonstrate the ability to listen and read attentively, and to express ideas with clarity in both oral and written communications as well as effective presentations.

PO5 Leadership Skills: Students should be able to document their participation in, and contribution to, student organizations, business or consulting projects, internship opportunities, or other MBA sanctioned initiatives.

PO6 Environment and Sustainability: Students should be able to understand the impact of the professional management solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

PO7 Ethics: Students should be able to apply ethical principles and commit to professional ethics and responsibilities and norms of the management practice for making judicious managerial decisions.

8. Programme Specific Outcomes (PSOs)

The MBA programme specific outcomes are given below.

PSO1: Students develop expertise in diverse management domains, fostering both effective organizational leadership and entrepreneurial capabilities.

PSO2: Students develop problem-solving skills and critical thinking for complex business scenarios, enabling informed decisions and leveraging digital skills.

PSO3: Students embrace value-based leadership and exhibit effective teamwork to achieve common organizational goals.

PSO4: Students attain communication and presentation skills to engage stakeholders effectively while making informed decisions through data analysis and strategic thinking.

PSO5: Students are sensitized to environmental sustainability and corporate governance principles.

9. Mapping of Programme Outcomes (POs) and Programme Specific Outcomes (PSOs)

Programme Outcomes (POs)	Programme Specific Outcomes (PSOs)				
	PSO1	PSO2	PSO3	PSO4	PSO5
PO1	3	3	1	2	2
PO2	1	3	2	2	1
PO3	1	1	3	1	1
PO4	2	1	3	3	1
PO5	1	2	3	3	2
PO6	2	1	2	1	3
PO7	1	1	1	1	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High

10. Course Outcomes

Course outcomes are specific and measurable statements that define the knowledge skills and attitude learners will demonstrate by the completion of the course. These are mapped with PSOs in the respective syllabus.

11. Programme Monitoring

The MBA programme in SMS shall be monitored by the Department Council of SMS as per the "Regulation for Post Graduate Programmes Under Choice Based Credit System (CBCS) Offered by the University Departments/Schools/Centres" by CUSAT.

11.1 Programme Duration, Semesters and Credits

The MBA (FT) programme has a duration of two years (four semesters) and the MBA (Regular-Evening) programme has a duration of three years (six semesters). The classes of MBA (Regular-Evening) programme will be conducted during evening hours.

In order to complete the MBA programme, MBA (FT) or MBA (Regular-Evening), a student is required to obtain a total of 102 credits from 34 courses including a Summer Project and MOOC course(s). The credit distribution of the MBA programme is given in the following table.

Credit Distribution of MBA (FT) and MBA (Evening-Regular)

Sl. No.	Courses	CC/EC	No. of Courses	Credit Per Course	Total Credit
1	Core Courses (other than Summer Project and Viva-voce)	CC	23	3	69
2	Elective Courses	EC	9	3	27
3	Summer Project	CC	1	3	3
4	Comprehensive Viva-voce	CC	1	3	3
	Total Courses		**34**	**-**	**102**

Note: CC – Core courses and EC – Elective Courses

11.2 Delivery of Courses

Through a dynamic blend of traditional lectures, case studies, and experiential learning opportunities, the students must be engaged deeply with real-world challenges and develop critical analytical skills. Case studies must serve as a cornerstone, offering nuanced insights into complex business scenarios, encouraging strategic thinking, and honing decision-making abilities. Moreover, experiential learning components such as simulations, consulting projects, and internships provide hands-on exposure, allowing students to apply theoretical knowledge in authentic business settings. This multifaceted approach is essential to cultivate a comprehensive understanding of business concepts with the agility and adaptability essential for success in today's dynamic global marketplace.

11.3 Interdepartmental Electives

The MBA programme follows CBCS and thus the interested students may opt for elective courses offered by the allied Schools/Departments in CUSAT as inter-department elective course(s) subject to the regulations/guidelines prescribed in this regard by the University.

11.4 MOOC Courses

The MBA (FT) students shall undergo one elective course as a mandatory MOOC course (3 credits) and the MBA (Evening-Regular) students shall undergo two elective courses as mandatory MOOC courses (3 credits each) as per the "Regulations for Conducting Online courses (MOOC)" of the University. The MBA (FT) students shall do the MOOC course after the first semester so as to complete the course and to report the marks and grade for that MOOC course in the mark list of the fourth semester. The MBA (Evening-Regular) students have to do two MOOC courses and shall start doing the MOOC courses after the first semester so as to complete one of the MOOC courses by the end of the fifth semester and to include the marks and grades of the same in the fifth semester mark list. The other MOOC course shall be completed by the end of the sixth semester and the marks and grades of the same shall be included in the mark list of the sixth semester. The monitoring of MOOC courses shall be ensured by the School/recognised institutes so as to meet the requirements as specified in the "Regulations for Conducting Online courses (MOOC)" of the University.

11.5 Summer Project

Students of both MBA (FT) and MBA (Evening-Regular) programmes should carry out a Summer Project in a firm after completion of the second semester (FT) and the IV semester (Evening-Regular) respectively. Summer Project shall be an internship-based study attached to a firm, to be completed by the students within 6 to 8 weeks' time. The aim of this project is to provide students an opportunity to familiarise with the management process and practice relevant to the area of internship offered and specific problem-solving exercise, if any, assigned to them as part of the project. This can be done by applying the management concepts students have studied. The students are also encouraged to use research methodology tools in a systematic manner and report the internship learning experience and study findings in a coherent manner. The project shall be carried out under the continuous supervision of a faculty member (Supervising Teacher) assigned by the School/ recognised colleges and institutes. The report of the summer project must be submitted during the third semester by the MBA (FT) students and during the fifth semester by the MBA (Evening-Regular) students.

Evaluation of Summer Project and awarding of marks and grade shall be made based on Continuous Assessment (CA) and Semester End Examination (SEE). The marks awarded for the project presentation will be considered as the semester end examination marks. If a candidate is not getting the required pass mark for the SEE,

the student has to redo the project work and obtain pass grade along with the next batch (es).

Detailed operational guidelines regarding the modus operandi and other relevant aspects of Summer Project shall be prepared and made available by SMS, CUSAT to their students and to the recognised colleges/institutes.

11.6 Comprehensive Viva-voce

The Comprehensive Viva-voce component is designed to assess the holistic understanding, critical thinking abilities, and practical application of knowledge acquired throughout the MBA programme. The Viva-voce may encompass a wide range of topics related to business administration, management theory, strategic planning, organizational behavior, finance, marketing, operations management, and entrepreneurship, among others. A panel of examiners, comprising faculty members and industry experts, will engage in an oral examination with the candidate.

12. MBA Programme Structure and Scheme

The MBA programme structures applicable to MBA (FT) & MBA (Evening-Regular) of the School of Management Studies, CUSAT, and MBA (FT) programme of recognised colleges/institutes are as follows.

12.1 MBA (FT) Programme Structure and Scheme: **(for School of Management Studies, CUSAT)**

FIRST SEMESTER

Course Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-375-0101	Management Concepts and Organisational Behaviour	CC	3	50	50	100
24-375-0102	Statistics for Managers	CC	3	50	50	100
24-375-0103	Managerial Economics	CC	3	50	50	100
24-375-0104	Financial Accounting for Managers	CC	3	50	50	100
24-375-0105	Business Environment	CC	3	50	50	100
24-375-0106	Indian Ethos and Business Ethics	CC	3	50	50	100
24-375-0107	IT for Business and Management	CC	3	50	50	100
24-375-0108	Marketing Management I	CC	3	50	50	100
24-375-0109	Professional Skill Development	CC	3	100	-	100
	Total		**27**	**-**	**-**	**900**

Note: CA - Continuous Assessment; SEE – Semester End Examination

SECOND SEMESTER

Course Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-375-0201	Corporate Financial Management	CC	3	50	50	100
24-375-0202	Marketing Management II	CC	3	50	50	100
24-375-0203	Operations Management	CC	3	50	50	100
24-375-0204	Human Resource Management	CC	3	50	50	100
24-375-0205	Management Accounting	CC	3	50	50	100
24-375-0206	Business Research Methods	CC	3	50	50	100
24-375-0207	Legal Aspects of Business	CC	3	50	50	100
24-375-0208	Innovation and Entrepreneurship	CC	3	50	50	100
24-375-0209	Business Communication	CC	3	50	50	100
	Total		**27**	**-**	**-**	**900**

THIRD SEMESTER

Course Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-375-0301	Management Science	CC	3	50	50	100
24-375-0302	Organisational Structure, Design and Change	CC	3	50	50	100
24-375-0303	Business Analytics	CC	3	50	50	100
24-375-03XX	Elective – 1	EC	3	50	50	100
24-375-03XX	Elective – 2	EC	3	50	50	100
24-375-03XX	Elective – 3	EC	3	50	50	100
24-375-03XX	Elective – 4	EC	3	50	50	100
24-375-03XX	Elective – 5	EC	3	50	50	100
24-375-0304	Summer Project	CC	3	50	50	100
	Total		**27**			**900**

**XX– is the unique two digit number of the particular elective course from the list of elective courses*

FOURTH SEMESTER

Course Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-375-0401	Strategic Management and Corporate Governance	CC	3	50	50	100
24-375-0402	Business Sustainability	CC	3	50	50	100
24-375-04XX	Elective – 6	EC	3	50	50	100
24-375-04XX	Elective – 7	EC	3	50	50	100
24-375-04XX	Elective – 8	EC	3	50	50	100
24-375-04XX	Elective – 9: MOOC	EC	3	-	100	100
24-375-0403	Comprehensive Viva-Voce	CC	3	-	100	100
	Total		**21**			**700**

**XX– is the unique two digit number of the particular elective course from the list of elective courses*

12.2 MBA (Evening - Regular) Programme Structure and Scheme for School of Management Studies, CUSAT

FIRST SEMESTER

Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-376-0101	Management Concepts and Organisational Behaviour	CC	3	50	50	100
24-376-0102	Statistics for Managers	CC	3	50	50	100
24-376-0103	Managerial Economics	CC	3	100	50	100
24-376-0104	Financial Accounting for Managers	CC	3	50	50	100
24-376-0105	Indian Ethos and Business Ethics	CC	3	50	50	100
	Total		**15**			**500**

SECOND SEMESTER

Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-376-0201	Corporate Financial Management	CC	3	50	50	100
24-376-0202	Business Communication	CC	3	50	50	100
24-376-0203	Human Resource Management	CC	3	50	50	100
24-376-0204	Management Accounting	CC	3	50	50	100
24-376-0205	Marketing Management I	CC	3	50	50	100
	Total		**15**			**500**

THIRD SEMESTER

Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-376-0301	Management Science	CC	3	50	50	100
24-376-0302	IT for Business and Management	CC	3	50	50	100
24-376-0303	Business Environment	CC	3	50	50	100
24-376-0304	Marketing Management II	CC	3	50	50	100
24-376-0305	Professional Skill Development	CC	3	100	-	100
	Total		**15**			**500**

FOURTH SEMESTER

Course Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-376-0401	Business Research Methods	CC	3	50	50	100
24-376-0402	Operations Management	CC	3	50	50	100
24-376-0403	Legal Aspects of Business	CC	3	50	50	100
24-376-0404	Organisational Structure, Design and Change	CC	3	50	50	100
24-376-04XX	Elective - 1	EC	3	50	50	100
24-376-04XX	Elective - 2	EC	3	50	50	100
	Total		**18**			**600**

***XX is the unique two digit number of the particular elective course from the list of elective courses*

FIFTH SEMESTER

Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-376-0501	Innovation and Entrepreneurship	CC	3	50	50	100
24-376-0502	Business Analytics	CC	3	50	50	100
24-376-05XX	Elective - 3	EC	3	50	50	100
24-376-05XX	Elective - 4	EC	3	50	50	100
24-376-05XX	Elective - 5: MOOC	EC	3	-	100	100
24-376-0503	Summer Project	CC	3	50	50	100
	Total		**18**			**600**

***XX is the unique two digit number of the particular elective course from the list of elective courses*

SIXTH SEMESTER

Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-376-0601	Strategic Management and Corporate Governance	CC	3	50	50	100
24-376-0602	Business Sustainability	CC	3	50	50	100
24-376-06XX	Elective 6	EC	3	50	50	100
24-376-06XX	Elective 7	EC	3	50	50	100
24-376-06XX	Elective 8	EC	3	50	50	100
24-376-06XX	Elective 9: MOOC	EC	3	-	100	100
24-376-0603	Comprehensive Viva-Voce	CC	3	---	100	100
		Total	**21**			**700**

***XX is the unique two digit number of the particular elective course from the list of elective courses*

12.3 MBA (FT) Programme Structure and Scheme for Recognised Colleges/Institutes

FIRST SEMESTER

Course Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-375-0101	Management Concepts and Organisational Behaviour	CC	3	40	60	100
24-375-0102	Statistics for Managers	CC	3	40	60	100
24-375-0103	Managerial Economics	CC	3	40	60	100
24-375-0104	Financial Accounting for Managers	CC	3	40	60	100
24-375-0105	Business Environment	CC	3	40	60	100
24-375-0106	Indian Ethos and Business Ethics	CC	3	40	60	100
24-375-0107	IT for Business and Management	CC	3	40	60	100
24-375-0108	Marketing Management I	CC	3	40	60	100
24-375-0109	Professional Skill Development	CC	3	100	-	100
	Total		**27**	**-**	**-**	**900**

Note: CA - Continuous Assessment; SEE – Semester End Examination

SECOND SEMESTER

Course Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-375-0201	Corporate Financial Management	CC	3	40	60	100
24-375-0202	Marketing Management II	CC	3	40	60	100
24-375-0203	Operations Management	CC	3	40	60	100
24-375-0204	Human Resource Management	CC	3	40	60	100
24-375-0205	Management Accounting	CC	3	40	60	100
24-375-0206	Business Research Methods	CC	3	40	60	100
24-375-0207	Legal Aspects of Business	CC	3	40	60	100
24-375-0208	Innovation and Entrepreneurship	CC	3	40	60	100
24-375-0209	Business Communication	CC	3	40	60	100
	Total		**27**	**-**	**-**	**900**

THIRD SEMESTER

Course Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-375-0301	Management Science	CC	3	40	60	100
24-375-0302	Organisational Structure, Design and Change	CC	3	40	60	100
24-375-0303	Business Analytics	CC	3	40	60	100
24-375-03XX	Elective – 1	EC	3	40	60	100
24-375-03XX	Elective – 2	EC	3	40	60	100
24-375-03XX	Elective – 3	EC	3	40	60	100
24-375-03XX	Elective – 4	EC	3	40	60	100
24-375-03XX	Elective – 5	EC	3	40	60	100
24-375-0304	Summer Project	CC	3	40	60	100
	Total		**27**			**900**

**XX– is the unique two digit number of the particular elective course from the list of elective courses*

FOURTH SEMESTER

Course Code	Name of Course	CC/ EC	Credit	Marks		Total Marks
				CA	SEE	
24-375-0401	Strategic Management and Corporate Governance	CC	3	40	60	100
24-375-0402	Business Sustainability	CC	3	40	60	100
24-375-04XX	Elective – 6	EC	3	40	60	100
24-375-04XX	Elective – 7	EC	3	40	60	100
24-375-04XX	Elective – 8	EC	3	40	60	100
24-375-04XX	Elective - 9: MOOC	EC	3	-	100	100
24-375-0403	Comprehensive Viva-Voce	CC	3	-	100	100
	Total		**21**			**700**
**XX– is the unique two digit number of the particular elective course from the list of elective courses*						

13 Evaluation and Grading

The whole system of evaluation and grading will be as per the "Regulation for Post Graduate Programmes Under Choice Based Credit System (CBCS) offered by the University Departments/Schools/Centres" of the University. As per the regulation, the entire system of evaluation is internal for University Departments/Schools/Centres. The evaluation scheme for each semester contains two parts, a continuous assessment (CA) and a semester end examination (SEE). Both the continuous assessment (CA) component and semester end examination (SEE) component shall be 50% of the total marks each. For recognised colleges/institutes, the continuous assessment (CA) component shall be 40% of the total marks and semester end examination (SEE) component shall be 60% of the total marks. The semester end examinations (SEE) of the recognised colleges/institutes shall be external and conducted in accordance with the relevant University regulations in place. University ranks for the MBA (FT) Programme in SMS and recognised institutes/colleges shall be considered separately. The model question papers for MBA (FT/Evening-Regular) of SMS and for MBA (FT) of recognised Colleges/Institutes are appended.

14. Certification of Specialisation Areas of Students

The MBA programme offers dual specialisation based on the number of elective courses a student has passed from a particular stream of electives. A minimum of four elective courses selected from a stream of elective courses, make her/him eligible for certification in that area. Thus, each student's specialisation is determined by their unique combination of elective courses she/he chooses from the available elective streams. In the event that a student opts for a course common to multiple elective streams, the elective is counted only once for certification, prioritizing the student's preference in shaping their specialisation.

15. Syllabi of MBA (FT) and MBA (Evening-Regular) Degree Programmes

15.1 Syllabi of Core Courses

MANAGEMENT CONCEPTS AND ORGANISATIONAL BEHAVIOUR

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT I/ PT I	24-375-0101/ 24-376-0101	Management Concepts and Organisational Behaviour	3	CC	50	50
For Recognized Colleges, CUSAT						
FT I	24-375-0101	Management Concepts and Organisational Behaviour	3	CC	40	60

Objectives:

1. To help students understand fundamental concepts of management and organizational behaviour.
2. To enable students to examine the dynamics between individual, group, and organizational factors and their effects on workplace behaviour.
3. Empower students to critically assess organizational behaviour issues and make informed decisions using suitable concepts and frameworks.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand management theories and organizational behavior concepts for practical applications in modern-day management.	2
CO2	Apply individual behavior, motivation, and interpersonal dynamics theories to enhance organizational effectiveness and employee well-being.	3
CO3	Apply leadership, power, and organizational culture theories to develop effective organizational dynamics and change management strategies.	3
CO4	Critically analyze the challenges and opportunities due to globalization, workforce diversity, and technological advancements in organizational contexts.	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	2	1
CO2	2	2	3	3	2
CO3	3	3	3	3	3
CO4	3	3	3	3	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Introduction to Management and Organizational Behavior

Foundations of Management: Definition and nature of Management; Overview of the Functions of Management (Planning, Organizing, Directing, Controlling); Introduction to the functional areas of management.

Schools of Management Thoughts: History and evolution of management theories. Classical, Behavioral, System, Contingency, and Contemporary approaches.

Introduction to Organizational Behavior (OB): Concept and evolution of OB; Significance of OB in Management- Challenges and Opportunities.

Module II: Individual Behavior in Organizations

Theories in Perception: Perception and Individual Differences, Perception and Decision-Making Process; Attribution theory.

Personality Concepts: Personality theories, Personality Testing, Implications in organizational settings.

Emotional Intelligence and Learning Theories: Models of Emotional Intelligence, Overview of learning theories (Classical Conditioning, Operant Conditioning, Social Learning Theory).

Module III: Motivation and Interpersonal Behavior

Theories of Motivation: Content, Process and Contemporary Theories; Application- Increasing Job Satisfaction, Understanding Attitudes and Values.

Understanding Groups and Teams: Process of Group Formation, Group Dynamics, Types of Teams and Team Performance; Decision making by individuals and groups

Module IV: Leadership and Organizational Dynamics

Leadership Theories: Behavioral, Situational, and Contingency theories, Applications in organizational settings. Power and Politics in Organizations: Dynamics of power. Understand and Manage Power & Politics.

Organisational Culture: Sources and influences on Organisational culture; Distinction between Organisational culture and climate, Functionalities and dysfunctionalities of culture; Changing culture

Module V: Contemporary Issues in Management and Organizational Behavior

Globalization and Organizational Behavior: Impact of Globalization and Workforce Diversity, Changing Employee/consumer profiles.

Organizational Change: Forces for change in organisation; Changing Context of Organizations in the Digital Age; Influence of technological advancements on organizational behavior,

Current Trends and Future Directions: Social responsibility and Ethics. Emerging Trends in Management and Organizational Behavior; Navigating Opportunities and Threats

References

1. Robbins, S. P., Judge, T. A., & Vohra, N. (2018). *Organisational behaviour*. Pearson Education.
2. Luthans, F. (2016). *Organisational behaviour: An evidence-based approach*. McGraw Hill Education.
3. Hill, C. W. L., & McShane, S. (2017). *Principles of management*. McGraw-Hill Education.
4. Grieves, J. (2010). *Organisational change: Themes and issues*. Oxford University Press.
5. Uhl-Bien, M., Piccolo, R., & Schermerhorn, J. (2020). *Organizational behavior* (2nd ed.). Wiley.

STATISTICS FOR MANAGERS

Semester	Course code	Course Title	Credit	CC/ EC	Mark	
					Internal	External
For School of Management Studies, CUSAT						
FT I/ PT I	24-375-0102/ 24-376-0102	Statistics For Managers	3	CC	50	50
For Recognized Colleges, CUSAT						
FT I	24-375-0102	Statistics For Managers	3	CC	40	60

Objectives:

1. To develop a comprehensive understanding of probability theory, including the fundamental concepts and rules governing probability and its application business decisions.
2. To learn various statistical tests applicable to business scenarios and be able to formulate hypotheses, select appropriate tests, collect data, perform statistical analyses, and draw meaningful conclusions to support or reject hypotheses.
3. To acquire the skills to assess relationships between variables through correlation analysis and build regression models to make predictions.
4. To make students capable of analyzing time series data to identify patterns, trends, and seasonality.
5. The course also intends to introduce statistical applications tools such as SPSS and MS Excel.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Ability to recall fundamental concepts of probability, sampling, hypothesis testing, correlation, regression, time series analysis and index numbers.	1
CO 2	Understanding the intricacies of probability distributions, business contexts that need sampling and hypothesis testing, correlation and regression analysis and prediction	2
CO 3	Ability to apply statistical methods to business decision context to provide solutions to business problems.	3
CO 4	Create and recommend appropriate business strategies through testing of hypothesis and data analysis	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	-	-	-
CO2	2	2	-	1	-
CO3	-	3	-	2	-
CO4	-	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Knowledge of Introduction to Descriptive Statistics: Measures of central tendency, Measures of dispersion -Skewness and Kurtosis (covered in Bridge course).

Syllabus:

Module I: Introduction to Probability and probability distributions

Basic concepts, Conditional Probability, Bayes' Theorem. Probability Distributions-Discrete Probability distributions-Binomial-Poisson, Continuous probability distributions-Uniform-Normal-Exponential.

Module II: Sampling and sampling Distribution

Introduction to Sampling, sampling distribution, properties of normal distribution (standard deviation, skewness and kurtosis), t distribution, point estimate, interval estimate

Module II: Testing of Hypothesis

Developing Null and Alternative hypotheses, Testing of Hypothesis-type I and II errors, parametric test-Z test and t-test for large and small samples- ANOVA-F test, Non parametric tests-chi square test.

Module III: Correlation and Regression

Correlation Analysis- Karl Pearson's Co-efficient of correlation-Rank Correlation-testing for significance. Regression analysis-simple regression-regression coefficients-Coefficient of Determination-testing for significance, multiple regression (using SPSS or Spread sheet)

Module V: Time series Analysis and forecasting

Overview of Time series Analysis and forecasting: Time series Decomposition models, Forecasting models, moving average, exponential smoothing, trend projection. – Index numbers and methods of constructing index numbers.

References

1. Richard I. Levin, David S. Rubin, Masood Husain Siddiqui, Sanjay Rastogi, "Statistics for Management", Pearson.
2. J. K. Sharma "Business Statistics, 5e", Vikas Publishing.
3. Naval Bajpai, "Business Statistics", Pearson Publication
4. S C Gupta, "Fundamentals of Statistics" Himalaya Publishing House

MANAGERIAL ECONOMICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT I/ PT I	24-375-0103/ 24-376-0103	Managerial Economics	3	CC	50	50
For Recognized Colleges, CUSAT						
FT I	24-375-0103	Managerial Economics	3	CC	40	60

Objectives:

1. To equip the students with the methodology of decision making using the concepts of microeconomics.
2. To comprehend the working of the markets, the determination of prices and the techniques of decision making that the players in the market can adopt to ensure that sound decisions are made.
3. To equip students with the knowhow on devising competition strategies in terms of pricing, product differentiation after assessing the nature of the product and structure of markets

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	To apply the basic theories and concepts of managerial economics, markets and existence of firms.	3
CO2	Apply and analyse the real world demand and supply conditions with a systematic theoretical framework.	4
CO3	Assess the effect of non-price factors on products and services of different market structures.	5
CO4	Devise competition strategies, including costing, pricing, product differentiation, and market environment according to the nature of products and the structure of the markets	6

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	2	-
CO2	3	3	2	3	1
CO3	3	3	2	3	-
CO4	3	2	1	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites: Nil

Syllabus:

Module I:

Managerial Economics: Concept of Economy, Economics, Microeconomics, Macroeconomics. Nature and Scope of Managerial Economics, Managerial Economics and decision-making. Concept of Firm, Market, Objectives of Firm: Profit Maximization Model, Economist Theory of the Firm.

Module II:

Utility & Demand Analysis: Utility-Meaning, Utility analysis, Measurement of utility, Law of diminishing marginal utility, Indifference curve, Consumer's equilibrium-Budget line and Consumer surplus. Demand -Law of Demand, Elasticity of Demand. Forecasting-methods of Demand Forecasting.

Module III:

Supply & Market Equilibrium-Law of Supply, Changes or Shifts in Supply. Elasticity of supply. Practical Importance, Market Equilibrium and Changes in Market Equilibrium. Production Analysis-Production Function, Cost of different types-Economies of scale, Behaviour of average and marginal cost, Cost- Output Relationship in the Short Run and Long Run.

Module IV:

Revenue Analysis and Pricing Policies-Relationship between Revenues and Price Elasticity of Demand, Pricing Policies, Price Determination under Perfect Competition- Pricing Under Imperfect Competition- Monopoly, Price Discrimination under Monopoly, Bilateral Monopoly, Monopolistic Competition, Oligopoly, Collusive Oligopoly and Price Leadership.

Module V:

Measurement of National Income: Components of GDP-Consumption function and investment Function: marginal efficiency of capital and business expectations, Multiplier, Accelerator. Business Cycle-Theories of Business Cycles, Measures to Control Business Cycles, Business Cycles and Business Decisions, Balance of Payments, Trade policy of India, Foreign Direct Investment (FDIs).

References

1. Samuelson, W. F., & Marks, S. G. (2010). Managerial Economics (6th ed.). Hoboken, NJ:
2. John Wiley & Sons. Salvatore, D. (2012). Managerial Economics: Principles and Worldwide Application:(adapted version). OUP Publication.
3. Hirschey, M. (2016). Managerial Economics. Cengage Learning. Samuelson, W. F., & Marks, S. G. (2008).
4. Managerial Economics. Varshney R L & Maheshwari K L, 2019, S. Chand & Sons
5. Ward, D., &Begg, D. (2016). Economics for Business. McGraw-Hill.

FINANCIAL ACCOUNTING FOR MANAGERS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT I/ PT I	24-375-0104/ 24-376-0104	Financial Accounting for Managers	3	CC	50	50
For School Recognized Colleges, CUSAT						
FT I	24-375-0104	Financial Accounting for Managers	3	CC	40	60

Objectives:

1. To inculcate right perception to read financial reports of corporatesand to develop their skill sets to read financial reports comprehensively.
2. Acquaint the students in brief with accounting process and system with emphasis on understanding principles and process involved in preparing financial statements and their managerial implications.
3. Lay a foundation for developing their skills in analyse, interpreting financial statements and apply them in decision making on the basis of assessment of company's financial performance, strengths and weaknesses.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcome	Description of Expected Course Outcomes	Revised Bloom's Taxonomy Level
CO 1	Understanding the basic concepts of accounting, accounting process and mechanism of preparation of Financial statements.	2
CO 2	Apply the ability to read financial statements to assess a company's financial performance, strengths and weakness.	3
CO 3	Analysing the financial statements such as income statement and position statement to bring out meaningful inferences regarding the cost, revenue, assets, liabilities and establishing relationships between the above variables	4
CO 4	Analyse the organisational efficiency and build capacity to judge resources utilization, profitability, liquidity and solvency of business undertakings with the help of the accounting Skill sets acquired	4
CO 5	Evaluate the financial statements to workout scenarios for comparison and utilise the knowledge for better planning and decision making.	5

CO-PSO Mapping:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO4
CO 1	3	1	3	3	1
CO 2	3	3	1	-	2
CO 3	3	3	1	-	-
CO 4	3	3	-	1	1
CO 5	3	3	-	-	-

Note: Correlation Levels 1= Low, 2=Medium, 3=High "-"= No correlation

Prerequisites: Nil

Syllabus:

Module I : Introduction to financial Accounting and Statements

Financial Accounting – Understanding the information available in Financial Statements of companies and the role of these information in decision making. (Real life examples from various sectors)

Module II: Accounting Standards

Significant Accounting Policies and Accounting Standards, Accounting Principles, Accounting Concepts and Accounting Standards -IAS, IFRS and INDAS- India's convergence to IFRS (An overview)- -Identification, measurement, and reporting in statements.

Module III:Financial Accounting Process

Introduction to the accounting system. -Users of accounting information –Accounting Equation - Concept of double entry and fundamental principles- Describe the

Accounting process- Debit and Credit rule - Ledger Accounts, Trial Balance, and Final Accounts =

Module IV: Company Financial Statements

Financial Statements, Form and Contents of Financial Statements of Joint Stock Company and Interfaces with Companies Act - Special Features of Corporate Accounting. Liabilities, Shareholder's Equity- Assets, Inventory, Long-lived assets, tangible and intangible assets in Balance Sheet.

Module V: Analysing and Interpreting Financial Statements

Analysing and Interpreting Financial Statements, Types of Financial Analysis and Tools for analysis – Ratio Analysis, Profit, Profitability- turnover and efficiency- Practical with real industry examples.

References

1 Study Materials of ICAI, http://www.icai.org
2 Financial Accounting: A Managerial Perspective (TB), R. Narayanaswamy,7th Edition, PHI.
3 Miller-Nobles, Tracie L., Mattison, Brenda L., and Matsumura, Ella Mae (2016). Horngren's Financial and Managerial Accounting: The Financial Chapters (fifth edition). Pearson (global edition).
4 Atrill, Peter and McLaney, Eddie (2013). Financial Accounting for Decision Makers. (Seventh edition). Pearson.
5 Shukla, M. C., Grewal, T. S.: Advanced Accounts, S. Chand & Company Ltd., NewDelhi.
6 Jain, S. P. & Narang, K. L. Advanced Accountancy, KalyaniPjublishers, New Delhi
7 Gupta, R. L., Radhaswamy M.: Advanced Accountancy, Sultan Chand & Sons, NewDelhi.
8 Maheshwari, S. N., and Maheshwari, S. K.: Financial Accounting, Vikas Publishing House Pvt. Ltd., New Delhi

BUSINESS ENVIRONMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT I/ PT III	**24-375-0105/ 24-376-0303**	**Business Environment**	**3**	**CC**	**50**	50
For Recognized Colleges, CUSAT						
FT I	**24-375-0105**	**Business Environment**	**3**	**CC**	**40**	60

Objectives:

1. To give awareness to the students about the business environment.
2. To enable them to analyse it to take appropriate business decisions in the context of a dynamic economy.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Analyse the business ecosystem in India, including internal and external environmental factors.	4
CO2	Apply environmental analysis tools such as PESTLE, Porter's Five Forces, and SWOT analysis.	3
CO3	Evaluate the economic and social environment of India, considering demographic trends and economic reforms.	5
CO4	Apply political and technological environment analysis to understand implications for businesses.	3
CO5	Evaluate the industrial sector including policies, growth, and development status of various sectors.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	1	1	2
CO2	2	3	3	2	3
CO3	2	3	-	2	1
CO4	2	3	-	2	1
CO5	2	3	-	1	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Overview of the Business Ecosystem in India

Meaning, Nature, types of business environment—internal, external, micro and macro environment—Environmental Analysis- Stages, Approaches and Benefits. Environmental awareness-concept of VUCA world and scanning for business planning- SWOT- PEST model- Porters' five forces model -VRIO analysis.

Module II: Economic & Social Environment

Economic Environment: Structural changes in the economy since independence- Agriculture, Industry, Service sectors - performance of various sectors. Economic Reforms- Liberalisation, globalization & Privatisation and its Impact in the economy. Overview of the Indian financial system- Money market & Capital Market: Social Environment - Demographic trend and analysis of social structure in India - Significance of growing middle class - social & cultural factor – social change

Module III: Political & Technological Environment

Political Environment: Business - government interface - public policy formulation - Implications for Business. Technological Environment: Choice of Technologies-

Economic effects of technology –social consequences. Practical Component: Exercises on PESTLE, Porters Five Forces Model, VRIO and SWOT analysis – special focus on digitalisation trends in industries and discussions to understand its impact

Module IV: Industrial Sectoral Overview:

An over view of industrial policies during the post liberalization period. Micro, Small and Medium Enterprises; Large Scale Enterprises and Public Enterprises; MNCs. Policy towards MSME --Industry–. The growth and development of public sector enterprises – disinvestment Sectoral Overview- Primary-Secondary-Tertiary sectors, important segments-infrastructure, FMCG, Retail, Aviation, IT & ITES – development and status of various sectors and sub sectors.

Practical Component: Case studies on public sector enterprises and status papers on various sectors

Module V: International Business Environment

International economic institutions and agreements— IMF, World Bank, ADB, UNCTAD, WTO. Cross-national cooperation and agreements— SAARC, SAPTA, BRICS, ASEAN. Regional Economic Integration-Trade Blocs. –customs unions

References

1. Sengupta, N.K. *Government and Business in India*, Vikas Publications, New Delhi.
2. Cherunilam, Francis: *Business Environment*, Himalaya Publishing House, New Delhi.
3. Bhalla, V.K. and S. Shivaramu: *International Business Environment and Business*, Anmol, New Delhi.
4. Sivayya and Das, *Indian Industrial Economy*, S.Chand & Co Ltd, New Delhi.
5. Cherunilam, Francis: *International Business*, Prentice-Hall of India, New Delhi.
6. Dutt and Sundharam, *Indian Economy*, S.Chand & Co Ltd, New Delhi.

INDIAN ETHOS AND BUSINESS ETHICS

Sester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT I/ PT I	24-375-0106/ 24-376-0105	Indian Ethos and Business Ethics	3	CC	50	50
For Recognized Colleges, CUSAT						
FT I	24-375-0106	Indian Ethos and Business Ethics	3	CC	40	60

Objective:

1. To help the students to acquire a clear knowledge to analyze business situations from an ethical point of view to make sound ethical decisions using inputs from Indian Ethos and values.

Course outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Recall the fundamentals of Indian Ethos to relate them to Business Ethics. The students will be able to reinforce the Indian values and culture in ethical dilemmas in business.	1
CO2	Understand comprehensively to internalize the concepts delivered and identify the options/alternatives available to make moral decisions in business situations.	2
CO3	Resolve moral dilemmas through cases, games, and situations for ethical decision-making.	3
CO4	Critically analyze business situations from the perspective of Indian and Western cultures to understand the peculiarities of ethical issues in the Indian context.	4
CO5	Make ethically autonomous decisions in day-to-day business affairs.	5
CO6	Generate disruptive ideas and solutions for the growth of the business mainly in the Indian context based on improved moral cognitive skills.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	2	-	2
CO2	1	3	2	-	-
CO3	-	3	-	3	-
CO4	-	3	3	-	1
CO5	-	3	3	-	-
CO6	3	3	-	-	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Indian Ethos and Values

Fundamentals of Indian Ethos - Values of Indian Culture and Society – Indian Heritage –Western Culture vs. Indian Culture –Management in Indian Holistic Perspective – Indian Work Ethos and Values –Indian Epics and Values – Kautilya's Arthashastra and Vishnu Sharma's Panchatantra - Importance of Yoga and Meditation for mental health and brain stilling – Relevance of Indian Ethos to Business Ethics - Islamic, Protestant, Catholic values, and other religions – Ethos of Kerala.

Module II: Introduction to Business Ethics Concepts

Teleology, Deontology, and Utilitarianism as Approaches to Ethics -– Ethical Dilemmas in Business – Ethical Universalism and Relativism in Business – Immanuel Kant's Categorical Imperative – Distributive Justice – False Consensus Effect – Implicit Bias - Virtue Theory – Hedonism – Gary S. Becker's formula on penalty for violations – Hong Kong Model of Business Ethics – Meta-ethics.

Module III: Ethical Decision-Making in Business

Importance of Business Ethics - Factors Affecting the Business Ethics - Process of Ethical Decision-making in Business –Lawrence Kohlberg Theory on Cognitive Moral Development – Whistle Blowing – Ethical Issues in Functional Areas: Marketing, HR, Production, IT/Systems and Finance – Environmental Ethics – Gender Ethics – CSR as Business Ethics –

Module IV: Ethics Management of Ethics

Role of Organizational Culture in Ethics – Structure of Ethics Management: Ethics Programmes, Code of Conduct, Ethics Committee, Ethics Officers, and the CEO – Communicating Ethics: Communication Principles, Channels, Training Programmes, and Evaluation – Corporate Governance and Ethical Responsibility.

Module V: Recent Trends

Transparency International (TI) and Other Ethical Bodies - Ethics Audit - Ethics Leadership – Ethically Autonomous Managers – Robotic Ethics – Other recent trends and issues in Indian Ethos and Business Ethics - Cases.

References

1. Management and Ethics Omnibus by Chakraborty, S.K., Oxford University Press.
2. Ethical Choices in Business by Sekhar, R.C, Response Books - A Division of Sage Publications.
3. Ethics and the Conduct of Business by John R. Boatright, Prentice Hall.
4. Business Ethics by Manuel G. Velasquez, Oxford University Press.
5. Managing Business Ethics by Linda K. Trevino and Katherine A. Nelson, John Wiley & Sons.
6. Business Ethics by Fernando, A.C., Pearson Education

IT FOR BUSINESS AND MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT I/ PT III	24-375-0107/ 24-376-0302	IT for Business and Management	3	CC	50	50
For Recognized Colleges, CUSAT						
FT I	24-375-0107	IT for Business and Management	3	CC	40	60

Objectives:

1. Understand the strategic importance of information technology (IT) in shaping business strategies and facilitating organizational processes.

2. Explore various issues surrounding information and communication systems, enterprise-wide systems, and the convergence of technologies within sophisticated information networks.
3. Develop knowledge of strategic issues related to IT management and gain specific digital skills relevant to contemporary business environments.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Recall concepts and applications of various Digital Technologies. Concepts of Information systems, Computer networks etc, Applications of IT for Business and Management. Concepts of DBMS. Various IT terminologies.	1
CO 2	To understand the importance of IT in providing solutions to modern business problems; To enhance personal productivity through Information technology tools; To understand the importance of information systems in managing an organization; to understand the basic theories, concepts, methods, and terminology used in information systems and in the field of IT	2
CO 3	To help students identify processes in an organization and convert it into a system. To make the participants familiarize with the technologies and methods used for effective decision making in an organization. To help to develop a conceptual framework of information systems from implementation to control. To learn to apply Information Technology to gain competitive advantage in business. To apply computer resources for use in business and academics.	3
CO 4	Analyze and select applications and IT systems to create an optimal user environment. Use and apply current technical concepts and practices in the core information technologies of networking, data management, software engineering, computer security. To identify and analyze user needs and take them into account in the selection, creation, evaluation, administration and management of computer-based systems.	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	2	1	-
CO2	3	3	-	3	2
CO3	3	3	3	3	3
CO4	3	3	-	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites:

1. Ability to Adapt to Change
2. Communication Skills
3. Understanding of Industry Trends

Syllabus:

Module I:

Introduction to Information Systems, Changing Environment and its impact on Business - The IT/IS and its influence on The Organisation: Structure, Managers and activities - Data, information and its attributes - The level of people and their information needs - Types of Decisions and Information – Applications of Information systems, IT for competitive advantage- Challenges of Strategic IS, Strategic roles of IS, Strategic Uses of Information Technology.

Module II:

Building blocks of IS - Wired and Wireless Technologies- Computer networks, Network topologies - Kinds of Information Systems: Transaction Processing System (TPS) - Office Automation System (OAS) - Management Information System (MIS) - Decision Support System (DSS) - Expert System (ES) - Executive Support System (EIS or ESS) - Knowledge Based systems (KBS) System. System Analysis and Design, Development models: SDLC, Prototyping, stages in SDLC.

Module III:

Digital transformation and Process- Enterprise wide systems: Concepts of Integrated Information systems, ERP, CRM, SCM, BI, E- Business & Applications-E- governance & tools and systems - Change management in IT implementations. Computer security and privacy issues - Cyber security-Cyber Laws and IT Act, IPR issues- Basics of Selection and implementation of IS Projects – Critical success factors.

Module IV:

Big Data Concepts and applications in business and management, Data Management-Introduction data analytics and methods, DBMS Concepts and types, Applications - Data Mining: tools and techniques-Data Visualization and Techniques- Data Analysis using MS Excel, Excel Basics: The Fundamentals of Excel, Creating Charts and Graphics, Analyzing Data and Producing Report with Pivot Table, Excel Advanced: Worksheet Formulas. Specific Worksheet, Formatting/Printing/Functions. Extract Data and Decision Making. Data Validation and External References. Advanced Filters, AutoFilters, Names, Charts, Protection. Cell references, Lookup tables, Goal seek. VLOOKUP and HLOOKUP.

Module V:

Industry 5.0 and IT Technologies- Disruptive Digital Technologies –Recent Developments and Trends in Information Technology and the impact of these

trends on industries and an organization's competitive environment. IT enabled Disruptive Innovation and its impact on Society- Cloud computing and its applications - Deployment models (SaaS, PaaS, IaaS), Internet of Things (IoT), IIoT, Blockchains, Machine Intelligence- AI& Machine learning, Automation, Robotics and RPA, Software Robots, Virtual Reality, Augmented Reality -Future Trends in Information Technology and its impact on Business and Management.

References

1. Laudon, K. C., & Laudon, J. P. (2021). Management Information Systems: Managing the Digital Firm. Pearson.
2. D. P. Goyal. (2016). Management Information Systems-Managerial Perspectives, 2ndEdition, Macmillan, New Delhi.
3. Naveen Prakash, Understanding Data Base Management, Tata Mc Graw Hill, 2005.
4. Prosenjit Sinha, Visual Basic Complete, S Chand & Co Ltd (2013)

MARKETING MANAGEMENT I

Semester	Course Code	Course Title	Credit	CC/EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT I/ PT II	24-375-0108/ 24-376-0205	Marketing Management I	3	CC	50	50
For Recognized Colleges, CUSAT						
FT I	24-375-0108	Marketing Management I	3	CC	40	60

Objectives:

1. Equip students with an understanding of the underlying concepts and principles of marketing.
2. Enable students to compare and analyse the marketing decisions of businesses.
3. Provide competency in framing marketing mix strategies for various products and services.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Summarise the fundamental concepts in Marketing management.	2
CO 2	Apply fundamental concepts in marketing and their underlying principles to real world scenarios.	3
CO 3	Analyse the marketing concepts used in various business scenarios	4
CO 4	Compare the marketing strategies of different firms.	5
CO 5	Develop Marketing mix strategies for Products and Services	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO5	PSO5
CO1	1	1		2	
CO2	2	2		2	
CO3	3	3		3	
CO4	3	3	1	3	1
CO5	3	3	1	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites: Nil

Syllabus:

Module I: **Introduction to Marketing**

Nature and scope - Evolution of Marketing-Marketing Vs selling- core marketing concepts – The value concept of marketing: Concept of Customer Value- the marketing environment and environment scanning - marketing information system- Sustainable marketing and marketing ethics- Triple Bottom Line

Module II: **Marketing Plan and Strategy**

Marketing Plan-marketing strategy-market segmentation, targeting and positioning-differentiation- POPs and PODs - competitive advantage

Module III: Product and Price Decisions

Concept and definitions-Levels of product-Product classification- product life cycle - new product development -diffusion of innovation- packaging and labeling decisions Pricing: major factors influencing pricing-pricing methods and strategies.

Module IV: **Promotion and Distribution Decisions**

Promotion mix – Integrated Marketing Communication -Promotion mix -advertising, sales promotion, public relations, personal selling and direct marketing Channel management -Channel levels, Channel functions- Types of intermediaries- selection and conflict management - vertical, horizontal and multi-channel systems.

Module V: **Extended Marketing Mix**

Unique aspects of services- Services Marketing mix: service process- Challenges of service design, Service blue printing-Crafting the service environment –Servicescape –Physical Evidence-Managing People for service advantage-Service Triangle concept

References

1. Kotler, P., & Armstrong, G. (2018). *Principles of Marketing* (17th ed.). Pearson Education.
2. Ramaswamy, V. S., & Namakumari. (2017). *Marketing Management*: *A Strategic Decision-Making Approach.* McGraw Hill.

3. Lamb, H., & Danniel, M. C. (2018). MKTG: *Principles of Marketing* (12th ed.). Cengage.
4. Saxena, R. (2019). *Marketing Management* (6th ed.). McGraw Hill.
5. Zeithaml, V. A., & Bitner, M. J. (2015). *Service Marketing: Integrating Customer Focus across the Firm* (7th ed.). McGraw Hill.
7. Lovelock, C. (2016). *Service Marketing*. Pearson Publications.

PROFESSIONAL SKILL DEVELOPMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks Internal Assessment
For School of Management Studies, CUSAT					
FT I/ PT III	24-375-0109/ 24-376-0305	Professional Skill Development	3	CC	100
For Recognized Colleges, CUSAT					
FT I	24-375-0109	Professional Skill Development	3	CC	100

Objectives:

1. To develop soft skills of the students that will enable them to start and pursue successful careers in the corporate world.
2. To inculcate Time management, Stress management, Public speaking and Creative problem-solving skills.
3. To equip the students with business knowledge and professional etiquettes needed for building a professional career.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Enable the incumbents to understand comprehensively the concepts related to professional skill development.	2
CO2	Apply the concepts related to professional skill development with illustrations and cases.	3
CO3	Impart skills to analyze the individual and organizational issues and challenges and to ensure quality decision making.	4
CO4	Make the students capable to evaluate the impact of professional skills on management decisions.	5
CO5	Generate new ideas and create plans for professional skills development.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	1	-
CO2	2	2	2	1	-
CO3	3	2	2	2	-
CO4	3	3	3	2	-
CO5	2	3	3	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites – NIL

Syllabus:

Module 1 Time management

Introduction to time management, Time analysis, Identifying and dealing with time stealers, Avoiding the psychological time trap, Different time styles, Determining the primary purpose, Goal setting, Prioritizing and scheduling, Deep work - Avoiding distractions, Procrastination - overcoming procrastination, Systematic development of new habits.

Module 2 Public Speaking

Glossophobia and ways to build confidence, Types of speeches, Audience analysis - Types and uses, Researching the speech, Parts of speech - introduction, body, and conclusion, Speech organizational patterns, Body language in public speaking, Controlling your voice, Using rhetoric devices, 3 Ps of public speaking, Design and usage of presentation aids, Using power point effectively.

Module 3 Stress Management

Meaning and nature of stress, Types of stress, Individual, environmental and organizational factors causing stress, Consequences of stress, Behavioral aspects of Stress, Adaptive and maladaptive behavior, Stress intervention, 4 A's and 4 R's of stress management, Individual and organizational coping strategies, Emotional and cognitive coping style.

Module 4 Creative Problem Solving

Understanding creative thinking, Lateral, vertical and parallel thinking, developing creative thinking skills, Science of creative thinking, Creative thinking methods, Creative problem solving, Critical Thinking vs Creative Thinking, How to overcome creative blocks and 'mind-sets', Understanding heuristics, mental shortcuts, emotions and cognitive biases that influence our thinking.

Module 5 Business Etiquettes and Business Awareness

Business Etiquettes - Personal Branding & Image building, The ABC's of Etiquette, Dressing Etiquette, Dining Etiquette, Meeting Etiquettes, Telephone Etiquettes, Resume writing - Types of resumes, components of a resume, Resume covering letter, Industry Analysis, National and Global Business Analysis, Latest trends in business.

References

1. Hasan, M (2023). *Win Every Argument: The Art of Debating, Persuading, and Public Speaking*. Henry Holt and Co.
2. Nghia. T L (2021). *Building soft skills for employability*. 1st edition. Routledge.
3. Tracy. (2017*). Eat That Frog!: 21 Great Ways to Stop Procrastinating and Get More Done in Less Time*. Berrett Koehler Publishers.
4. Newport. (2016). *Deep Work: Rules for Focused Success in a Distracted World*. Grand Central Publishing.
5. Whetten, D & Cameron, K. (2015). *Developing Management Skills*. 9th Edition Prentice Hall.

CORPORATE FINANCIAL MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT II/ PT II	24-375-0201/ 24-376-0201	Corporate Financial Management	3	CC	50	50
For Recognized Colleges, CUSAT						
FT II	24-375-0201	Corporate Financial Management	3	CC	40	60

Objectives:

1. Learn how to evaluate investment opportunities and make informed decisions on capital budgeting.
2. Study the different sources of capital and computation of cost of capital of these sources of finance and the firm's cost of capital.
3. Learn about capital structure theories, decisions and financing strategies for companies.
4. Learn the dividend policies and the impact of dividend decision on market valuation of firms.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the basic concepts and theories related to financial management of companies	**2**
CO2	Apply the financial management concepts, theories and skills in making investment decisions through illustrations and case studies.	**3**
CO3	Apply the financial management concepts, theories and skills in computing cost of capital, capital structure decisions and dividend decisions through illustrations and case studies.	**3**
CO4	Analyse the impact of changes in financial variables on decision outcomes through a sensitivity or a scenario analysis in a spread sheet application.	**4**

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	3	1	3	-
CO3	3	3	1	3	-
CO4	3	3	2	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Overview of Corporate Financial Management

Meaning and scope of Corporate Financial Management- Objectives of Corporate Financial Management-Function of Corporate Finance-Risk-Return Trade-off-Stakeholder-Manager Conflicts- Corporate Governance; Organisation of the Finance Functions.

Module II: Investment Decisions

Capital Budgeting Decisions: Concept of capital budgeting, Need, types and importance of capital investment decisions, Time Value of Money, Capital Budgeting Appraisal Methods with case studies using spreadsheet applications – Pay-back Period, Net Present Value, Present Value Index, Internal Rate of Return, and Modified Internal Rate of Return- Investment in Working Capital (An Overview)

Module III: Sources of Finance and Cost of Capital

Sources of Capital-Equity financing, GDR-ADR, Internal financing, and Debt financing- Cost of Capital: Concept and Significance, Computation of Component

Costs of capital - Costs of Debt, Preference Share Capital, Equity Capital, and Retained Earnings; Composite Cost of Capital.

Module IV: Capital Structure Decision

Meaning and Patterns of Capital Structure, Concept of Optimum and Appropriate Capital Structure; Factors affecting Capital Structure, Theories of Capital Structure - Net Income Approach, Net Operating Income Approach, M-M Approach and Traditional Approach; EBIT-EPS Analysis; Leverage-Operating, Financial, and Composite Leverages

Module V Dividend Decision

Dividend and its forms, Dividend Policy, Relevance and Irrelevance Theories of Dividend Decision: Walter's Approach; Gordon's Approach and MM Approach.

References

1. James C. Van Horne, John M. Wachowicz Jr.: Fundamentals of Financial Management, Prentice Hall of India, New Delhi.
2. Richard A. Brealey, Stewart C. Myers, Franklin Allen, Pitabas Mohanty: Principles of Corporate Finance, Tata McGraw Hill Publishing Company Ltd. New Delhi.
3. Pandey I. M.: Financial Management, Vikas Publishing House Pvt. Ltd., New Delhi.
4. Prasanna Chandra: Financial Management – Theory and Practice, Tata McGraw Hill Publishing Company Ltd. New Delhi.
5. Khan M. Y., Jain P. K.: Financial Management – Text and Problems, Tata McGraw Hill Publishing Company Ltd. New Delhi.
6. Lawrence D. Schall, Charles W. Haley: Introduction to Financial Management, McGraw Hill, Inc., New York.

MARKETING MANAGEMENT II

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT II/ PT III	24-375-0202/ 24-376-0304	Marketing Management II	3	CC	50	50
For Recognized Colleges, CUSAT						
FT II	24-375-0202	Marketing Management II	3	CC	40	60

Objectives:

1. To understand consumer behavior and its practical applications within marketing contexts
2. To gain comprehensive insights into consumer purchasing patterns in both Business-to-Consumer (B2C) and Business-to-Business (B2B) markets.
3. To promote the skills of effective salesmanship and equip students to excel in sales roles.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Summarise differences in structure, buying behavior, and marketing practice within business markets	2
CO2	Apply fundamental concepts in consumer psychology by exploring factors influencing individual buyers.	3
CO3	Analyse authentic selling situations and opportunities encountered by salespeople, utilizing relevant metrics within personal selling.	4
CO4	Compare salesforce motivation, compensation plans, and performance evaluation across various industries	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	2	1	-
CO2	-	1	-	2	-
CO3	3	2	2	3	-
CO4	1	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Consumer as An Individual

Psychological factors- Consumer Motivation, Perception, Learning and Memory, Attitudes. Social factors- family, reference groups, roles, and status. Cultural factors- culture, subculture, social class. Personal factors- age, income, occupation, and lifestyle. Economic factors- personal and family income, consumer credit, liquid assets, savings. Creating the buyer persona based on these factors

Module II: Consumer Buying Behavior

Consumer decision-making process, Post-decision process: dissonance, regret, learning from Consumer Experience, Satisfaction/Dissatisfaction, disposition, recycling

Module III: Consumer as an Enterprise

Nature and scope -Difference between Business Markets and Consumer Markets Structural difference: Market structure, Product structure. Buying behaviour difference: purchase process- buying roles -demand drivers. Product strategy- bases of segmentation - key account management – pricing in B2B – factors influencing pricing – price elasticity- distribution in B2B- types of intermediaries

Module IV: The Art of Personal Selling

Salesmanship Fundamentals – Nature of selling, Salesmanship. Sales Territories – Procedures for setting up Sales territories –Assignment of sales personnel to territories Sales Quota – Types of quotas, Quota setting procedures, administering the quota system

Module V: Making of the Salesman

Selection, Recruitment, Training, Motivation, Performance Evaluation and Compensation of salespersons. Hands-on sales training – B2B and B2C- handling difficult customers, sales funnel. Sales Audit, Sales Analysis.

References

1. Anderson, J. C. (2004). Business Market Management: Understanding, creating, and delivering value. Pearson Education India.
2. Anderson, R. E., Hair, J. F., & Bush, A. J. (1988). Professional Sales Management, McGraw Hill.
3. Brennan, R., Canning, L., & McGrath, H. (2024). Business-to-Business Marketing. SAGE Publications Limited.
4. Havaldar, K. K. (2010). Business Marketing: Text and cases. McGraw-Hill Education.
5. Schiffman, L. G., Wisenblit, J., & Kumar, S. R. (2011). Consumer Behavior By Pearson. Pearson Education India
6. Hoyer, W. D., MacInnis, D. J., Pieters, R., Chan, E., & Northey, G. 2017). Consumer Behaviour: Asia-Pacific Edition. Cengage AU
7. Spiro, R. L., Stanton, W. J., & Rich, G. A. (2008). Management of a Sales Force. McGraw-Hill.
8. Still, R. R. (2007). Sales Management: Decision Strategy and Cases, 5/E. Pearson Education India.

OPERATIONS MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT II/ PT IV	24-375-0203/ 24-376-0402	Operations Management	3	CC	50	50
For Recognized Colleges, CUSAT						
FT II	24-375-0203	Operations Management	3	CC	40	60

Objectives:

1. Develop understanding and appreciation for production and operations management, including decision areas and strategies for resource utilization and meeting customer expectations.

2. Explore planning, design, and control decisions in both manufacturing and services, emphasizing their importance and relationship to overall organizational strategies.
3. Examine the impact of technology, inventory management, and contemporary organizational approaches, including supply chain management, on production and operations activities.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand fundamental concepts and terms in Operations, Inventory, Customer Service, and Optimization, and their significance in industrial organizations.	2
CO2	Apply decision models to real-time problems, covering MRP & CRP concepts, inventory types and objectives, EOQ calculation, and develop optimal schedules for machine and job allocation, while identifying and addressing bottlenecks using various elimination methods.	3
CO3	Analyze OM with creativity, innovation, and initiative, especially in new situations of professional practice for an Industry 4.0 environment; and recommend or make decisions concerning OM Strategies, designs, and operations with high level of personal autonomy and accountability.	4
CO4	Evaluate the ability to develop aggregate capacity plans and master production schedules (MPS), implement appropriate materials handling principles, rank capacity locations, and effectively plan and schedule production through problem-solving.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	-	-	-
CO2	1	3	-	2	-
CO3	3	3	-	3	-
CO4	2	3	-	1	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I

Introduction: production and operation management as a function, nature, and scope, decision areas, Production-systems concept, transformation process, the difference between products and services,Manufacturing in India – issues and challenges -

Operations strategy – Strategic, Tactical and Operations decisions in Operations Management. 5P's and 9M's of OM.

Types of Manufacturing Systems, Concepts, and Applications of Computer Integrated Manufacturing, Flexible Manufacturing Systems, Group Technology and Cellular Manufacturing, Quick Response Manufacturing, Concurrent Engineering.

Concepts of Productivity, Efficiency, Effectiveness, Throughput, OEE - Variables affecting productivity and throughput improvements, Bottlenecks, and their identification - starving and blocking in Production and assembly lines

Module II

Process and Capacity Analysis – planning premises, Capacity planning framework – definitions, measures, issues, time frame-design of Manufacturing Process -process types, operations systems. Process-Product matrix.

Facility Location - factors, competitiveness, facility location planning-numericals. Facility Layouts, Layout Decisions- types –design; Hybrid layout, Line Balancing & Sequencing –Capacity Planning.

Contributions of Japanese Manufacturing - Kanban, Kaizen, Poka Yoke, 5S, TPS, FMS, Lean & agile Manufacturing - Pull and Push systems, JIT -Elements of JIT manufacturing- Role of Technology in Manufacturing and Services.

Module III

Concepts of work and motion Study, Implications on Productivity -Total Quality Management- elements, tools for TQM, Cost of Quality, Quality circles, Concepts of acceptance sampling - OC curve, Six sigma quality control

Basics of Maintenance Management – Maintenance Decisions, Total Productive Maintenance (TPM) – overview. Operations Forecasting: Forecasting methods. - Quantitative and Qualitative approaches- Benchmarking- Industrial Safety and Security, Work Environment & Ergonomics.

Module IV

Inventory and materials Management-Inventory planning and control for independent demand items, Classifications, EOQ, EOQ numericals, inventory Models- selective control of inventory, Material handling equipments.

Supply chain Management- Concept of the Supply chain, Stages and flows in the Supply chain, Terminologies in Supply chain management – Supply chain disruption- Bull Whip effect.

Sourcing and Supply Management - strategic sourcing, procurement process, Global Sourcing- Concept of outsourcing, examples -mass customization.

Managing Vendors; Vendor Identification, Analysis, Rating and Selection – Procedure and Criterions, VMI.

Module V

Enterprise Resource planning, Material requirement planning (MRPI), MRPII, Aggregate production planning, CRP, Bill of Materials, Master Production Schedule (MPS), Scheduling of operations- flow shop, job shop, scheduling rules, theory of constraints- synchronous manufacturing, The Drum–Buffer–Rope (DBR) methodology.

Industry 4. 0, Disruptive Technologies and its impact in Production and Operations area –Robotics, AI, Machine learning, Autonomous Mobile Robots, IoT and IIoT, Smart Manufacturing, Additive Manufacturing/3D Printing, Smart factory, Smart Products, Automation, RPA, Augmented and Virtual Reality- Current topics in Production and Operations Areas- Case Studies

References

1. Operations Management Theory and Practice, Third edition B Mahadevan. Pearson, 2018. (TextBook)
2. Adam, Everette E and Ronald J Ebert. Production and Operations Management: Concepts, Models, and Behavior. PHI, 2018.
3. Chase, Richard B. Operations Management for Competitive Advantage. Tata McGraw-Hill, 2014.
4. Hill, Terry. Operations Management. Palgrave Macmillan, 2016.
5. Lee J. Krajewski et al, Operations Management, Process, and Supply chains. 11th EditionPearson,India Education Services Ltd. India.
6. Pannerselvam R, Production and Operations Management, Prentice Hall India, 2010.
7. Stevenson, William J. Operations Management. McGraw Hill, 2022.

HUMAN RESOURCE MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT II/ PT II	24-375-0204/ 24-376-0203	Human Resource Management	3	CC	50	50
For Recognized Colleges, CUSAT						
FT II	24-375-0204	Human Resource Management	3	CC	40	60

Objectives:

1. To introduce the basic concepts, functions, and processes of human resource management.
2. To provide insights on how to develop strategies, initiatives, and programmes to sustain competitive HR advantage in organizations.
3. Addresses the concept of HR as an agile force in a firm's survival in the knowledge economy.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Recall the basic concepts and terms related to all functional areas of HRM and Industrial Relations.	1
CO2	Understand comprehensively the concepts delivered at the remembrance level to make them cognitively fit for application.	2
CO3	Develop application skills from the contents delivered with illustrations and cases.	3
CO4	Impart skills to critically analyze human resource practices to explore and establish relationships in HR decisions.	4
CO5	Make the students capable of evaluating the impact of Human Resource Management Practices on business performance and appraising existing HR practices.	5
CO6	Generate new ideas and create Human Resource plans and proposals for overall business growth.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	1	-	-
CO2	3	2	-	-	-
CO3	2	3	1	-	-
CO4	1	3	3	1	3
CO5	1	2	1	3	2
CO6	3	3	3	2	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module - I: Concept of HRM

Introduction to HRM – Traditional Personnel Management vs. Human Resource Management vs. People Management - Strategic HRM - Skills and Competencies of HR Professionals – Approaches to and Schools of Thought on HRM.

Module - II: Human Resource Planning and Development

Human Resource Planning- Forecasting - Job Analysis- Recruitment- Selection- Onboarding - Learning and Development - Types of Training- Training Evaluation – Mentoring and Coaching.

Module - III: Performance and Rewards Management

Performance Appraisal and Management - Succession Planning- Employee Counseling – Salary and Wage Administration – Executive Compensation - Job Evaluation – Innovative Employee Benefits and Incentives – Gender Gap in Compensation.

Module - IV: Management of Employee Relations and Welfare

Concept of Industrial Relations - Approaches to Industrial Relations - Trade Unions, Collective Bargaining and Workers' Participation in Management - Employee Safety – Labour Codes - Grievance Handling - Sexual Harassment at the Workplace - Stress Management – Employee Engagement.

Module - V:

Concept of Global HRM – Types of GHRM – Types of International Employees - Strategic Role of GHRM - Cross-Cultural Training – Managing Workforce Diversity - Global Work Ethics - HRIS - Automation at Workplace - Social HR – Green HRM - HR Business Partner - HR Leadership – HRM in Gig Economy - Workplace Privacy.

References

1. Armstrong, M. and Taylor, S., *Armstrong's Handbook of Human Resource Management Practice: A Guide to the Theory and Practice of People Management,* Kogan Page,
2. Sahoo, D.P., *Employee Relations Management: Text and Cases,* Sage Publications, First Edition.
3. Dessler, G., Fundamental of *Human Resource Management*. Pearson.
4. Verhulst, S.L. and DeCenzo, D.A., *Fundamentals of Human Resource Management,* Wiley, Fourteenth Edition.
5. Gomez-Mejia,L.R., Balkin, D.B. and Cardy, R.L., *Managing Human Resources,* Pearson, Sixth Impression.
6. Singh, P.N. and Kumar,N., *Employee Relations Management,* Pearson, Fifth Impression.

MANAGEMENT ACCOUNTING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT II/ PT II	24-375-0205/ 24-376-0204	Management Accounting	3	CC	50	50
For Recognized Colleges, CUSAT						
FT II	24-375-0205	Management Accounting	3	CC	40	60

Objectives:

1 To enhance knowledge and develop skills among participants in the application of management accounting techniques at functional/ operational level.

2 To develop strategic orientation with management accounting tools and techniques, in business planning, controlling and analysis.

3 To learn marginal costing, standard costing and budgetary control.

4 To learn output costing, Activity based costing, preparation and interpretation of cash flow statements

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Understand various management accounting techniques at operational and strategic level.	2
CO 2	Apply various management techniques at operational and strategic level, to improve the results of a business/sustain and grown a business in a competitive market.	3
CO 3	Analyse the cost data for a firm, to study deviations and effect control function.	4
CO 4	Evaluate the nature of costs in a given business situation and identify the business drivers behind those costs.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	1	-
CO2	1	2	1	1	-
CO3	1	2	2	3	2
CO4	2	3	2	3	2

Prerequisites: Nil

Syllabus:

Module I: Introduction to Management Accounting –

Meaning, Nature, Scope, of Management Accounting - Classification of Cost Direct- Indirect- Fixed-Variable- marginal cost -differential cost -opportunity cost - replacement cost- relevant cost- imputed cost- sunk cost -normal and abnormal cost- avoidable and unavoidable cost –over view of various costing techniques-costing in service industry.

Module II: Cost-Volume- Profit Analysis

Concept of Marginal Costing - Features of Marginal Costing - Absorption Costing vs Marginal Costing - Cost Volume Profit (CVP) Analysis - Break Even Point, Target profit and Margin of Safety- make or buy decisions- product prioritization- key factor decisions- case discussions.

Module III: Standard Costing

Meaning and Importance of Standard Costing- Types of Standards - Establishment of Standards – General framework of variance Analysis – Mixed and variable variances- Material, Labor and Overhead Variances-investigating variances case discussions.

Module IV: Cost allocation and Activity Based Costing

Activity Based Costing – concept – cost driver- cost pool- estimation of cost under ABC-ABC v abortion costing. Establishing ABC in an organization-case discussions.

Module V:

Budget and Budgetary Control –Cash Budget –. Balancing financial and non-financial performance measures-Balance score card – Theories on compensation, incentives and motivation -connecting with management accounting and control techniques.

References

1. Robert N Anthony, Vijay Govindarajan, Frank G.H. Hartman, Kalle Kraus and Goran Nilsson Management Control Systems McGraw-Hill Education.
2. Jain S. P. &Narang K. L. Cost Accounting: Principles and Practice- Kalyani Publishers, New Delhi.
3. Robert S Kaplan and David P Norton, Balance Score Card – Translating Strategy into Action, Harvard Business Press, New Delhi.
4. Khan M. Y. & Jain P. K., Management Accounting: Text, Problems and Cases, Tata McGraw Hill, New Delhi.
5. Sarngadharan M. &Rajitha Kumar S., Financial Analysis for Management Decisions, PHI Learning, New Delhi

BUSINESS RESEARCH METHODS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT II/ PT IV	24-375-0206/ 24-376-0401	Business Research Methods	3	CC	50	50
For Recognized Colleges, CUSAT						
FT II	24-375-0206	Business Research Methods	3	CC	40	60

Objectives:

1. To read and understand various empirical research reports and papers using different techniques to develop an awareness of possible research solutions to management problems that the learner may encounter as managers, entrepreneurs, or independent researchers.
2. To develop measurement tools, including questionnaires for attitudinal/ behavioral or social/ economic /business/economic phenomena relevant to business problems.
3. To familiarize the learners with concepts and techniques of sampling and go about sampling for a research problem.
4. To design data collection tools and use the same for data collection and to make the data thus collected properly presented fit for analysis.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes	Cognitive Abilities	Course Outcomes
CO1	Remembering	Define various concepts and terms associated with scientific business research methods.
CO2	Understanding	Outline various types of measurement scales and attitude scaling techniques in the context of business research.
CO3	Applying	Experiment with various sampling and data collection techniques for contemporary business issues
CO4	Analyzing	Test for different types of hypotheses and interpret the statistical outcomes.
CO5	Evaluating	Derive actionable inferences from qualitative and quantitative data for decision-making.
CO6	Creating	Formulate appropriate research design and methodology for real-life business problems.

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	-	3	-
CO2	-	3	-	3	-
CO3	-	3	1	3	-
CO4	-	3	-	3	-
CO5	-	3	-	3	-
CO6	-	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Syllabus:

Module I: Introduction to Business Research

Introduction to Research, Objectives and motivations for research, Types of Research, Introduction to Qualitative Research, Introduction to Quantitative Research, Business Problem Formulation, and definition, Developing research objectives- broad and specific research question.

Module II: Research Process

Steps in Research Process, Research Design, Errors, Types of Research Design- Exploratory, Descriptive and Causal Research, Qualitative and Quantitative research – differences, methods.

Module III: Research Methodology

Population, Sampling- Sampling Frame, Sampling Technique, Statistical Terms in Sampling: statistic, parameter, Sampling & non-sampling errors, Probability and non-probability Sampling, Sample Size Determination. Measurement and Scaling- Types of scales, Scaling techniques- Comparative and Non-comparative scales, Reliability

and Validity of Scales. Data Collection Methods- Primary and Secondary data, Data Sources, Tools of data collection for qualitative and quantitative research; Designing questionnaires; field work

Module IV: Data Analysis

Data Preparation and coding, Descriptive Statistics, Univariate and multivariate analysis, Inferential Statistics, Hypothesis Testing Process, Tests of difference, association, and dependence (overview).

Module V: Data Presentation

Report Writing- Types of Business Research Reports- Components of Reports- Written and Oral Presentations.

References

1. Cooper, D. R., & Schindler, P. (2014). *Business research methods*. Mcgraw-hill.
2. Bell, E., Bryman, A., & Harley, B. (2022). *Business research methods*. Oxford University Press.
3. Bougie, R., & Sekaran, U. (2019). *Research methods for business: A skill building approach*. John Wiley & Sons.
4. Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.
5. Zikmund, W. G., Babin, B. J., Carr, J. C., & Griffin, M. (2013). *Business research methods*. Cengage learning.
6. Malhotra, N. K. (2020). Marketing research: an applied orientation. Pearson.

LEGAL ASPECTS OF BUSINESS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT II/ PT IV	24-375-0207/ 24-376-0403	Legal Aspects of Business	3	CC	50	50
For Recognized Colleges, CUSAT						
FT II	24-375-0207	Legal Aspects of Business	3	CC	40	60

Objectives:

1 To develop understanding of basic laws concerning the operations of business and industry in India.

2 To highlight the Provisions of Law governing the General Contract and Special Contract.

3 To highlight the Provisions of Negotiable Instruments Act, GST and the Consumer Protection Act.

4 To highlight the provisions of Companies Act and the Corporate governance mechanism.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcome		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Understand the basic concepts and terms related to laws that have a bearing on business including Contract Act, Sale of Goods Act, Companies Act, LLP Act, Negotiable Instruments Act, IT Act, Consumer Protection Act, Labour laws and other relevant acts	2
CO 2	Apply the provisions of business laws various decision-making context.	3
CO 3	Apply the provisions of business laws in operational level in an industry, and ensure high standards of compliance.	3
CO 4	Analyse the provisions of various business laws applicable and facilitate learned decision making and appraisal of the scenario.	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	2	2	2
CO2	2	2	2	2	2
CO3	2	3	3	3	2
CO4	3	3	2	3	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Law of contracts

The Law of Contracts : Definition of contract Essential elements of a valid contract - Offer and acceptance - Free consent, Competency of parties, Lawful consideration, Legality of object - Void, void able -unenforceable and illegal contracts –Provisions regarding performance and discharge of contracts- Remedies for breach of contracts.

Module II: Special Contracts

Contract of bailment—rights and duties of a bailor and bailee- pledge- hypothecation – mortgage -Contract of Indemnity and guarantee – surety- rights of surety- types of guarantee- discharge of a contract of guarantee.

Module III: Contract of sale of goods

Definition of a sale and a contract of sale -Difference between - sale and agreement to sell - sale and a contract form - sale and bailment – sale and mortgage of goods -sale and time purchase - conditions and warranties –Passing of property of goods - Rights of an unpaid seller.

Module III:

Negotiable Instruments Act- Negotiable instruments -Cheques - Bills of exchange and Promissory notes, Holder in due course. Consumer Protection Act 2019- rights of consumer- consumer forums.

Module IV: Company law

Limited Liability Partnership Act 2008: Characteristic features-Definition of LLP, Difference between LLP and partnership of 1932, Comparison between LLP and Company Law : Evolution of company form of organization- Companies Separate legal entity -Kind of companies Comparison of private and public companies – Formation of companies -general idea about Memorandum and Articles of Association, Prospectus, Statement in lieu of prospectus – Corporate governance - Company and meetings-Winding up of companies.

Module V

GST-- Basics of Goods and Services Tax 'GST': Basics concept and overview of GST; Constitutional Framework of GST; GST Model – CGST / IGST / SGST / UTGST; - Place of supply -Time and value of supply-Input Tax credit. Information Technology act 2000- broad framework.

References

1. Business Law including Company Law, Gulshan S.S and Kapoor G.K: New Age International Pvt Ltd.
2. Business Law, Satish Mathur McGraw Hill Education
2. Elements of Mercantile Law:N.D.Kapoor: S.Chand Publishers
3. Legal Aspects of Business: R.S.N Pillai and Bhagavathi, S. Chand Publishers
4. Sale of goods Act: Pollock &Mulla, LexisNexis
5. A manual of Mercantile Law: M. C Shukla, S. Chand Publishers

INNOVATION AND ENTREPRENEURSHIP

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT II/ PT V	24-375-0208/ 24-376-0501	Innovation and Entrepreneurship	3	CC	50	50
For Recognized Colleges, CUSAT						
FT II	24-375-0208	Innovation and Entrepreneurship	3	CC	40	60

Objectives:

1. To provide students with an in-depth understanding of the evolving landscape of entrepreneurship in India, focusing on innovation and enterprise development.
2. To provide insights into the entrepreneurial process, from ideation to the realization of business ventures.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Analyze the role of entrepreneurship in economic growth and evaluate its impact on Indian startups.	4
CO2	Apply entrepreneurial concepts and theories to assess the feasibility of business ideas.	3
CO3	Evaluate innovation strategies and their application in developing new business models.	5
CO4	Create comprehensive business plans integrating design thinking principles and funding strategies.	6
CO5	Analyze governmental policies and challenges in entrepreneurship and propose solutions for new enterprises.	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	1	1	1
CO2	3	2	3	2	1
CO3	3	3	3	3	1
CO4	3	3	3	3	2
CO5	3	2	3	1	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Basic knowledge in domain areas

Syllabus:

Module I: Entrepreneurship in Economic Development:

Overview: Role of entrepreneurship in economic growth- Entrepreneurial Climate in India: Examination of the ease of doing business, competitiveness, and government initiatives like Startup India, Standup India, Udyami mitra, PMMY, and Business Incubation.

Practical Component: Case studies on successful Indian startups and analysis of government policies impacting entrepreneurship.

Module II: Entrepreneurial Foundations:

Entrepreneurship Concepts: Definitions, traits, types, and significance of entrepreneurship- Entrepreneurial Mindset: Characteristics, behaviours, and motivation of entrepreneurs-Entrepreneurship Theories: Focus on achievement, management success, and the intersection of innovation and entrepreneurship-Types of Entrepreneurships: Exploring social, technology entrepreneurship, family businesses, and startups.

Practical Component: Personality and entrepreneurial assessments to identify and develop entrepreneurial traits.

Module III: Innovation in Entrepreneurship:

Innovation Types: Exploration of various forms of innovation and their impact on entrepreneurship-Innovation Management: The challenges and steps in managing innovation- New Business Models: Understanding the role of technology in shaping modern business models.

Practical Component: Workshops on creative thinking and innovation strategies in business.

Module IV: Entrepreneurial Process and Planning:

Idea Generation: Methods for finding and evaluating business ideas -Feasibility Study: Analyzing the viability of business ideas- Design Thinking: Understanding the principles and processes of design thinking in problem-solving and innovation.

Business Planning: Elements of a business plan, with an emphasis on the Business Model Canvas. Preparation of a business plan (technical, marketing, financial) and funding sources (venture capital, angel investment, crowdfunding)-Enterprise Setup: Understanding different business organizations.

Practical Component: Design thinking workshops where students apply concepts to real-world scenarios. Students create and present a business plan using the Business Model Canvas approach

Module V: Challenges and Policies in Entrepreneurship:

Intellectual Property Rights: Understanding patents, trademarks, and copyrights-Managerial Challenges: Addressing production, financing, labour, and marketing issues in new enterprises- Government Policies: Examining MSME policies, assistance for small industries, and training programmes.

Practical Component: Interaction with industry experts on managing new enterprises, intellectual property workshops, interactions with successful entrepreneurs and industry professionals.

References

1. Cliffton, Davis S and Fylie, David E. *Project Feasibility Analysis*, John Wiley, NewYork, 1977
2. Drucker, Peter, *Innovation and Entrepreneurship*, Heinemann, London, 1985
3. McCleffand, D C and Winter, W G., *Motivating Economic Achievement*, Free Press,New York, 1969
4. Pareek, Udai and Venkateswara Rao T., *Developing Entrepreneurship – A Handbookon Learning Systems*, Learning Systems, Delhi, 1978
5. Kaplan, J.M and Warren A.C., Patterns of Entrepreneurship Management, John Wiley& Sons Inc, 2013
6. CharantimathPoornima M, Entrepreneurship Development and Small Business Enterprises, Pearson, 2018.

BUSINESS COMMUNICATION

Semester	Course Code	Course Title	Credit	CC / EC	Mark	
					Internal	External
For School of Management Studies, CUSAT						
FT II/ PT II	24-375-0209/ 24-376-0202	Business Communication	3	CC	50	50
For Recognized Colleges, CUSAT						
FT II	24-375-0209	Business Communication	3	CC	40	60

Objectives:

1. Enable students to understand the nature and scope of communication and its implications in the real time business world
2. Enable students to equip themselves to meet the demands of a fast-changing world where technology and globalization and other forces have dramatically changed the practice of business communication
3. Enhance proficiency and competencies in verbal and non- verbal communication skills with a holistic long-term perspective
4. Guide the participants to manage cross cultural communication and develop technical communication skills
5. Demonstrate the use of basic and advanced business writing skills.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Empower the students to understand complex ideas in business communication to make them ready for application in real life scenarios.	2
CO2	Build application skills in business communication strategies and principles to prepare effective communication for domestic and international business situations.	3
CO3	Provide the competencies to analyse business communication to negate ethical, legal, cultural, and global issues affecting day to day business	4
CO4	To help the student in developing the skill to assess the impact of selecting appropriate organizational formats and channels used in developing and presenting business messages.	5
CO5	Create innovative ways to develop and share novel business communication strategies for future business enhancement.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	1	1	-
CO2	3	2	2	1	-
CO3	3	3	2	2	-
CO4	3	3	2	3	-
CO5	3	3	3	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites – NIL

Syllabus:

Module 1

Introduction to Business Communication: Importance of business communication, Process of effective communication, Types of communication within the organization, Communication channels in business, Effective communication flow, 7 Cs of effective communication, Barriers to effective communication. Overcoming the barriers to effective communication, Digital trends in business communication.

Module 2

Business Correspondence: Principles of effective business writing, Business Letters - Types of business letters, Structure of a business letter, Business Reports - Types of business reports, Structure of business report, Memo –Parts of a memo, Effective strategies for business memos, Minutes of Meeting –Components of a Minutes, The 3X3 writing process for business communication.

Module 3

Digital Communication Skills: Email etiquettes – Anatomy of an email, Acceptable email standards in workplace, Managing Email Overload. Digital Identity in the Workplace, Digital etiquettes, Digital Writing, Digital communication methods, Social Media etiquettes at workplace, Cyberbullying, Virtual communication tools, Linkedin for Business Communication, AI tools for business communication.

Module 4

Listening and Persuasive skills: Listening skills - Significance of listening in communication, Anatomy of poor listening, Features of a good listener, Different listening models, Triple-A-Listening, Empathetic Listening, Techniques for active listening, Persuasive communication - Four modes of persuasive communication, Cialdini's 6 Principles of Persuasion, AIDA Model of persuasive communication

Module 5

Cross cultural and Non- Verbal Communication: Challenges in cross cultural communication, Cultural values and barriers, Understanding cultural differences, High context and low context cultures, Hofstede's dimensions of cultural differences,

Elements of cultural intelligence, Non-Verbal communication, Mehrabian Model of Nonverbal communication, Categories of nonverbal communication.

References

1. Schwarts, R (2023). *Smart Brevity: The Power of Saying More with Less*. Nicholas Brealey Publishing.
2. Barbara G. Shwom and Lisa Gueldenzoph Snyder (2021). *Business Communication: Polishing Your Professional Presence*. 5th Edition. Pearson.
3. Sullivan, J (2016). *Simply Said: Communicating Better at Work and Beyond*. Wiley.
4. Newman, A (2016). *Business Communication: In person, in print, online*. South-Western College Publishing.
5. Scott McLean (2015). *Business Communication for Success*, University of Minnesota Libraries Publishing.

MANAGEMENT SCIENCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT III/ PT III	24-375-0301/ 24-376-0301	Management Science	3	CC	50	50
For Recognized Colleges, CUSAT						
FT III	24-375-0301	Management Science	3	CC	40	60

Objectives:

1. To develop an understanding of basic management science techniques and their role in managerial decision-making.
2. To help the students to translate business situations into quantitative models for optimal decision-making.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Understand the scope and applications of Management Science tools and solvers in Managerial decision making	2
CO 2	Apply various Management Science techniques for resource, time and cost optimization	3
CO 3	Analyze business situations and translate to quantitative models for optimal decision making.	4
CO 4	Evaluate different situations in the industrial/ business scenario involving limited resources and finding the optimal solution within the constraints.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	3	-	3	-
CO3	3	3	-	3	-
CO4	3	3	-	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites:

1. Basic knowledge in Mathematics and Statistics.
2. Familiarity with any spreadsheet software

Syllabus:

Module I

Business and Management Decisions - Decision-Making Process- Types of Decisions – Concept of Modelling and Optimization – Modelling Techniques — Applications - Introduction to Operations Research, Evolution and Scope, Nature, Significance and Limitations - Methodology of OR - OR models - Applications of OR.

Module II

Programming techniques – Linear programming and applications – General Linear Programming Problems- Solution methods: Graphical methods, Simplex methods - Slack and Artificial Variables- Basic and non- Basic variables - Maximization problems – Minimization problems - Big-M Method – Standard and Canonical Forms of LPP – Special cases in LPP - Concepts of Duality – Shadow price- Sensitivity analysis –Integer, Goal Programming (theory only)

Module III

Special Linear Programming Problems- Basic feasible and Optimal Solutions, Transportation problem – Transportation algorithms – North West Corner Method (NWCM) – Least Cost Method (LCM) – Vogel's Approximation Method (VAM) – MODI method for Optimal Solution – Unbalanced Transportation Problems, Maximization Transportation Problems - Degeneracy in transportation problem - Assignment problem – Assignment algorithms - Hungarian method -Unbalanced & Prohibited assignments- - Maximization Problem-Travelling salesman problem - Transshipment Problems.

Module IV

Decision Theory- Decisions under Certainty, Uncertainty, Risk and Conflict - Payoff matrix-Hierarchical Decisions - Decision Tree - Game theory – Two person zero sum game –payoff Matrix - Minimax and Maximin Criteria- Saddle point- Optimum

Strategy- Pure and Mixed Strategies- Theory of Dominance – Queuing theory: first model only –Queuing Process- Models and Techniques- single server models- Sequencing, Replacement theory - Assumptions and Different types - Simulation Techniques – Monte Carlo Technique - Markov Chain model.

Module V

Network modelling and Analysis – Network Construction- Deterministic and Probabilistic Models- CPM and PERT - Time estimation, Critical Path, Basic Concepts of Crashing, Resource leveling, Resource Smoothing - MS/OR Techniques - Importance and applications – familiarization with software packages - solving Management Science problems with Excel Solver/Analytic Solver/Anylogic

References

1. Hamdy A. Taha. (2022). *An Introduction to Operations Research*, Prentice Hall.
2. Ronald L. Rardin. (2018). *Optimization in Operations Research*, Pearson Education, India.
3. Ravindran, A., Phillips, D. T., & Solberg, J. J. (2007). *Operations research: principles and practice*, Wiley.
4. G. Srinivasan. (2017). *Operation Research- Principles and Applications*, PHI Learning.
5. Sharma, J.K. *Operations Research: Theory and Applications*, New Delhi Macmillan India Ltd., 6e.
6. Natarajan, A. M., Balasubramanie, P., & Talilarasi, A. (2014). *Operations Research*. Pearson Education India.

ORGANISATIONAL STRUCTURE, DESIGN AND CHANGE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT III/ PT IV	24-375-0302/ 24-376-0404	Organisational Structure, Design and Change	3	CC	50	50
For Recognized Colleges, CUSAT						
FT III	24-375-0302	Organisational Structure, Design and Change	3	CC	40	60

Objectives:

1. To enable students to develop knowledge of various organization theories which enable managers to understand, predict, and influence organizational structure and design and their role in organizational effectiveness.
2. To develop an understanding of the dynamics of change in organizations.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand comprehensively the concepts related to organizational structure, design and change elements	2
CO2	Apply skills in organisational design and change based on the understanding of the different contents delivered to apply them with illustrations and cases.	3
CO3	Analyse the organizational design and organizational development to explore and establish relationships in the areas of organizational management decisions	4
CO4	Evaluate the impact of structure, strategy and culture in organizational design decisions, and appraise organizational change plans using organizational development techniques.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	3	2	3	-
CO3	3	3	1	3	-
CO4	3	3	2	3	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Basic understanding of Principles of Management

Syllabus:

Module 1: Organisations and Structure

Organizational stakeholders- Systems theory- Organizational Effectiveness- Types of Structure- Functional- Divisional- Matrix- Mintzberg typology of structures- Contemporary structures (Holacracy, Network, Hybrid)-Organigraphs

Module 2: Strategy

Concepts of strategy- Strategy frameworks-Organizational Redesigning-General and Specific environment- Resource dependency theory- Transaction cost theory

Module 3: Environment

Organizational life cycle- Population ecology model- Institutional theory- Greiner's life cycle theory- Organizational decline and death

Module 4: Organisational Culture

Organizational culture-climate- values- Hofstede's cultural dimensions- Managing cultural diversity- Learning Organization- - Knowledge Management- Nonaka Model

Module 5: Organisational Change

Organizational change and development- Types of change- Process of change- Models of change management- OD interventions

References

1. Jones, G. R. (2013). *Organizational theory, design, and change*. Upper Saddle River, NJ: Pearson.
2. Daft, R. L. (2015). *Organization theory and design*. Cengage learning.
3. Mintzberg, H., & Van der Heyden, L. (1999). Organigraphs: Drawing how companies really work. *Harvard business review*, *77*, 87-95.
4. Mintzberg, H. (1993). *Structure in fives: Designing effective organizations*. Prentice-Hall, Inc.
5. Nonaka, I., & Takeuchi, H. (2007). The knowledge-creating company. *Harvard business review*, *85*(7/8), 162.

BUSINESS ANALYTICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT III/ PT V	24-375-0303/ 24-376-0502	Business Analytics	3	CC	50	50
For Recognized Colleges, CUSAT						
FT III	24-375-0303	Business Analytics	3	CC	40	60

Objectives:

1. Understand the foundations of data analytics and its transformative role in business.
2. Master essential descriptive statistics and data visualization techniques to summarize and communicate insights from data effectively.
3. Explore various predictive and prescriptive analytics methods for forecasting future trends and optimizing business decision-making.
4. Gain familiarity with relevant analytics tools, including MS Excel, popular visualization software

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Distinguish between different types of analytics (descriptive, predictive, prescriptive) and apply them to real-world business scenarios.	2
CO 2	Evaluate the strengths and weaknesses of different data sources and methodologies in the context of a specific business objective.	4
CO 3	Critically assess the ethical implications of data collection and analysis practices in a business context.	4
CO 4	Develop an interactive dashboard in a tool like Power BI to visually represent and communicate data insights related to a chosen business problem.	5

CO – PSO Mapping Table :

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	2	-
CO2	2	3	1	2	-
CO3	1	3	1	2	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Thorough understanding of Statistical concepts and Business Research Methods

Syllabus:

Module 1

Introduction to Data Analytics, Data Science; Types of Analytics: Descriptive, Predictive, Prescriptive, Decision, Diagnostic, and Cognitive Analytics; Data Fundamentals: Types, Sources, Characteristics, Management, Quality, and Cleaning Methods; Business Analytics: Definition, Evolution, Process, Industry Landscape, and Value Generation; Big Data Fundamentals: Characteristics, Application in Business; Artificial Intelligence (AI), Machine Learning, Deep Learning, and Cloud Computing.

Module 2

Data Summarization and Cleaning; Visualization Techniques and principles; The art of Data Storytelling; Overview of Business Intelligence: Power BI: Interface, Power Query Editor; Data Analysis Expressions; Building Dashboards.

Module 3

Predictive Analytics: Understanding Relationships: Correlation vs. Covariance vs. Causality, Forecasting Techniques: Linear and Non-linear Regression, Regression Model Building: Assumptions; Framework, Business Applications of Predictive Analytics.

Module 4

Advanced Predictive Analytics: Multiple Linear Regression, Logistic Regression, Multinomial Regression; Applications in business: demand forecasting, pricing strategies, credit scoring and customer churn prediction; Prescriptive Analytics: Simulation and Optimization Techniques; Business applications of Prescriptive Analytics.

Module 5: Familiarizing different Analytics Tools

Supervised and Unsupervised Machine Learning; Forecasting using Supervised Machine Learning: kNN-classification, Decision Tree; Unsupervised Machine Learning Algorithms: Clustering; Association rule mining, Market basket analysis; Business applications: Sales Forecasting, Fraud Detection, Anomaly Detection and Product Placement and Layout Optimization

Additional Resources:

- Readings from academic journals, business publications, and online certifications are recommended

References

1. Albright, S. C., &; Winston, W. L. (2022). Business Analytics: Data Analysis and Decision Making with MindTap. Cengage Learning India Pvt. Ltd.
2. Evans, J. R. (2021). Business Analytics (3rd ed.). Pearson Education.
3. Jaggia, S., Lertwachara, K., Kelly, A., Chen, L., &; Guha, A. (2023). Business Analytics: Communicating with Numbers (2nd ed.). McGraw Hill.
4. Kumar, U. D. (2021). Business Analytics: The Science of Data-Driven Decision Making (2nd ed.). Wiley.
5. Mathew, R. (2024). Business Analytics for Decision Making (1st ed.) [Kindle edition]. Pearson.
6. Sharda, R., Delen, D., &; Turban, E. (2018). Business Intelligence and Analytics (10th ed.). Pearson Education.

STRATEGIC MANAGEMENT AND CORPORATE GOVERNANCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT IV/ PT VI	24-375-0401/ 24-376-0601	Strategic Management and Corporate Governance	3	CC	50	50
For Recognized Colleges, CUSAT						
FT IV	24-375-0401	Strategic Management and Corporate Governance	3	CC	40	60

Objective:

1. This course provides an overview of the fundamental concepts, tools, and principles associated with the competitive analysis and formulation of strategies. It focuses on managerial choices and actions that influence the success and long-term survival of business organizations.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
	After completion of the course, the student will be able to:	
CO1	Understand the concept of strategy, hierarchy of strategies and the strategic planning process.	2
CO2	Understand the principles of corporate governance and the legal framework for ensuring effective corporate governance in India	2
CO3	Identify and assess the impact of opportunities and threats in a firm's macro and industry environment and analyse the strategic positioning alternatives for the firm.	4
CO4	Identify and assess a company's strengths and weaknesses, and match them with its opportunities and threats to assess the suitability of strategy alternatives.	4
CO5	Assess the strategy fit in the business activity systems of a firm.	4
CO6	Evaluate the alignment of structure, leadership, culture and performance management with business strategy	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	-	3
CO2	3	3	1	-	3
CO3	3	3	1	-	3
CO4	3	3	1	-	3
CO5	3	3	1	-	3
CO6	3	3	1	-	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I

Introduction to strategy: Mission, vision and values; Strategy vs Plan; Levels of strategy; SBU, Social responsibility of business; Environmental scanning and Analysis: Macro Environmental Analysis –PESTEL Framework, EFE matrix, Porter's Five Forces Industry Analysis.

Module II

Analysing Organisational Resources and Capabilities; VRIN/VRIO Framework for Resource Configuration; Dynamic capabilities; sources of competitive advantages; Developing Core Competencies; Value chain analysis; Business Model analysis: Business Model canvas, Business model patterns; Blue Ocean strategy: concept & framework for building and analysing blue ocean products.

Module III

SWOT analysis; Synergy; competitive strategies: Cost Leadership, Differentiation and Focus; Strategic Fit; Dual strategies. Corporate strategy: Portfolio Analysis tools: BCG matrix, GE portfolio analysis; Growth strategies: Ansoff Matrix, Diversification strategies, vertical, concentric and conglomerate diversification, mergers and acquisitions, takeovers; strategic alliances, collaborative partnership Stability and retrenchment strategies, Stability strategy and Retrenchment. Parenting strategies.

Module IV

Functional Strategies; Implementation of strategy; strategy and structure; corporate culture; management of change; managing for the future; Strategy execution and leadership; Balanced scorecard; Metrics and rewards; evaluation and control of strategy; Technology-driven Business Transformation

Module V

Corporate Governance and Ethics: Definitions and Importance of Corporate Governance-Reputation; Corporate Ethics; Corporate Governance and Corporate

Responsibility: Shareholder Rights; Equitable Treatment-Responsibilities of Shareholders; Minority Shareholders'Protection; Structure and Independence of the Board; Responsibilities and Dutiesof the Board; Organization of Audit Committee-Responsibilities of the Audit Committee.

References

1. Kim, W. C., & Mauborgne, R. (2014). *Blue ocean strategy, expanded edition: How to create uncontested market space and make the competition irrelevant*. Harvard business review Press.
2. Michael Porter (2014), Competitive Strategy: Techniques for Analyzing Industries and Competitors, Export edition, The Free Press
3. Gerry Johnson and Keven Scholes: Exploring Corporate Strategy, Prentice Hall of India, New Delhi.
4. Thomas L. Wheelen, J. David Hunger Strategic Management and Business Policy: Globalization, Innovation and Sustainability, 15 ed, Pearson
5. Hamel, G. and S.K. Prahlad, Competing for the Future Harvard (C. K. Prahalad Business School Press, Boston)
6. Michael E Porter: Competitive Advantage, The Free Press, New York
7. Pearce and Robinson: Strategic Management, All India Travellers Bookseller, New Delhi.

BUSINESS SUSTAINABILITY

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
FT IV/ PT VI	24-375-0402/ 24-376-0602	Business Sustainability	3	CC	50	50
For Recognized Colleges, CUSAT						
FT IV	24-375-0402	Business Sustainability	3	CC	40	60

Objectives:

1. Gain knowledge of sustainability principles, CSR, and the triple bottom line approach.
2. Learn to assess and apply sustainable practices in business, focusing on environmental economics and green financing.
3. Develop skills to create and implement effective sustainability strategies and reporting.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes		Revised Bloom's taxonomy levels
CO1	Understand the triple bottom line approach and its significance in sustainability management and CSR.	2
CO2	Apply environmental economic principles to assess resource allocation and implement organizational sustainability practices.	3
CO3	Analyze the effectiveness of CSR initiatives and sustainability reporting in enhancing social and environmental impact.	4
CO4	Evaluate green business strategies and their impact on stakeholder engagement and organizational sustainability.	5
CO5	Develop a sustainability report integrating the triple bottom line, CSR, and ESG factors to showcase sustainable business strategy implementation.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2	2	2	3
CO2	2	2	2	3	3
CO3	2	2	2	3	3
CO4	2	2	2	3	3
CO5	2	2	2	3	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: NIL

Syllabus:

Module 1: Introduction to Sustainability Management

Overview of sustainability- Triple bottom line approach: people, planet, profit- Meaning and need for sustainability management- Sustainability development goals, UN Global Compact Advantages and challenges of sustainability management.

Module 2: People Aspect of Triple Bottom Line

Understanding Corporate Social Responsibility (CSR)- Meaning and significance of CSR- Need for CSR and its benefits to organizations - CSR mandate in India- Implementing CSR- Employee engagement - Social audit- Sustainable investing- Strategic CSR - CSR reporting- Case studies in CSR.

Module 3: Planet Aspect of Triple Bottom Line

Environmental Economics-efficiency and optimality in resource allocation-market failure and public policy-Common Property resources-Tragedy of Commons- Circular economy- Green financing- Issues affecting ecological equilibrium – population growth- depletion of natural resources–industrial and trade driven - emerging issues- global warming– alternative sources of energy – implementation challenges – cost benefit analysis - Sustainability Practices for Environmental Protection- Sustainable value chain and its relation to organizational costs- Case studies of organizations incorporating sustainability practices.

Module 4: Profit Aspect of Triple Bottom Line

Stakeholder vs. Shareholder approach- Business ethics and sustainability- Corporate governance and its relation to organizational sustainability- Case studies of unethical and fraudulent practices-Green Strategies in Business Operations- Vision 2030: Elements in Marketing and Human Resource Management towards Green strategies.

Module 5: Sustainability Reporting and Standards

Overview of sustainability reporting standards - GRI reporting guidelines- Dow Jones Sustainability Index- OECD Guidelines for Multinational Companies - AA-1000, ISO-26000, ISO 14001, OHSAS-18001, SA-8000- Sustainability report and integrated reporting- Business Process and Social Sustainability Examples - Environmental, Social, and Governance (ESG) Integration- Understanding ESG: Environmental, Social, and Governance factors- Case studies showcasing successful ESG integration and its impact on organizational performance.

References

1. Agarwal, S.K., 2008 “Corporate social Responsibility in India”, Sage Publishing Co. India Pvt. Ltd.
2. Andrew Savitz, 2013, “Triple Bottom Lines -How Today's Best-Run Companies Are Achieving”, John Wiley
3. John Hill, 2020, “Environmental, Social, and Governance (ESG) Investing: A Balanced Analysis of the Theory and Practice of a Sustainable Portfolio”, Academic Press Inc.
4. Sri Urip, 2010, “CSR Strategies - Corporate Social Responsibility for a competitive Edge in Emerging Markets”, John Wiley

15.2 Syllabi of Electives Streams and Courses

CODE for the particular Elective Course: 24-37A-0BXX

Where 'A' stands for whether it offers to Full-time batch or Evening-Regular batch. For Full-time batch '5' and '6' for Evening-Regular batch.

'B' stands for semester number in which it is offered.

'XX' stands for unique two-digit number for a particular elective course.

15.2.1 Finance and Accounting

24-37A-0B11: Security Analysis and Portfolio Management

24-37A-0B12: International Finance

24-37A-0B13: Working Capital Management

24-37A-0B14: Management of Financial Services

24-37A-0B15: Financial Derivatives and Risk Management

24-37A-0B16: Corporate Restructuring and Valuation

24-37A-0B17: Financial Modelling

24-37A-0B18: Analytics for Finance

24-37A-0B19: Behavioural Finance

24-37A-0B20: Bank Management

24-37A-0B21: FinTech Applications in Business

24-37A-0B22: Risk Management in Banks

15.2.2 Marketing

24-37A-0B26: Advanced Consumer Behaviour

24-37A-0B27: Integrated Marketing Communication

24-37A-0B28: E-Commerce

24-37A-0B29: Marketing Research

24-37A-0B30: Strategic Marketing

24-37A-0B31: International Marketing

24-37A-0B32: Strategic Sales Management

24-37A-0B33: Services Marketing

24-37A-0B34: Brand and Product Management

24-37A-0B35: Retail Management

24-37A-0B36: Digital Marketing

24-37A-0B37: Customer Relationship Management

24-37A-0B38: Marketing Analytics

24-37A-0B39: Neuromarketing

24-37A-0B40: Social Enterprise Marketing

15.2.3 Organisational Behaviour and Human Resource Management

24-37A-0B46: Strategic Human Resource Management

24-37A-0B47: Management of Industrial Relations

24-37A-0B48: Learning and Development

24-37A-0B49: Global Human Resource Management

24-37A-0B50: Reward Management

24-37A-0B51: Human Resource Planning and Development

24-37A-0B52: Organisational Change and Development

24-37A-0B53: Managing Interpersonal and Group Processes

24-37A-0B54: Performance Management

24-37A-0B55: HR Analytics

24-37A-0B56: Workplace Diversity and Inclusion

24-37A-0B57: Leadership Development: Theory and Practice

24-37A-0B58: Negotiation skills for Managers

15.2.4 Operations Management

24-37A-0B61: Project Management

24-37A-0B37: Customer Relationship Management

24-37A-0B62: Supply Chain Management

24-37A-0B63: Purchasing and Inventory Management

24-37A-0B64: Quality Management

24-37A-0B65: International Logistics Management

24-37A-0B66: Service Operations Management

24-37A-0B67: Simulation and Modelling

24-37A-0B68: Enterprise Resource Planning

24-37A-0B69: Supply Chain Analytics

24-37A-0B70: Design Thinking

24-37A-0B71: Agile project management

24-37A-0B72: Business Performance measurement

15.2.5 Information Technology and Systems

24-37A-0B76: Data Management Dynamics

24-37A-0B77: Advanced Business Process Reengineering

24-37A-0B78: System Analysis and Design

24-37A-0B79: Strategic Data Mining for Business Intelligence

24-37A-0B80: Advanced Data Analytics for Business Decisions

24-37A-0B81: Technology Management

24-37A-0B82: Data Science Using R and Python

24-37A-0B83: Artificial Intelligence for Business

24-37A-0B84: Advanced visual analytics

24-37A-0B85: Text Analytics for Business

24-37A-0B71: Agile project management

24-37A-0B28: E-Commerce

24-37A-0B36: Digital Marketing

24-37A-0B68: Enterprise Resource Planning

24-37A-0B86: Strategic Management of Information Technology

15.2.6 International Business

24-37A-0B12: International Finance

24-37A-0B31: International Marketing

24-37A-0B49: Global Human Resource Management

24-37A-0B65: International Logistics Management

24-37A-0B87: Export Import Policies and Procedures

15.2.7 Data Science and Business Analytics

24-37A-0B80: Advanced data analytics for business decisions

24-37A-0B82: Data science using R and Python

24-37A-0B84: Advanced visual analytics

24-37A-0B83: Artificial Intelligence for Business

24-37A-0B76: Data management dynamics

24-37A-0B17: Financial Modelling

24-37A-0B55: HR analytics

24-37A-0B38: Marketing analytics

24-37A-0B67: Simulation and modelling

24-37A-0B79: Strategic Data Mining for Business Intelligence

24-37A-0B69: Supply chain analytics

24-37A-0B85: Text analytics for business

24-37A-0B18: Analytics for finance

15.3.8 Entrepreneurship

24-37A-0B70: Design thinking

24-37A-0B29: Marketing research

24-37A-0B61: Project Management

24-37A-0B53: Managing Interpersonal and Group Processes

24-37A-0B89: Creativity for Innovation and entrepreneurship

24-37A-0B90: New product development

24-37A-0B91: New Business Models

24-37A-0B92: Entrepreneurial Finance

Syllabi of Electives Streams and Courses

15.2.1 Finance and Accounting

SECURITY ANALYSIS AND PORTFOLIO MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B11	Security Analysis and Portfolio Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B11	Security Analysis and Portfolio Management	3	EC	40	60

Objectives:

1. To familiarize students with security trading system and market structure
2. To familiarize students with basic approaches of security analysis – fundamental and technical analysis.
3. Train the students to develop necessary skills for security analysis. Make them able to analyse the impact of macro-economic, industry, corporate events on security prices.

4. To familiarize students with the concept of market efficiency, its implications and limitations.
5. Develop the skill sets to construct, revise and evaluate portfolio.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Familiarize students with security trading system and market structure	1
CO2	Understand the basic approaches of security analysis – fundamental and technical analysis.	2
CO3	Analyse the impact of macro-economic, industry, corporate events on security prices.	3
CO4	Understand the concept of market efficiency and Modern Portfolio Theory, its implications and limitations.	2
CO5	Develop the skill sets to construct, revise and evaluate portfolio.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	-	-
CO2	3	3	-	-	-
CO3	3	3	-	1	-
CO4	3	3	-	1	-
CO5	3	3	-	1	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Introduction to Investment

Concepts of investment – Characteristics – Objectives – Asset Classes and Financial Instruments – Financial Markets: Meaning - Functions – Classification – Securities Market – Primary Market – Secondary Market - Functions of Stock Exchanges – Trading and Settlement procedures. Valuation of Debt: Fixed- Income Securities, Types of bonds, Bond risk, Bond pricing, Bond Yields.

Module II: Equity Analysis – Fundamental and Technical Analysis

Relationship between macroeconomic variables and financial markets. Industry Life-Cycle; Business Cycles and Industries; Analysis of Competition in the Industry,

Technological Changes and Industry. Economy-Industry-Company (EIC) Framework, Analysis of Financial Statements to understand value drivers. Valuation of stock based on projected cashflow, Relative valuation and Valuation Multipliers. Meaning and assumptions of technical analysis - Charting Techniques - Dow Theory – Elliot Wave Theory - Bar and Line Charts – Point and Figure Charts - Moving average analysis – Relative Strength Analysis – Japanese Candlesticks - Technical Indicators.

Module III: Market Efficiency

Efficient Market Hypothesis, Various Forms of market efficiency and Testing Implications. Behavioural Finance- Limits of Arbitrages, Heuristics and Biases, Implications.

Module IV: Modern Portfolio Theory

Definition of Risk, Risk Aversion, Benefits of Diversification, Markowitz risk-return optimization with Two Stocks. Portfolio Optimisation with Black Litterman Approach. Capital Assets Pricing Model (CAPM), CML and SML, Empirical tests of CAPM, Limitations of CAPM and Market Anomalies. Arbitrage Pricing Theory (APT), Multifactor Models, Fama-French Model, Factor-Based Investing.

Module V: Portfolio Management

Passive vs. Active Portfolio Management, The conventional theory of performance evaluation, Composite Portfolio performance measures (Treynor; Sharpe; Jensen; and Information ratio performance measures) Asset Allocation Strategies.

References

1. David G. Luenberger: Investment Science, Oxford University Press, New Delhi.
2. Frank K. Reilly, Keith C. Brown: Investment Analysis and Portfolio Management (Indian Edition), Thomson – South Western.
3. Zvi Bodie, Alex Kane and Alan J. Marcus (12th Edition ISBN:9781260571158) McGraw Hill
4. Burton Malkiel, A Random Walk Down Wall Street,
5. Prasanna Chandra: Investment Analysis and Portfolio Management, Tata McGraw-Hill, New Delhi.
6. Bhalla V.K.: Investment Management–Security Analysis and Portfolio Management,S. Chand and Company Ltd., New Delhi.

INTERNATIONAL FINANCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B12	International Finance	3	EC	50	50
For School of Management Studies, CUSAT						
	24-37A-0B12	International Finance	3	EC	40	60

Objectives:

1 To enhance the understanding on functioning of foreign exchange markets, and use of various instruments.

2 To enhance the understanding on risk exposure and risk management approaches in international business.

3 To develop skills for using derivatives instruments and strategies for in international finance markets, and forming appropriate strategies to advice clients for taking positions in the market.

4 To learn currency quotation, cross currency quotations and arbitrage possibilities.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Understand the micro structure of the internation finance m markets, trading motives mechanism, and payoffs.	2
CO 2	Applying/taking positions with market instruments in line with market outlook/risk management requirements.	3
CO 3	Analysing the technical/ and other parameters of the contract, and connecting with market signals to judge a position.	4
CO 4	Evaluate the international financial market conditions, instrument, currency trends and firm's exposures.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	-	-	2
CO2	2	2	1	2	1
CO3	1	3	1	3	1
CO4	1	3	1	2	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Completion of basic course in financial management/banking

Syllabus:

Module I: Introduction to International Finance and markets

Global Economy -monetary system; Globalization- Balance of payments – significance- preparation of BOP statement – Link between BOP and the economy - Eurocurrency market, international bond market, international equity market, international money market.

Module II: Foreign Exchange Market

Forex market- regulator – FEMA- authorized dealers Exchange Rate Mechanism: Exchange rate quotations, direct and indirect quotes, bid and ask quote, Nominal, real and effective exchange rates, cross currency rates- triangular arbitrage.

Module III: Foreign exchange markets – instruments and trading

Spot Market: Meaning, Features, Currency arbitrage: Forward Market: Meaning, Features, Arbitrage in forward market; Market for Currency Futures: Meaning, Forward and Futures Contracts, Hedging in currency Futures Market; Market for Currency Options: Types of Option Market, Types of Options, Option properties and payoffs.

Module IV: Risk exposure and financing for international business

Risk exposure -meaning, Types of Exposure, Hedging of exposure. Purchase power parity- interest rate parity. Portfolio investment - FDI-FII -ADR-GDR-IDR.

Module V : Swaps

Concept -- interest rate swaps -currency swaps- speculation and hedging using swaps-economic advantages and value creation using swaps - credit derivatives

References

1. Apte.P.G. International Financial Management.TataMcGraw Hill, New Delhi
2. John C Hull, *Options Futures and Other Derivatives*, Pearson Education.
3. Francis Cherunilam: International Economics, Tata McGraw-Hill Education PrivateLtd., New Delhi
4. Maurice D. Levi: International Finance – The Markets and Financial Management of Multinational Business

WORKING CAPITAL MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B13	Working Capital Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B13	Working Capital Management	3	EC	40	60

Objectives:

1. To impart students the significance of maintaining liquidity by keeping optimal level of cash and other liquid assets.
2. Provide the knowledge sets and strategies to manage receivables and payables to optimize the company's cash flow.
3. Capacity building to identify and mitigate risks associated with working capital, such as credit risk, interest rate risk, and market risk.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the significance of maintaining liquidity by keeping optimal level of cash and other liquid assets.	2
CO2	Apply knowledge sets and strategies to manage inventory, receivables, payables, and cash.	3
CO3	Estimate operating cycle, working capital requirement, optimum size of inventory, receivables and cash.	3
CO4	Examine different strategies for efficient management of cash, receivables and inventories.	4
CO5	Develop skills to suggest context specific physical control over inventory.	4
CO5	Evaluate the quantitative effects of changes in credit policies and inventory policies on key variables of firms.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	-	-
CO2	3	3	1	1	-
CO3	3	3	1	1	-
CO4	3	3	1	1	-
CO5	3	3	1	1	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Knowledge of financial accounting, financial management and management accounting

Syllabus:

Module I: Introduction to Working Capital Management

Importance of Working Capital and its management, Kinds of Working Capital, Objectives of WCM, WC as a Measures of Liquidity, Working capital policy, Risk-return trade-off, Liquidity v/s profitability trade-off, Cost trade-off, Basic approaches for determining the working capital financing mix, Sources of Financing for working capital.

Module II: Assessment of Working Capital

Gross Operating cycle, Net Operating Cycle/Cash Conversion Cycle, Production cycle, Weighted Operating cycle, Factors Determining Working capital, Estimating Working capital Requirements, Modelling working capital estimation in MS Excel.

Module III: Management of Cash and Marketable Securities

Motives for Holding Cash, Objectives of Cash Management, Factors Determining Cash Balance, Determination of Cash Need and Cash Management Models - Baumol Model, Miller-Orr Model, Stone Model, Orgler's Model, Bernanke's Model. Cash Budget as a tool for cash management, Modelling cash budget in MS Excel, Cash Management Strategies. Meaning and characteristics of Marketable Securities, Selection Criterion.

Module IV: Receivable Management

Objectives, Costs and Benefits of receivables, Decision Areas in Receivables Management- Marginal Cost-Benefit Analysis, Credit Policy, Credit Standard, Credit Analysis, Credit Terms, Cash Discount, Collection policies. Modelling decisions on Credit Policy, Credit Standard, Credit Analysis, Credit Terms, Cash Discount, Collection policies in MS Excel, Monitoring Receivables- Average Collection Period, Aging Schedules, Collection Experience Matrix.

Module V: Inventory Management

Nature of Inventories, Need to hold inventories, Benefits and Costs of Holding Inventories, Objectives of Inventory management, Inventory Management Techniques- EOQ, EOQ

modelling in MS Excel, Reorder Point, Safety stock. Types of Inventory levels, Physical Control of Inventory/Inventory Control Systems-ABC/PVA/CIE, JIT, FSN.

References

1. Sagner, James. Working Capital Management: Applications and Cases.
2. Bhattacharya, Hrishikes. Working Capital Management: Strategies and Techniques.
3. Van Horne, James C and Wachwicz. Jr. Fundamentals of Financial Management.

MANAGEMENT OF FINANCIAL SERVICES

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B14	Management of Financial Services	3	EC	50	50
For School of Management Studies, CUSAT						
	24-37A-0B14	Management of Financial Services	3	EC	40	60

Objective:

1. To learn various financial services and their role in the overall financial system.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcome	Description of Course Outcomes	Revised Bloom's taxonomy Level
CO 1	Understand how closely the financial system of a country related to the economic development of that country and also to know the role, functions of various financial services.	2
CO 2	Applying the acquired knowledge in the evaluation of securities, Shares/Bonds, Bill Discounting, Hire purchase and Leasing in real life situation.	3
CO 3	Analysing the functions, Scope and Growth potential of Financial Services in India and thereby obtaining clarity about present condition of Indian Financial System and its growth potential	4
CO 4	Evaluate various investment opportunities in the context of SEBI regulations and ratings by various rating agencies like CRISIL,CARE, ICRA	5

CO-PSO Mapping:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	-	3	-	1	2
CO 2	3	3	-	2	-
CO 3	-	3	1	3	1
CO 4	2	3	3	3	-

Note: Correlation Levels 1= Low, 2=Medium, 3=High "-"= No correlation

Prerequisites: Nil

Syllabus:

Module I: Indian Financial System and Markets

Indian Financial System: Structure and constituents of Indian Financial System, Financial institutions, Financial System and Economic Development, Role of Banking and Financial Markets in Economy, Banking as a Service, Financial Markets: Nature, Functions, Primary and Secondary Markets, Money and Capital Market, New Issue Market – Issue Mechanism – Public issue, Rights issue, private placement, Issue of Bonus Shares, SEBI and its role as regulator.

Financial Services: Meaning, Nature and Scope, Classification of Financial Services, Financial products and services, Need and importance of financial services, Regulatory Frame Work for Financial Services.

Module II: Merchant Banking Services

Meaning, Services of Merchant Bankers, Role and functions in new issue market, managing issue of Shares and Bonds, Underwriters, Lead Managers, Pre-issue and post issue management -Guide lines of SEBI for Merchant Bankers, Scope for Merchant Banking in India, Issue of Indian Depository Receipts (IDR), Book Building, Green Shoe Option.

Module III: Mutual Funds

Meaning, Origin and growth of mutual Fund industry in Indial, types, importance, Products/Schemes, Managing Mutual Funds in India, Function of Asset Management Company, Net Asset Value, Investors rights, Selection of a Fund, Regulations regarding Mutual Funds, Evaluation of Performance of Mutual Funds, Mutual Funds rating, Mutual funds industry in India, SEBI Directives for Mutual Funds, RBI Guidelines. Structure. Offer Document- Contents of Offer document (as per the format specified by SEBI) and Key Information Memorandum (KIM) contents.

Module IV: Other Financial Services

Venture Capital: Concept, features, Dimensions, Scope, Importance, Venture Capital industry in India, Guide Lines for the Venture Capital Companies in India. Factoring:

Concept, Types, Functions, and benefits. Bills Discounting – Concept, Importance, Factoring and Discounting, Factoring and Forfeiting, Factoring in India.

Leasing – Concept, Types, Merits and Demerits, Structure of Leasing Industry in India, problems of leasing; Hire purchase – Concept, features, advantages, Hire purchasing and Leasing. Debt Securitization – concept, mechanism of securitization, benefits of securitization, Securitization in India, Housing Finance in India, Reverse Mortgage Loan.

Module V: Credit Rating

Concept, functions, benefits and limitations, Credit Rating Agencies in India- CRISIL, ICRA, CARE

References

1. Khan M.Y., Financial Services, Tata McGraw Hill Publishing Company Limited, New Delhi.
2. Albert J. Fredman, Russ Wiles: How Mutual Funds Works, Prentice Hall of India Private Ltd., New Delhi.
3. Pandey I. M., Venture Capital: The Indian Experience, Prentice Hall of India Private Ltd., New Delhi.
4. Gurusamy S. Financial Services and Markets, Thomson – Vijay Nicole Imprints Pvt. Ltd., Chennai
5. Machiraju H. R., Indian Financial System, Vikas Publishing House, New Delhi
6. Bhole, L. M.: Financial Institutions and Markets, Tata McGraw Hill, New Delhi.

FINANCIAL DERIVATIVES AND RISK MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B15	Financial Derivatives and Risk Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B15	Financial Derivatives and Risk Management	3	EC	40	60

Objectives:

1. To enhance understanding of derivative markets, different derivative instruments and trading in derivatives
2. To develop skills for using derivatives contracts for risk management.
3. To develop skills for using derivatives instruments and strategies for hedging, and forming appropriate strategies to advice clients for taking positions in derivatives market.
4. To learn various pricing models, position payoff and trading strategies using derivative instruments.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Understand the micro structure of the derivative markets. Trading motives mechanism, and payoffs.	2
CO 2	Applying/taking derivative positions in line with market outlook/risk management requirements.	3
CO 3	Analysing the technical/ and other parameters of the contract, and connecting with market signals to judge a position.	4
CO 4	Evaluate the contracts and apply judgment on appropriate position/strategy in the market.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	1	-	-	2
CO2	-	2	1	1	1
CO3	-	3	1	2	1
CO4	-	3	1	2	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Good understanding of financial markets and instruments.

Syllabus:

Module I: Introduction to Derivatives Markets

Introduction to financial markets and derivatives segment – Concept of risk and uncertainty – sources of risk- risk management approaches – risk retention- risk avoidance- risk sharing- loss control- risk transfer – Derivative contracts– meaning - hedging – microstructure of derivative markets in India- clearing and settlement – classification of derivatives - derivative contracts – forwards – futures- options -swaps.

Module II: Forwards and Futures

Forward contract- meaning, features – motives and payoffs for parties-- futures contracts -meaning, features - payoffs - hedging with futures- futures pricing -cost of carry and reverse cost of carry- concept of net cash settlement- stock and index futures - currency futures - commodity futures.

Module III: Options – basics

Options and basic option positions – motives/market outlook and option positions – trading in options- concept of option premium– option payoffs - option strategies.

Module IV: Options- advanced

Option properties – option boundaries- put call parity- factors influencing option price – option pricing- time and intrinsic value of option.

Module V: Swaps

Swaps – concept types- interest rate swaps -currency swaps- speculation and hedging using swaps- credit derivatives

References

1. John C Hull, *Options Futures and Other Derivatives*, Pearson Education.
2. Kevin Dowd, *Measuring Market Risk*, John Wiley & Sons
3. Robert W. Kolb&James A. Overdahl, *Financial Derivatives: Pricing and Risk Management*, John Wiley & Sons
4. Sundaram Janakiraman, *Derivatives and Risk Management*, Pearson Education
5. Jayanth Rama Varma, *Derivatives and Risk Management*, TMH
6. Bishnupriya Mishraand Sathya Swaroop Debasish, *Financial Derivatives*, Excel Books
7. S.L. Gupta, *Financial Derivatives: Theory, Concepts and Problems*, Prentice Hall ofIndia
8. S.S S Kumar, *Financial Derivatives*, Prentice Hall of India.

CORPORATE RESTRUCTURING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B16	Corporate Restructuring and Valuations	3	EC	50	50
For School of Management Studies, CUSAT						
	24-37A-0B16	Corporate Restructuring and Valuations	3	EC	40	60

Objective:

1) To understand the significance of corporate restructuring in today's economy and familiarize students with various techniques of corporate restructuring, legal and accounting considerations, valuation methods and its application

Course Outcomes:

Course Outcome	Description of Expected Course Outcomes	Revised Bloom's Taxonomy Level
CO 1	Understand the basic concepts, terms, theoretical and regulatory framework related to corporate restructuring and different forms of restructuring.	2
CO 2	Apply the broad theoretical and legal frame work of firm valuation and various firm valuation models in the firm restructuring context	3
CO 3	Analyse the implication of restructuring decisions on the firm valuations – from differ stake holders perspective	4
CO 4	Evaluate the impact of Internal reconstruction, M&A decisions	5
CO 5	Create new perspectives and proposals for achieving better corporate performance through internal reconstruction, mergers, acquisitions and divest strategies.	6

CO-PSO Mapping:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO 1	-	-	-	-	-
CO 2	-	2	-	1	-
CO 3	2	3	-	3	-
CO 4	3	3	-	2	-
CO 5	2	3	-	1	1

Note: Correlation Levels 1= Low, 2=Medium, 3=High "-"= No correlation

Prerequisites: Nil

Syllabus:

Module I:

Corporate Restructuring, Reasons, Barriers, Types of restructuring: Expansion - Merger & Acquisition, Joint Ventures, Cross Border Expansion, Contraction - Spin-offs, Split-Ups, Equity Carve-out, Divestitures, Corporate Controls - Going Private, Buy Back, Leveraged Buy Out (LBO), Takeover.

Module II:

Legal framework for Corporate Restructuring, Rescue and Insolvency, Bankruptcy Laws in India – Companies Act, 1956, SICA 1985, SRFAESI Act Overview of the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act, Special Purpose Vehicle (SPV), Asset Reconstruction Companies (ARCs), Qualified Institutional Buyers (QIB), Revival, Rehabilitation and Restructuring of Sick Companies.

Module III:

Business Failure and Re-organisation: Types and causes of business failure— Reorganization, reconstruction and liquidation — Corporate Debt Restructuring - Financing M&A, Deal Structuring in M&A Risk, Management in M&A – Regulatory Issues in M&A – Insolvency and Bankruptcy Code 2016 – Timeliness and Stakeholder Value Maximisation.

Module IV:

Valuation, Purpose of valuation, Role of Valuation, Key Concepts : Market Value, Book Value, Liquidation value, Intrinsic Value, Replacement Value, Fair value, Valuation process – Overview of various approaches to valuation (Theory & Numerical) – Asset Based Valuation: Net Asset Method – Book Value basis – Market Value basis – Liquidation Value basis - Income Based Valuation: Discounted Cash Flow Method - Equity Valuation and Firm Valuation, Stable growth and two stage growth (FCFE and FCFF models) – Dividend Yield Method – Capitalization Method – Market Based Valuation (Theory & Numerical) Comparable company and Transaction Analysis Method – Fair Value Method – Valuation Using Multiples (Theory & Numerical), Earnings Based Approach (Earnings – Capitalization Method, EPS, MPS, P/E Ratio

Module V:

Practical Ecosystem for Corporate Restructuring through real Indian cases – Managing Post Merger and Acquisition Issues – SEBI rules and regulations) – Accounting for Mergers: AS 14.

References

1. Damodaran, A. (Latest). *Damodaran on Valuation*. Wiley-India
2. Aurora, R. S., Shetty, K., & Kale, S. (2011). *Mergers and Acquisitions*. Oxford University Press.
3. Godbole, P. G. (2009). *Mergers, Acquisitions and Corporate Restructuring*. Vikas Publication.
4. Chandra, P. (2014). *Corporate Valuation: A Guide for Analysts - Managers and Investors*. McGraw Hill.
5. Gaughan, P. A. (2019). *Mergers, Acquisitions and Corporate Restructurings* (7th ed.). Wiley.
6. Chandra, P. (2011). *Corporate Valuation and Value Creation*. McGraw Hill.
7. Das, B., Raskhit, D., & Debasish, S. S. (2009). *Corporate Restructuring*. Himalaya Publishing House.
8. Khan, M. Y., & Jain, P. K. (2018*). Financial Management* (8th ed.). McGraw Hill.
9. Sinha, P. K. (2016). *Mergers, Acquisitions and Corporate Restructuring*. Himalaya Publishing House.
10. Chandra, P. (Latest). *Financial Management: Theory and Practice*. McGraw Hill.
11. Hitt, M. A., Harrison, J. S., & Ireland, R. D. (2019). *Mergers & Acquisitions: A Guide to Creating Value for Stakeholders*. Oxford University Press.

FINANCIAL MODELLING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B17	Financial Modelling	3	EC	50	50
For School of Management Studies, CUSAT						
	24-37A-0B17	Financial Modelling	3	EC	40	60

Objectives:

1. Impart Spreadsheet skills to the students for building abstract representations (models) of real-world financial decision contexts related to accounting and finance such as interpretation of financial documents, project evaluation, performance of a financial asset or portfolio, project, or any other investment and so on.
2. Build financial decision models for inventory, receivables, cash, working capital estimation, financing, investment and dividend.
3. Practise optimisation techniques for portfolio optimisation and VaR estimation related to investments.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the uses and applications of MS Excel's inbuilt general functions and financial functions to build financial models.	2
CO2	Understand the financial modelling process, features of financial modelling, factors to be considered in constructing efficient financial models.	2
CO3	Develop application skills through case studies to build financial models relating to different decision-making contexts.	3
CO4	Acquire competencies for suggesting measures for improving models, reconstructing models and to make error-free financial models.	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	2	-
CO2	3	1	-	2	-
CO3	3	3	-	2	-
CO4	3	3	-	2	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Familiarity with Spreadsheet Applications (Not essential)

Syllabus:

Module I: Introduction to MS Excel and Financial Modelling

Introduction to Excel, Understanding Advanced Features of Excel, VLOOKUP, HLOOKUP, Match Function, Index Function, Index plus Match Function, What if Analysis, Goal seek Analysis-Modelling Database Functions in Excel-Introduction to Financial Modelling, approach to Financial Modelling, Guidelines for Creating Effective Financial Model. Modelling EMI, DEI, WEI, FEI-Creation of Amortisation Schedule- Application of advanced excel features to retrieve information from Amortisation Schedule/data bases.

Module II: Creating Financial Models in MS Excel

Project evaluation through excel modelling-Discount Rate-cost of debt-cost of Equity- modelling CFATs-XNPV-XIRR. Risk Analysis in Project Appraisal. Cash book modelling-inventory modelling-working capital estimation modelling.

Module III: Forecasting Financial Statements in MS Excel

Scenario Analysis and Sensitivity Analysis-Common uses of Scenarios-Sources of Scenarios-Data Tables. Case studies on Scenario and Sensitivity Analysis of companies. Forecasting Financial Statements using Excel-Case studies.

Module IV: Modelling Asset Pricing in MS Excel

Expected Return and Asset Pricing Modelling-Single factor model (CAPM), threefactor model (FFM), four factor model (Carhart), five factor model (FFM). Modelling portfolio return and risk-Jenson Alpha-portfolio optimization-MPT Case studies.

Module V: Risk analysis related to valuation

PDURATION-NPER-IMPT-Modelling valuation of Bonds and Shares-sensitivity and risk analysis related to valuation. Value at Risk (VaR)

References

1. Michael Rees, Principles of Financial Modelling: Model Design and Best Practices Using Excel and VBA, Wiley
2. Joachim Häcker & Dietmar Ernst, Financial Modelling: An Introductory Guide to Excel and VBA Applications in Finance, Palgrave
3. Danielle Stein Fairhurst, Using Excel for Business and Financial Modelling: A Practical Guide, Wiley
4. Jules Nkansah Love to Excel: A Financial Modelling Master class for the Analyst in You, Partridge
5. Danielle Stein Fairhurst, Financial Modelling in Excel for Dummies, Wiley

ANALYTICS FOR FINANCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B18	Analytics for Finance	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B18	Analytics for Finance	3	EC	40	60

Objectives:

1. Master analytical finance tools and techniques to proficiently utilize a range of tools and techniques in analytical finance, including time-series analysis methods, interest rate modelling, exotic derivatives pricing models, and risk analytics methodologies and demonstrate competence in applying these tools through hands-on exercises, case studies, and theoretical discussions.
2. Apply software skills for financial analysis to develop proficiency in using software tools such as R, EViews, Gretel and MS Excel for financial analysis.
3. Provide students with a foundation for performing data analytics in finance-related roles in commercial and investment banking, venture capital, private equity, asset management.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Develop understanding of the basics of time-series analysis.	2
CO2	Apply the concepts of time-series analysis in modelling and forecasting.	3
CO3	Apply the concepts of interest rate modelling.	3
CO4	Apply the Monte Carlo techniques in pricing exotic options with variance reduction techniques.	3
CO5	Apply the concept of Copula modelling in estimating VaR.	3

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	1	-
CO2	3	3	-	1	-
CO3	3	3	-	1	-
CO4	3	3	-	1	-
CO5	3	3	-	1	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Basic knowledge of statistics

Syllabus:

Module I: Introduction to Financial Analytics

Meaning, uses in decision making, tools and skills required for doing analytics in finance, Discussion on the basics of probability, random variables, density and distribution function, different discrete & continuous distributions, and descriptive statistics.

Module II: Financial Time Series Analysis

Time series data, stationarity, auto-covariance, ACF, white noise, joint test of autocorrelation, Identify the orders of AR, MA, ARMA models, fit the model, generate forecasts and evaluate the forecasts based on statistical and economic significance. Volatility modelling and forecasting based on GARCH family of models with evaluation based on statistical and economic significance.

Module III: Stochastic Calculus for Finance

Concepts and characteristics of stochastic process, Markov process, Martingale, Random Walk, Brownian motion, Brownian bridge, Brownian motion with drift, geometric Brownian motion, stochastic integral, Ito's lemmas, Ornstein-Ulenbeck Process.

Module IV: Interest Rate Modelling

Implementation of bootstrapping, cubic spline without knot and with knots, NS and NSS for yield curve modelling. Implementation of short rate modelling including Vasicek and CIR models.

Module V: Exotic Option Pricing and VaR

Implementation of Monte Carlo simulation for exotic option pricing. Implementation of the antithetic and control variate variance reduction techniques. Basics of various concordance measures and copula. Implement the copula measure in VaR estimation based on Monte Carlo simulation.

References

1. Ruey S. Tsay, Analysis of Financial Time Series (Third Edition), Wiley Publication.
2. Christopher Dougherty, Introduction to Econometrics, Oxford University Press, Indian Edition.
3. D. N. Gujarati and D.C. Porter, Essentials of Econometrics, McGraw Hill, International Edition.
4. Jan Kmenta, Elements of Econometrics, Indian Reprint, Khosla Publishing House.

BEHAVIOURAL FINANCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B19	Behavioural Finance	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B19	Behavioural Finance	3	EC	40	60

Objectives:

1. To introduce the students to the role of human behaviour in financial decision making and gain an enhanced understanding of how individuals actually make financial decisions, with a view to more informed, prescriptive decision making within investment, organizations and on a personal basis.
2. To provide the conceptual framework of behavioural finance based on traditional and modern theories
3. To impart the psychological aspects and challenges underlying the issue of rational and irrational behaviour
4. To apply important behavioural biases of beliefs and preferences in financial settings, like overconfidence, loss aversion, skewness preference, reference-dependence, narrow framing, myopia, or time-inconsistency.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Understand the theoretical and empirical foundations and challenges to the efficient market hypothesis. .	2
CO 2	Apply the main concepts, research tools and methodologies in behavioral finance that help to reveal biases, heuristics, etc. in the decision making process on individual, corporate and financial market level.	3
CO 3	Analyse behavioral biases of individual, professional investors and anomalies in the markets proving the behavioral biases	4
CO 4	Analyse behavioral biases of managers that affect the decision-making process in a corporation	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	2	1	1	1
CO2	1	2	1	2	1
CO3	1	3	1	2	2
CO4	1	2	2	3	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Completion of a basic course in financial management.

Syllabus:

Module I:

Investment Decision Cycle: Judgment under Uncertainty: Cognitive information perception - Peculiarities (biases) of quantitative and numerical information perception - Weber law -Subjective probability – Representativeness – Anchoring Asymmetric perception of gains and losses framing and other behavioural effects - Exponential discounting - Human economic behaviour - Discount factors for short and long horizons -Experimental measurement of the discount factor.

Module II:

Utility/ Preference Functions: Expected Utility Theory and Rational Thought: Decision making under risk and uncertainty - Expected utility as a basis for decision-making –Theories based on Expected Utility Concept – Decision making in historical prospective - Allais and Elsberg's Paradoxes - Rationality from an economics and evolutionary prospective – Herbert Simon and bounded rationality- Investor rationality and market efficiency - Empirical data that questions market efficiency

Module III:

Behavioural Factors and Financial Markets: The Efficient Markets Hypothesis – Information available for Market Participants and Market Efficiency -Market Predictability –The Concept of limits of Arbitrage Model - Asset management and behavioural factors - Active Portfolio Management: return statistics and sources of systematic underperformance.

Module IV:

Emotions and Decision – Making: Experimental measurement of risk-related - Measuring Risk - Emotional mechanisms in modulating risk-taking attitude - Neurophysiology of risk taking. Personality traits and risk attitudes in different domains -Making decisions with "play" and real money - Modulating altruistic behaviour by utilizing the essentials of the specific proximal mechanisms - Emotions and rationality - Antonio Damasio and somatic markers.

Module V:

Behavioural game theory-Nature of behavioural game theory- Mixed strategies- Bargaining- Iterated games- Signaling- Learning- Application: Case studies on Market entry in Monopoly and Impasses in bargaining and self-serving bias.

References

1. Nick Wilkinson and Matthias Hales, An Introduction to Behavioral Finance, 2ndEdition, Palgrave Macmillan 2012
2. Edward Cartwright, Behavioural Economics, Routledge 2011.
3. Erik Angner, A Course in Behavioral Economics, Palgrave Macmillan 2012.
4. Dan Ariely, "Predictably Irrational: The Hidden Forces that Shape Our Decisions", Harper Collins 2009,
5. Richard Thaler and Carl Sunstein, "Nudge: Improving Decisions about Health, Wealth and Happiness", Penguin UK 2009.
6. Kahneman, Daniel and Amos Tversky. Choices, Values and Frames, New York: Russell, Sage Foundation; Cambridge, U.K.; New York: Cambridge University Press,2000.

BANK MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B20	Bank Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B20	Bank Management	3	EC	40	60

Objectives:

1. To develop an understanding about financial sector, especially banking
2. To equip the students with the management of a bank

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Develop application skills in bank management based on illustrations and cases.	3
CO2	Develop the ability to critically analyze banking scenarios, identify problems, and propose effective solutions.	4
CO3	Make the students capable of evaluating the general scenario of banking in the economy	5
CO4	Evaluate scenarios of bank management and bank risk and to envisage coping strategies to contain and mitigate risk.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	-	2	1
CO2	2	3	-	1	3
CO3	2	3	-	3	2
CO4	2	3	-	3	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Role of Banking in economic development

- Types of banks- classification- Difference between banking and other businesses.

Functions of commercial banks: Primary functions- accepting of deposits, lending of funds; secondary functions - agency services, general utility services, innovative financial services. Principles of commercial banking: liquidity, shiftability, safety or security, profitability. Credit creation by commercial banks: technique of credit creation, limitations of credit creation.

Module II: Central banking

Origin of central banking in the world, Reserve Bank of India - evolution and development, functions of a central bank: monetary policy, monetary policy of RBI – quantitative techniques of credit control - bank rate policy, open market operations, variable reserve requirements; qualitative techniques / selective credit control.

Module III: Post liberalization banking in India

major recommendations of the Narasimham committee on Indian financial system and banking sector reforms; integration of the different components of the financial markets, new products, services and markets of the Indian banking industry; deregulation of interest rates on deposits and lending; entry of new generation banks; mergers and acquisitions in the banking sector.

Management of Non-Performing Assets; IRAC norms, the impact of NPAs on profitability of banks, powers of banks for recovery of NPAs under the SARFESI Act, 2002. Capital Adequacy Ratio.

Module IV: Technological Advances in Banking

Communication Networks in Banking System, Automated Clearing Systems, CHIPS, Electronic Fund Management, ECS, RTGS, NEFT, IFSC, ATM, CBS, Internet Banking, Mobile banking, Digital Wallets, Digital banking, Cloud

Computing, CTS, National Financial Switch, AePS, Aadhaar Payment Bridge (APB) System, BHIM Aadhaar Pay, International payment systems, SWIFT, Digital certificate, Digital signature.

Competition in Indian Banking - Non-bank actors - P2P (Peer to Peer), Crowd-funding, PPI (Prepaid Instruments), TReDS (Trade Receivables Discounting System), Digital currencies: CBDC, Crypto currency.

Module V: Overview of Risk Management in Banking and Financial Markets

-; Asset Liability Management in banks: concept, objective, risks involved, process of ALM. Liquidity & Solvency risk, credit risk, credit rating for banks: CAMELS rating, interest rate risk, Foreign exchange risk.

References

1. Indian Institute of Banking and Finance, 2017, Principles and Practices of Banking, Macmillan Education
2. Muralidharan, D., 2015, Modern Banking: Theory and Practice, Prentice Hall of India Learning
3. Gorden, E., Natarajan, K. 2023. Banking Theory, Law & Practice (13th ed.), Himalaya Publishing House.
4. Indian Institute of Banking & Finance, 2023., Information Technology and Digital Banking. MacMillan Education India Pvt. Ltd., D-90, Sec-2, Noida-201301.
5. Indian Institute of Banking and Finance, 2008, Risk Management. Macmillan.
6. Seethapathi .K., 2007, Risk Management – An Enterprise Wide Approach. ICFAI
7. Moorad Choudhry, 2018, An introduction to banking – Principles, strategy and riskmanagement, Wiley
8. Kanaiah Singh and Vinay Dutta, 2019, Commercial Bank Management, McGraw hillpublications.

FINTECH APPLICATIONS IN BUSINESS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B21	**FinTech Applications in Business**	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B21	**FinTech Applications in Business**	3	EC	40	60

Objectives:

1 To explore the impact of Financial Technology in our day to day lives.

2 Learn the technology behind payments, loans, trading and asset management as well as applications of machine learning and blockchain technology for finance and transactions.

3 Build ability to analyze and make recommendations to finance industry regarding how to react to these changes.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Remember key terms and concepts related to fintech and its business applications	1
CO2	Understand the (1) fundamental principles of blockchain and technologies underlying fintech, (2) the impact of fintech on traditional banking and financial systems and (3) the role of data analytics in fintech decision-making.	2
CO3	Present recommendations to take advantage of fintech applications and to respond to challenges and opportunities the fintech revolution brings.	3

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	1	-	-	-
CO3	3	1	-	-	-
CO4	3	1	-	-	-
CO5	3	1	-	-	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Introduction to Fintech

Meaning of FinTech, Drivers of FinTech revolution, FinTech landscape, FinTech and society, FinTech and financial inclusion, FinTech and green and sustainable finance, Fintech opportunities and changes.

Module II: Fintech Business Applications

FinTech applications for - lending and personal finance, Fintech banks, Digital payments, crowd-finding and business financing, payments and retail transactions, equity, trading and investment applications, Robo advisors.

Module III: Technologies Underlying Fintech

Distributed Ledger Technology (DLT)-blockchain and encryption, smart contracts, Cloud computing, IoT, Open source, SaaS and serverless, No-code and low-code, Hyper automation.

Module IV: Fintech Innovations

Digital assets- Fungible and non-fungible tokens (NFTs), Cryptocurrencies and other examples for fungible tokens, Examples of NFTs, Central Bank Digital Currency (CBDC); Digital wallets, decentralized finance (DeFi), Initial Coin Offers (IoC).

Module V: Fintech Implications

Implications of FinTech changes and challenges for existing financial services companies, current and future trends in FinTech world-wide. Course project presenting recommendations to a selected organisation to take advantage of and respond to FinTech challenges and opportunities.

References

1. "Fintech: The Beginners Guide to Financial Technology" by Matthew Driver
2. "Blockchain Basics: A Non-Technical Introduction in 25 Steps" by Daniel Drescher
3. "Fintech Innovation: From Robo-Advisors to Goal Based Investing and Gamification" by Paolo Sironi
4. "The Age of Cryptocurrency: How Bitcoin and Digital Money are Challenging the Global Economic Order" by Paul Vigna and Michael J. Casey
5. "Fintech: The New DNA of Financial Services" by Pranay Gupta
6. "Financial Technology: Cases and Materials" by Dong He, Vikram Haksar, Ross Leckow, and Vikram Nehru
7. "Digital Bank: Strategies to Launch or Become a Digital Bank" by Chris Skinner
8. Online Platforms and Journals

RISK MANAGEMENT IN BANKS

Semester	Course Code	Course Title	Credit	CC/EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B22	Risk Management in Banks	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B22	Risk Management in Banks	3	EC	40	60

Objectives:

1. To develop an understanding of elements of risks in the banking sector
2. To equip the students with the understanding of measurement, monitoring and management of various risks in banking

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Analyse liquidity, solvency, and operational risks in banking and financial markets.	4
CO2	Apply Asset Liability Management (ALM) principles to optimize bank balance sheets.	3
CO3	Evaluate credit risk assessment models and interest rate risk management techniques.	5
CO4	Analyse foreign exchange risk management strategies and operational risk mitigation measures.	4
CO5	Evaluate asset securitization methods and their impact on risk management in financial institutions.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	3	1	-	-
CO2	1	3	3	1	2
CO3	-	3	-	1	2
CO4	-	3	-	1	2
CO5	-	3	-	-	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Overview of Risk Management

Risk Management in Banking and Financial Markets- Liquidity & Solvency Risk - Overview of Liquidity and Solvency-Managing Liquidity (CR and SLR)-Managing Solvency & Capital-Adequacy (BASEL-I)-Liquidity Risk Management-Operational Risk: Measuring and Managing Operational Risk-Basel II Guidelines for Capital Adequacy-Basel III Guidelines- Monetary Policy in India

Module II: Asset Liability Management in Banks

Components of a bank's balance sheet – components of liabilities, components of assets, bank's profit and loss account, meaning and significance of Asset Liability Management (ALM), purpose and objectives of ALM.

Module III: Credit Risk and Interest Rate Risk

Retail Lending-Lending to SMEs-Measuring Credit Risk- Managing credit risk-Monitoring Credit Risk-Credit Risk Assessment Models-Loan Concentration Risk-Loan Portfolio Risk-Off-Balance Sheet Risk -X Credit risk management measures-Overview of Interest Rate Risk- Yield Curve: An Overview-Measuring and Managing IRR: Repricing Model- Measuring and Managing IRR: Duration Gap Analysis-Interest Rate Derivatives- Interest Rate Futures- Interest Rate Swaps-Risk Measurement Matrices-VaR (Value at Risk)-Stress Test

Module IV: Foreign Exchange Risk and Operational Risk

Foreign Exchange Risk -Concepts and Terminology- Introduction-Management of Foreign Exchange Risk: Transaction Exposure-Translation Exposure-Operating Exposure-Currency Futures-Currency Options. Operational Risk- definition, classification-cause based, effect-based, and event-based-operational risk measurement – basic indicator approach- standardized approach-advanced measurement approach- measures for risk mitigation

Module V: Asset Securitization

An Overview-Basic Attributes, Cash Flows, and Structuring Payment Structure - Credit Rating and Credit Enhancements-Types of Securitization: Residential Mortgage Backed-Securities (RMBS)-Credit Card Securitization -Credit Enhancements using CDS-Collateralized Debt Obligation

References

1. Indian Institute of Banking and Finance.2008. *Risk Management*. Macmillan
2. Rene Stulz M. 2009. *Risk Management and Derivatives*. Cengage Learning
3. Seethapathi .K..2007. *Risk Management – An Enterprise Wide Approach.* ICFAI.
4. Padmalatha Suresh, Justin Paul 2019, Management of Banking And Financial

Services, Pearson

5. Kanaiah Singh and Vinay Dutta, 2019, Commercial Bank Management, McGraw hill publications
6. Moorad Choudhry, 2018, An introduction to banking – Principles, strategy and risk management, Wiley

15.2.2 Marketing

ADVANCED CONSUMER BEHAVIOUR

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B26	Advanced Consumer Behaviour	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B26	Advanced Consumer Behaviour	3	EC	40	60

Objectives:

1. To understand the role of marketing in influencing consumer behaviour.
2. To analyze the role of the marketer and the consumer in marketing communication.
3. To sensitise the students to the changing trends in consumer behaviour.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Demonstrate understanding of consumer psychology with the help of short cases and application exercises	3
CO2	Analyze real-world consumer marketing challenges and opportunities that marketing managers face.	4
CO3	Appraise the effectiveness of their marketing decisions.	5
CO4	Develop innovative approaches to cope with the changing nature of consumer behaviour.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	3	-	3	-
CO2	1	3	-	3	-
CO3	1	2	1	3	-
CO4	1	3	-	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Marketing Management

Syllabus:

Module I: Understanding the Consumer Behaviour

Consumer Motivation- Motivation as a psychological force, the dynamics of motivation, measurement of motives. Personality and Consumer Behaviour- Personality and understanding consumer diversity, Brand personality framework, self and self-image. Consumer Perception- Elements of perception- The absolute threshold, The differential threshold, Subliminal perception- Dynamics of perception- Perceptual selection, organisation and interpretation. Consumer imagery- product/service positioning, repositioning, perceived price, perceived quality. retail store image, perceived risk

Module II: Learning and Attitude in Consumer Behaviour

The elements of Consumer Learning- motivation, cues, response and reinforcement, Behavioural Learning Theories – Classical conditioning, Instrumental conditioning and Modelling/Observational learning. Cognitive learning theory – information processing, memory, Mere Exposure Effect, involvement theory. Structural models of attitudes- Tricomponent attitude model, Multiattribute attitude models, Theory of trying-to-consume model, Attitude-toward-the-ad models. Strategies of attitude change- Changing the basic motivational function, Changing beliefs about competitor's brands, Theory of Reasoned Action and Theory of Planned Behaviour, The Elaboration Likelihood Model (ELM)

Module III Consumers in their Social Settings

Understanding the power of reference groups- consumer-related reference groups, word-of-mouth, celebrity and other reference group appeals. Family influences- socialization of family members, functions of the family, roles of husband, wife and children in family decision-making, Family life cycle- traditional and non-traditional. Social class and Consumer behaviour- measurement of social class, lifestyle profiles of the social classes

Module IV: Consumers in their Cultural Settings

Enculturation and Acculturation, Changing Indian Core Values. Subcultures- nationality, religious, geographic, and racial subcultures, Age subcultures- Gen Alpha, Z, Y, X and older consumers, Gender as subculture- women as depicted in media and advertising

Cross-cultural consumer analysis

Module V: Consumer Decision-Making Process

Opinion Leadership. Diffusion of Innovations- the diffusion process, the adoption process- stages in the adoption process, Technology Acceptance Model (TAM), The Unified Theory of Acceptance and Use of Technology (UTAUT)

Levels of consumer decision-making- EPS, LPS, RRB. Models of Consumer Decision-making- Traditional models- Microeconomic and Macroeconomic models. Contemporary models- Nicosia Model, Howard Sheth Model, Engel-Kollat-Blackwell Model, Sheth-Newman-Gross Model

References

1. Hawkins, D. I., & Mothersbaugh, D, L. (2010). Consumer Behaviour: Building Marketing Strategy. 11th ed. McGraw-Hill
2. Hoyer, W. D., MacInnis, D. J., Pieters, R., Chan, E., & Northey, G. (2017). Consumer Behaviour: Asia-Pacific Edition. Cengage AU
3. Schiffman, L. G., Wisenblit, J., & Kumar, S. R. (2011). Consumer Behavior. Pearson Education India
4. Solomon, M., Bamossy, G., Askegaard, S., & Hogg, M. K. (2006). Consumer Behavior, A European Perspective, 3rd ed. Prentice Hall

INTEGRATED MARKETING COMMUNICATION

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B27	Integrated Marketing Communication	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B27	Integrated Marketing Communication	3	EC	40	60

Objectives:

1. To familiarize students with the concepts and processes of advertising and sales promotion
2. To communicate the need for integrating the individual elements of the marketing communications mix

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Illustrate applications of various IMC methodologies in case scenarios	3
CO2	Interpret patterns and connections in marketing communication scenarios for effective decision-making.	4
CO3	Compare multiple marketing communication decisions from an implementation perspective.	5
CO4	Develop innovative frameworks in advertising and promotion, factoring in both advertising appeals and media decisions.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	3	2	2	1
CO2	2	3	2	2	-
CO3	-	2	2	3	1
CO4	1	3	3	2	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Marketing Management

Syllabus:

Module I: Introduction to Integrated Marketing Communication

The marketing communications process and the IMC Process Model, Need for IMC
The use of signs in encoding and decoding, semiotics, sender credibility, celebrity endorser credibility scale
Marketing communications psychology- psychological influences on buyer behaviour

Module II: Media- the Carriers of the Message

Media possibilities and media vehicles in marketing communication- press/TV/cinema/radio/posters/OOH (Out Of Home Media)/The Internet/direct mail/ word-of-mouth/ POS displays/ leaflets & brochures/ signages/others
Central role of the media, media as relationship builders
E-media – marketing communications in the digital world, recent developments
Macro-environmental and micro-environmental changes affecting marketing communications, social changes

Module III: Planning and Organising IMC

The IMC RABOSTIC Planning Model, the planning process, Traditional & Alternative Response Hierarchy Models, Establishing Objectives and Budgeting: Determining Promotional Objectives, DAGMAR, campaign management,

organizing for IMC, evaluation of the planning process

Module IV: Fundamentals of Advertising Campaigns

Brand Positioning through Advertising; use of appeal in advertising; Elements of Print Advertisement - Scriptwriting for Radio and Television, Celebrity Endorsement; Legal and Ethical aspects of Advertising

Agency operations- agency roles, types of agencies, agency selection process and remuneration, managing the client-agency relationship

Roles and responsibilities of client and market research agency personnel

Media Planning- Media and Message, Media Planning Process, Media Objectives, Media Scheduling, Media Planning Implementation

Module V: The IMC Mix

Public relations, Sponsorship, Advertising, Direct Marketing Communications, Sales Promotion, Merchandising & Point of Sale, Packaging, Exhibitions and Tradeshows, Personal Selling and Sales Management

Product categories and the marketing communication mix

References

1. Aaker, D. A., Biel, A. L., & Biel, A. (2013). *Brand equity & advertising: advertising's role in building strong brands*. Psychology Press.
2. Batra, R., Myers, J. G., & Aaker, D. A. (2006). Advertising management. Pearson.
3. Blakeman, R. (2023). *Integrated marketing communication: creative strategy from idea to implementation*. Rowman & Littlefield.
4. Clow, K. E. (2012). *Integrated advertising, promotion and marketing communications, 4/e*. Pearson Education India.
5. Juska, J. M. (2021). *Integrated marketing communication: advertising and promotion in a digital world*. Routledge.
6. Kazmi, S. H. H., & Batra, S. K. (2009). *Advertising and sales Promotion*. Excel Books India.
7. Luck, E., Barker, N., Sassenberg, A. M., Chitty, B., Shimp, T. A., & Andrews, J. C. (2020). *Integrated Marketing Communications*. Cengage AU.
8. Percy, L. (2008). *Strategic integrated marketing communications*. Routledge.
9. Schultz, D., Patti, C. H., & Kitchen, P. J. (Eds.). (2013). *The evolution of integrated marketing communications: The customer-driven marketplace*. Routledge.
10. Sutherland, M. (2020). *Advertising and the mind of the consumer: what works, what doesn't and why*. Routledge.

E-COMMERCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B28	E-Commerce	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B28	E-Commerce	3	EC	40	60

Objectives:

1. To acquaint the students with the E- Commerce business in the competing markets.
2. To get familiarized with E- Commerce platforms and tools to build a career or start a business in E-Commerce

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand different E- Commerce business models, payment systems and distribution models	2
CO2	Apply appropriate business models and strategies for building an E commerce platform	3
CO3	Analyse the opportunities and challenges of E- Commerce in the contemporary business	4
CO4	Evaluate various E- Commerce strategies including marketing, logistics, regulatory issues and opportunities for innovation and differentiation	5
CO5	Create entrepreneurial mindset and creative thinking in developing e-commerce business ideas, products, or services	6

CO – PSO Mapping :

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	3	1	-	-
CO3	3	3	1	-	3
CO4	3	3	-	2	-
CO5	3	3	3	3	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Introduction to E-Commerce

Types of E commerce business B2C, B2B, C2C, P2P, M Commerce; Business models- Market place model, Inventory model, Mixed model, Drop shipping, Subscription model, Private labelling; Types of players- Vertical and Horizontal players; Issues in E Commerce; IT ACT

Module II: Build, Launch and Manage an E-commerce store

Practical application of Domain registration process, Developing and putting online an E commerce store; process of integration of payment system; process of integration of logistics; Policies and legal compliances for E Commerce,

Module III: E Commerce payment system and Pricing strategy

Electronic Payment methods– E- Cash, E- cheque, E- wallets- On-line Credit Card & debit card; Security measures- SSL (Secure Sockets Layer), PCI DSS (Payment Card Industry Data Security Standard), Two-Factor Authentication (2FA), Fraud Detection and Prevention; Revenue and Cost models; Pricing Strategy for products.

Module IV: Logistics for E Commerce

Delivery systems in E commerce; E commerce shipping process; Functioning of fulfilment centre and shipping system- sortation centre, delivery hub, last mile delivery; Distribution models- point-to-point model, Hub and spoke model; E commerce shipping methods and strategies; E commerce shipping cost.

Module V: Marketing for E Commerce

Marketing strategies- Social media marketing, Search Engine Optimization, Content, Influencer, Affiliate and Email marketing; Advertising strategies; Advertising methods- Web banner advertising- frame ads, pop up banners, floating ads, expanding ads, trick banners, news feeds ads, Interstitial ads, Text ads; Online marketing metrics- Audience size or market share metrics, conversion to customer metrics, social marketing metrics, email metrics; Sentiment analysis.

References

1. Laudon, Kenneth C and Traver Carol, E Commerce-Business, Technology and Society, Pearson
2. Cady, G H and Part McGreger, The Internet, BPB Pub. Delhi
3. Carpenter Phil e Brands, HBS Press, Boston
4. Keen, Peter and Mark McDonald The e-Process Edge, Tata McGraw-Hill, Delhi
5. Mann, Catherine, L Global Electronic Commerce, Institute for International Economics, Washington, DC
6. Oberoi, Sundeep-Security and You, Tata McGraw-Hill, Delhi
7. Rich, Jason R. Starting an E-Commerce Business, IDG Books, Delhi

MARKETING RESEARCH

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B29	Marketing Research	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B29	Marketing Research	3	EC	40	60

Objectives:

1. To encourage students to adopt an applied approach toward marketing research by deploying the case study method.
2. To familiarize students with real-world marketing scenarios that present research opportunities by undertaking research projects.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Demonstrate research aptitude using research tools	3
CO2	Examine data collected from student projects for drawing research insights to marketing problems.	4
CO3	Appraise the effectiveness of adopted strategies against the tactical and strategic objectives of firms.	5
CO4	Develop innovative approaches in research methods for marketing applications	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	3	-	3	-
CO2	1	3	-	3	-
CO3	1	2	1	3	-
CO4	1	3	-	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Business Research Methods, Marketing Management

Syllabus:

Module I: Introduction to Marketing Research

The global marketing research industry, classification of marketing research, Marketing research in business-to-business, marketing research brief and its components, writing a marketing research proposal, defining the marketing research

problem, components of the research approach, objective/theoretical framework, analytical model, research questions, and hypotheses.

Module II: Research Methods

Research design classification, relationships between exploratory, descriptive and causal research. Secondary data - internal and external, its collection and analysis. Primary data- qualitative vs. quantitative research, rationale for using qualitative research, ethnographic research, grounded theory, action research

Module III: Qualitative and Quantitative Research

Qualitative research. Focus group discussions- planning and conducting FGDs, offline vs. online FGDs, moderator's role- Triangulation. In-depth interviews vs. Projective techniques. Data analysis- Grounded theory, content analysis, semiotics, qualitative data analysis software. Quantitative research. Survey methods, Observation techniques, Experiments and Test markets

Module IV: Data Collection Tools

Measurement and Scaling- multi-item scales, scale evaluation. Questionnaire design, cross-cultural survey designs. Social media research and social listening, sentiment analysis, research with image and video data

Module V: Data Analysis

Testing of hypothesis using various multivariate analysis tools- Factor Analysis, Cluster Analysis, Discriminant Analysis, Multidimensional Scaling (MDS), Conjoint Analysis, Structural Equation Modelling (SEM), Canonical Correlation Analysis, Correspondence Analysis, MANOVA (Multivariate Analysis of Variance). Report preparation and presentation

References

1. Aaker, D. A., Kumar, V., & Day, G. S. (2008). *Marketing research*. John Wiley & Sons.
2. Hair, J. F., Bush, R. P., & Ortinau, D. J. (2009). Marketing research in a digital environment.
3. Joseph, F. H. J. R., Barry, J. B., Rolph, E. A., & Rolph, E. A. (2010). *Multivariate data analysis*. Pearson Prentice Hall.
4. Kinnear, T. C., & Taylor, J. R. (1996). *Marketing research: an applied approach*. McGraw-Hill.
5. Malhotra, N. K. (2020). *Marketing research: an applied orientation*. Pearson.
6. Malhotra, N. K., Nunan, D., and Birks, D. F. (2017). *Marketing Research: An applied approach*. Pearson.
7. McDaniel Jr, C., & Gates, R. (2018). *Marketing research*. John Wiley & Sons.

STRATEGIC MARKETING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B30	Strategic Marketing	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B30	Strategic Marketing	3	EC	40	60

Objectives:

1. To perform situational analysis of the market environment.
2. To design appropriate competitive marketing strategies for long-term survival.
3. To frame marketing mix strategies for sustainability of the business.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	State basic concepts related to strategic decision-making for business.	2
CO 2	Apply appropriate tactics and strategies in marketing decision-making.	3
CO 3	Appraise marketing strategies adopted by firms in various business scenarios.	4
CO 4	Compare the strategic marketing decisions of different firms.	5
CO 5	Prepare a strategic marketing plan for a business based on given information.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO5	PSO5
CO1	1	1		2	
CO2	2	2		2	
CO3	3	3	1	3	
CO4	3	3	1	3	
CO5	3	3	1	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Syllabus:

Module I: Marketing Strategy

Nature and scope of market-oriented strategic planning – Corporate & Marketing strategy, SBUS; Strategic market planning process, marketing plan implementing strategies- Setting Vision and Mission, Internal Analysis, Market Environment Analysis, Industry Analysis, Customer Analysis, Competitor Analysis; Tools for Implementing Marketing Plan -Ansoffs matrix, BCG Matrix, TOWS matrix.

Module II: Competitor Analysis

Need and Scope; Analysis of Competitor's Strategies and Estimating their Reaction Pattern and Competitive Position; Competitor Intelligence; Competitive Benchmarking; Offensive and Defensive Strategies - Market Leader Strategies – Expanding Total market, Protecting market Share, Expanding market Share- Market Challenger Strategies – Choosing an Attack Strategy, market Follower Strategies; market Nicher Strategies; Choosing a competitive strategy.

Module III: Customer Analysis & Industry Analysis

Industry Analysis- Competitive Market Strategy for Emerging Industries, Declining Industries and Fragmented Industries- Arthur D'Lit Model; Industry Segmentation and Competitive Advantage; Balancing Customer and Competitor Orientations - Analysing Customer Journey – Kano method; Customer Retention and Lifetime Value of Customer, Customer Analysis Tools.

Module IV: Marketing Mix Strategies

Product Differentiation and brand Positioning, Strategic Positioning through Perceptual Mapping, Strategic Positioning through branding; Competitive Pricing: Lifecycle Cost and Value creation; Pricing for Profitability under various scenarios; Marketing Communication: Competitive Advertising – Stages, Framing Message and Media Strategy; customer response to Sales Promotion and Trade promotion.

Module V: Strategy Implementation and Performance Metrics

Marketing Performance Metrics; Balanced Score Card, Sources of competitive advantage; Formulating strategies for sustainable competitive advantage using VRIO framework; Cases in Strategic Marketing

References

1. Best, R. (2021). *Market-Based Management: Strategies for growing customer value and profitability*. Pearson Education.
2. Shahjahan, S. (2010). *Strategic Marketing*. Viva Books.

3. Phillips, D. M. (2023). *Marketing Strategy and Management*. Sage Publications.
4. Walker, O., & Mullins, J. (2013). *Marketing Strategy: A decision-focused approach*. McGraw Hill.
5. Cravens, D., & Percy, N. (2003). *Strategic Marketing*. McGraw Hill.
6. Sahaf, A. M. (2019). *Strategic Marketing: Making Decisions for Strategic Advantage*. PHI Education.
7. Proctor, T. (2008). *Strategic Marketing: An Introduction*. Routledge.

INTERNATIONAL MARKETING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B31	International Marketing	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B31	International Marketing	3	EC	40	60

Objectives:

1. To familiarise students with the principles of international marketing.
2. To acquaint students with the methods and means of conducting international business.
3. To enable students to develop international marketing mix strategies.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Explain the principles of international business.	1
CO 2	State export documentation, procedures and aspects of Indian foreign trade policy	2
CO 3	Examine the global marketing decisions of various firms	3
CO 4	Distinguish international marketing from domestic marketing mechanics	4
CO 5	Appraise international marketing mix strategies for market offerings.	5
CO 6	Formulate international marketing mix designs for products and services.	6

CO – PSO Mapping Table :

CO/PSO	PSO1	PSO2	PSO3	PSO5	PSO5
CO1	1	1		2	1
CO2	2	2		2	2
CO3	2	2		2	1
CO4	3	3		3	1
CO5	3	3		3	1
CO6	3	3	1	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites: Nil

Syllabus:

Module I: Introduction to International Marketing

Introduction to international business-Special problems/features of international marketing vis-a-vis domestic marketing; internationalisation stages and international marketing orientations; benefits of international marketing; International Marketing Environment.

Module II: Market Entry decisions

International marketing research; market profiling analysis and selection; market entry and operating strategies; exporting; licensing; contract manufacturing; foreign assembly, foreign production; joint ventures; production in free areas; third country location; counter trade; strategic alliance. International market segmentation and market coverage strategies- differentiated marketing; undifferentiated marketing; concentrated marketing; niche marketing.

Module III: International Marketing Mix (Product and Distribution)

Global Product Strategies: Product Design, Packaging and Labeling, Warranty and Service Policies, international marketing and PLC; New Product Development, Global Strategies for Services & Brands. International distribution vs Local distribution mechanisms; e-commerce and e-logistics.

Module IV: International Marketing Mix (Pricing and Promotion)

Pricing decisions: Global Pricing Framework, Pricing Basics, Marginal Cost Pricing and its importance, Transfer Pricing, Counter trade, Systems Pricing, Pricing and Positioning, price quotation – preparation of quotations. Promotion Decisions: Promotions – international advertising – sales promotion in international markets – international advertising – direct mailing – personal selling – exhibition – generic

Module V: Export Import scenario

International marketing organization; export department; subsidiary; foreign branches/offices; global organisation;Foreign direct investment. Import-Export Policy Export Documentation- Export Procedure; International Technology Transfer and

Counter Trade; Trade distortions and marketing barriers, legal protection. Foreign trade strategy of India; Foreign Trade Policy, export promotion measures; analysis of global trade and foreign trade of India; major issues within India's export sector.

References

1. Keegan, W. (2015). *Global Marketing*. Prentice Hall of India.
2. Cateora, P., & Graham, J. L. (2019*). International Marketing*. McGraw Hill.
3. Onkvisit, S., & Shaw, J. (2019). *International Marketing*. Prentice Hall of India.
4. Korwar, A. (1997). *Creating Markets across the Globe*. Tata McGraw Hill.
5. Rajagopal. (2007). *International Marketing*. Vikas Publishing.

STRATEGIC SALES MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B32	Strategic Sales Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B32	Strategic Sales Management	3	EC	40	60

Objective:

1. Equip individuals with the knowledge, skills, and competencies needed to succeed in strategic sales management roles.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Gain a deep understanding of strategic sales concepts, theories, and frameworks.	2
CO2	Apply essential selling skills to navigate diverse selling situations.	3
CO3	Analyse sales activities and diverse sales models to effectively engage customers and drive sales outcomes.	4
CO4	Analyse sales forecasting methodologies/sales intelligence tools to identify market opportunities and customer preferences.	4
CO5	Evaluate the effectiveness of strategic sales planning techniques in achieving organizational sales objectives.	5
CO6	Create effective sales plans aligned with organizational objectives by applying strategic sales planning techniques	6

CO – PSO Mapping:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	-	-	-	-
CO2	3	3	1	3	-
CO3	3	3	2	2	-
CO4	3	3	-	3	-
CO5	3	3	-	-	-
CO6	3	3	2	2	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Introduction to Sales Management

Evolution and role of sales management; Types of personal selling- Industrial, Retail and Service selling; Types of sales man- Robert McMurry and Arnold's classification of sales man- order taker, creator, getters, Missionary, Technical and Creative; Difference between selling and marketing; Modern selling and sales activities; Selling in VUCA world; Emerging trends in sales; Sales management process- Formulation, Implementation, Evaluation and Control of strategic sales management

Module II: Selling Process and B2B Selling

Stages in selling process- Pre- sales preparation; Prospecting- Process and methods of prospecting; Pre approach; Approach to the customer- Sales Models- Consultative, Customer- centric sales, Professional Selling Skills (PSS), Relationship model, SPIN and Miller Heiman sales model; Sales presentation- Approach and methods of presentation; Methods of handling customer objections; Methods of closing sales; Follow up action; B2B selling approaches- Programmed, Relationship, Transactional and Bargain Hunter buyers; Concept of Buy class- Straight re-buy, Modified re- buy, New task.

Module III: Selling Skills and Selling Strategies

Selling situations; Selling skills- Communication process, Managing body language, Listening skills, Conflict management, Negotiation and Problem solving skills; Preparing a strategic sales plan; Tools to access market while developing strategic sales plan- PESTEL/ STEEP analysis, SWOT/ TOWS analysis, Catchment analysis, Market mapping

Module IV: Forecasting Sales Information

Importance of sales forecasting; Forecasting market demand- Market demand function, Marketing Decision Support System, Forecasting process, Approaches to sales forecasting; Sales forecasting methods- Qualitative and Quantitative methods; Factors affecting selection of a forecasting method.

Module V: Sales Intelligence and Sales Force Automation

Overview on Sales intelligence software; Sales intelligence tools- Need, Choosing the intelligence tools, Data for sales intelligence; Creating Ideal customer profile; Sales Force Automation- Need for automation, Generations of SFA, Components of SFA, SFA Tools.

References

1. Tapan K Panda and Sunil Sahadev, Sales and Distribution Management, Oxford University Press, 2019
2. Stanton, Buskirk and Spiro: *Management of a Sales Force,* Irwin Publishers.
3. Charles Futrell: *ABC's of Selling*, Irwin Publishers.
4. Stilt, Cundiff and Govoni: *Sales Management – Decisions, Strategies and Cases* Prentice Hall
5. Anderson, Hair and Bush: Professional *Sales Management*, McGraw Hill International editions.
6. Bill Donaldson: Sales *Management by Theory and Practice,* Mc Million.

SERVICES MARKETING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B33	Services Marketing	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B33	Services Marketing	3	EC	40	60

Objectives:

1. To understand distinctive features of services and critical elements in services marketing
2. To provide insights into ways to improve service quality and productivity
3. To comprehend the marketing of different services in the Indian context

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Demonstrate practical skills in services marketing through engaging classroom exercises	3
CO2	Examine authentic service marketing challenges and opportunities marketing managers face across various service sectors.	4
CO3	Assess the consequences of the service marketing decisions.	5
CO4	Develop innovative ideas to expand the service marketing mix and enhance service quality delivery	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	2	-	3	-
CO2	1	3	1	2	1
CO3	-	-	1	2	1
CO4	1	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Marketing Management

Syllabus:

Module I: Understanding Service Markets, Products, and Customers

Introduction to services marketing, Contribution of the service sector to India's economy, the tangibility spectrum. Service Quality- Service Gap Model, SERVQUAL vs. SERVPERF

Pricing of services- approaches to pricing, pricing based on perceived value, deciding the price for services

Module II: Complaint Handling and Service Recovery

Stages of consumer decision-making for services, customer expectations, Zone of Tolerance, customer perception and expectations, factors influencing customer satisfaction, service encounters, service failure and recovery, and service guarantees.

Module III Service Design

New service development, types, process, Service blueprinting, components of a service blueprint, service positioning. Service intermediaries- types of distribution in service, key intermediaries for service delivery- direct delivery, franchising, agents & brokers, electronic channels- channel management issues

Module IV: People and Physical Evidence

Role of employees in services marketing- importance of service employees, service culture, internal marketing, robots replacing service employees. Role of customers in services marketing- roles played by customers, level of customer participation, self-service technology

Physical evidence in services- types and roles of servicescapes, behaviours in servicescape, strategies for physical evidence design

Module V: Service Excellence

Enabling service excellence, delivering value, customer loyalty

Application of Services Marketing in various fields like financial services, tourism, healthcare, education, retail, insurance, airlines etc.

References

1. Lovelock, C., & Patterson, P. (2015). *Services marketing*. Pearson Australia.
2. Mudie, P., & Pirrie, A. (2012). *Services marketing management*. Routledge.
3. Rao, K. R. M. (2011). *Services marketing*. Pearson Education India.
4. Shanker, R. (2002). *Services marketing*. Excel Books India.
5. Wilson, A., Zeithaml, V., Bitner, M. J., & Gremler, D. (2016). *EBOOK: Services Marketing: Integrating customer focus across the firm*. McGraw Hill.
6. Wilson, A., Zeithaml, V., Bitner, M. J., & Gremler, D. (2020). *EBK: Services Marketing: Integrating Customer Service Across the Firm 4e*. McGraw Hill.
7. Wirtz, J. (2012). *Essentials of services marketing*. FT press.
8. Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2010). Services marketing strategy. *Wiley international encyclopedia of marketing*.
9. Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2018). *Services marketing: Integrating customer focus across the firm*. McGraw-Hill.

BRAND AND PRODUCT MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B34	**Brand and Product Management**	**3**	**EC**	**50**	**50**
For Recognized Colleges, CUSAT						
	24-37A-0B34	**Brand and Product Management**	**3**	**EC**	**40**	**60**

Objectives:

1. Demystify concepts relating to brands, branding terminologies and brand creation process.
2. Unearth underlying principles and process of building and growing brand equity in multi brand companies.
3. Provide insights on brand portfolio management, brand architecture formulation and brand revitalisation strategies.
4. Familiarise learners with the new product development (NPD) process and the role of innovation.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Conceptualise branding, product management and new product development process.	2
CO 2	Assess the methods of brand valuation.	3
CO 3	Assimilate branding mechanisms and techniques from brand success and failure stories.	4
CO 4	Evaluate the impact and implications of brand and product management decisions.	5
CO 5	Propose strategies to create, manage and grow brands effectively.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	2		2	
CO2	2	2		2	
CO3	2	2		2	
CO4	3	3		3	
CO5	3	3	1	3	1
CO6	3	3	1	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Understanding Products, Brands and Branding

Understanding goods, products and brands – branding practices, Product and Brand Manager – roles and functions

Module II: Brand Initiation and Brand Creation

Situational Analysis; Branding Process – Brand Promise, Brand identity, Brand Association, Brand Personality, Brand Image, Brand Positioning, Brand Equity; Value addition from Branding – Brand-customer Relationships, Brand Loyalty

Module III: Measuring Brand Equity

Measuring Brand Equity – Brand resonance model, Y&R Brand Asset Valuator model, Brand Identity Prism – Brand Valuation – Brand Tracking through Brand Audits.

Module IV: Managing Brand Growth

Developing Brand architecture strategy – Product portfolio management, Brand Portfolio and Brand Hierarchy; Brand Extensions; Brand revitalization and Brand repositioning; Brand nomenclature; Managing Brand Crisis; Topics of Special interest- Luxury branding; Personal Branding; Experiential Branding.

Module V: New Product Development

Product management; Innovation- types, Levels in innovation-Incremental to radical; Innovation vs Creativity; New product development and launching, Managing development risk

References

1. Dutta, K. (2017). *Brand Management: Principles and Practices* (5th ed.). Oxford University Press.
2. Keller, K. L. (2013). *Strategic Brand Management: A Strategic Decision-Making Approach.*
3. Beverland, M. (2021). *Brand Management: Co-creating Meaningful Brands*. Sage Publications.
4. Gad, T. (2005). *4-D Branding*. Pearson Education.
5. Trott, P. (2005*). Innovation Management and New Product Development*. Financial Times Management.
6. Horlings, S., & Ind, N. (2016). *Brands with a Conscious – How to build a successful and responsible brand*. Kogan Page.
7. Aaker, D. (1991). *Managing Brand Equity*. New York: Free Press.

Haig, M. (2004). *Brand Royalty*. Kogan Page.

RETAIL MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B35	Retail Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B35	Retail Management	3	EC	40	60

Objectives:

1. Develop a comprehensive understanding of retail business.
2. Help the students develop strategic thinking to manage various retail operations.

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	To have a comprehensive understanding of retailing concepts and theories	2
CO2	Analyse different retail formats, store operations and different marketing channels	4
CO3	Analyse the effectiveness of different marketing mix and tactics for driving foot traffic and sales in retail stores.	4
CO4	Evaluate the retail location, inventory management and store operations decisions	5

CO – PSO Mapping:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	-	-	-	-
CO2	3	3	-	-	1
CO3	3	3	-	2	-
CO4	3	3	-	2	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Introduction to Retailing

Evolution of Retailing; Organised and Unorganised Sector; Retail formats- Traditional vs Modern, Store and Non- store based, Services Retailing; Retail Mix; Retail Life Cycle Theory; Multi channel and Omni channel retailing; Emerging Retail formats

Module II: Retailing Strategy

Strategic Retail Planning process; Retail Market Strategy; Retail Locations- Trade area, Techniques to evaluate potential site; Human Resource Management; Inventory Management; Kahn Retailing Success Matrix

Module III: Merchandise Management & Logistics

Merchandise Types; Process of merchandising; Assortment plan; National brands or Private labels, Category Sales; Retail Pricing; Understanding physical flow of Merchandise; Reverse Logistics

Module IV: Store Management

Store environment- physical, online; Creating a store image; Store Layout, Design and Visual Merchandising; Techniques and methods of display; Fixtures; Space management

Module V: Retail Marketing Mix

Segmentation and Targeting shoppers- Creating buyer personas; Positioning of Retail Outlets/Chain; Retail Communication; Retail promotion mix- Advertising - Sales promotion – Publicity-Personal selling and Direct marketing; Customer Relationship Management

References

1. Levy, Michael & Barton A. Weitz Retailing Management, Irwin, London
2. Swapna Pradhan, Retailing Management, Tata Mc Graw Hill (3 edn.), 2010
3. Piyush Kumar Sinha, Uniyal, Managing Retailing, Oxford University Press, 2007
4. Chetan Bajaj, Rajnish Tuli, Nidhi Srinivastava, Retail Management, Oxford University Press, 2010
5. Barry Berman, Joel Evans, Retail Management – A Strategic Approach (11th Edn,), 2010
6. Morschett, D., Zentes, J., Schramm-Klein, H. (2016). Strategic Retail Management: Text and International Cases. Germany: Springer Fachmedien Wiesbaden.

DIGITAL MARKETING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B36	Digital Marketing	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B36	Digital Marketing	3	EC	40	60

Objectives:

1. To acquaint students with the various concepts, tools, techniques and platforms used in the planning and execution of different digital marketing campaigns.
2. To develop a customer centric digital marketing strategic campaign building perspective and campaign optimizing skills in students
3. To sensitize the students to the emerging technologies and changing trends in the field of digital marketing.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the basic concepts, tools and frameworks related to marketing in a digital world	2
CO2	Apply specific concepts and frameworks related to planning search engine marketing campaigns using case studies and mini project	3
CO3	Apply specific concepts and frameworks to plan content marketing related to direct marketing (email & mobile) and social media marketing campaigns	3
CO4	Analyse different digital marketing tactics using various tracking tools with campaign optimisation mindset	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	3	1	3	-
CO3	3	3	1	3	-
CO4	3	3	2	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I

Overview of Digital marketing and the online environment – origins, characteristics, internet users and digital advertising industry size, type, growth. Digital marketing strategy in Owned, earned and paid media. Digital marketing campaign planning process.

Module II

User experience-Website and other digital assets planning, design and development. SEO- onsite and offsite tactics. Content marketing strategy- Video marketing.

Module III

Basics of Search advertising & Online display advertising- concepts, tools and strategies connected to planning and running advertising campaigns.

Module IV

Social Media strategy. Social media advertising – with paid, owned and earned media strategy. Marketing , Social media usage statistics, An Overview of implementing Social media advertising in some of the popular platforms like Facebook ,Instagram , LinkedIn, Whatsapp and YouTube. Measuring the effectiveness of social media strategy and advertising- analytics and tools.

Module V

Direct marketing – basics of Email and Mobile marketing. Online PR and Reputation Management. Tracking, analysing, and optimising digital marketing activities- overview of Web Analytics and conversion optimization-. introduction to Universal Analytics and Google Analytics 4 . - Understanding Google Analytics Reports.

References

1. E marketing- The essential guide to marketing in the digital world, 7th edition, Red and Yellow, 2022.
2. Greg Jarboe, Matt Bailey and Michael Stebbins, Digital Marketing Fundamentals-OMCP guide , Wiley, 2023.
3. Seema Gupta, Digital marketing 3rd Edition,.McGrawHill. 2022.
4. Puneet Bhatia, Fundementals of Digital Marketing, 3rd Edition Pearson, 2023.

CUSTOMER RELATIONSHIP MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B37	Customer Relationship Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B37	Customer Relationship Management	3	EC	40	60

Objectives:

1 Gain in-depth understanding of the principles, strategies, and technologies involved in managing customer relationships effectively.

2 Empower students with the tools and techniques needed to build strong, profitable, and sustainable relationships with customers.

3 Explore various aspects of CRM, including customer acquisition, retention, satisfaction, and loyalty, and learn how to leverage CRM tools and techniques to enhance business performance and competitiveness.

Course Outcomes:

COs and Bloom's Taxonomy Level

Course Outcomes (COs)		Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Gain a comprehensive understanding of CRM concepts and role of IT in CRM	2
CO2	Learn to apply CRM strategy for effective customer acquisition, retention, and loyalty programmes.	3
CO3	Analyse customer profiling, customer journey mapping, clickstream analysis, and profitability data to segment customers effectively and to learn customer behaviour and preferences	4
CO4	Evaluate the effectiveness of CRM strategies, including customer acquisition, retention, and loyalty programmes, in achieving organizational objectives.	5

CO – PSO Mapping:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	-	-	-	-
CO2	3	3	-	3	-
CO3	3	3	-	3	-
CO4	3	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Introduction to CRM

Emergence of CRM; Components of CRM; Customer ladder; Relationship strategy; Buyer- Seller relationship framework; Buyer- Seller Interaction; Customer lifecycle management; Relationship marketing; Cross- selling and upselling.

Module II: CRM strategy

CRM strategy development process; Customer Defections; Customer acquisition and segmentation strategy; Customer retention strategy; Customer life time value; Customer loyalty programmes; Customer Churn and Attrition Management Strategy.

Module III: Role of IT in CRM

Different levels of e- CRM; Sales force automation- sales activity management, contact and lead management, knowledge management, SFA and mobile CRM; CRM in e-business- CRM in B2B, Supplier and partner relationship management.

Module IV: Analytical CRM

Customer journey mapping OLAP; Clickstream analysis; Personalisation and collaborative filtering; Churn management; Customer profiling and profitability analysis; Data protection and privacy codes of practice; Predictive Analytics for Demand Forecasting and Inventory Management.

Module V: Implementing a Technology based CRM

Overview of CRM software and platforms; Planning CRM programme; Choosing the right CRM solution/tools- Need assessment, Vendor selection, CRM score card; CRM implementation; Establishing a CRM performance monitoring system-standards, metrics and key performance indicators. CRM budget and CRM return on investment.

References

1. Specchia, A. (2022). Customer Relationship Management (CRM) for Medium and Small Enterprises: How to Find the Right Solution for Effectively Connecting with Your Customers (1st ed.). Productivity Press.
2. CRM Handbook: A Business Guide to Customer Relationship Management, Jill Dyche, Addison- Wesley 2002
3. Peelen E. D., Customer relationship management, Pearson Education 2010.
4. Adrian Payne, Hand Book of CRM- Achieving Excellence Through Customer Management, Butterworth Hienennan,
5. Francis Buttle, Customer Relationship Management Concepts and Technologies, Butterworth Hienennan
6. Paul Greenberg fourth edition, CRM at the Speed of Light, Tata McGraw Hill.

MARKETING ANALYTICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B38	Marketing Analytics	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B38	Marketing Analytics	3	EC	40	60

Objectives:

1. To demonstrate the importance of marketing analytics in solving marketing problems.
2. To acquaint students with various techniques for analyzing marketing data to help make decisions.
3. To enable students to solve business problems using analytical techniques.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Demonstrate the value of taking an analytical approach to marketing decision-making.	2
CO 2	Apply key marketing analytics techniques in solving marketing problems	3
CO 3	Deploy data analytics tools in marketing decision-making	4
CO 4	Assess business scenarios from patterns in data.	5
CO 5	Solve business problems through modern analytical approaches.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO5	PSO5
CO1	2	2		2	
CO2	2	2		2	
CO3	3	3		3	
CO4	3	3		3	
CO5	3	3		3	

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: The Art and Science of Marketing Decisions

Introduction to Marketing Analytics: Meaning and scope, Sources of marketing data, Data Analysis - Exploratory Analysis, Descriptive Analysis, Predictive Analytics, Prescriptive Analytics; Marketing analytics in the age of big data- Ethical issues.

Module II: Customer Analytics and Digital Analytics

Customer Journey mapping- Process; Use of analytics; Customer Lifetime Value- Need, computation; Churn rate and its computation; Market basket analysis; Logistic regression

Digital Analytics- Web metrics, Conversion rate. Exit Rate, Bounce rate, Click-through rate, Page views, Unique visitors; A/B testing; Social Media Analytics

Module III: Analytics for Segmentation, Targeting and Positioning

Segmentation- Data collection and analysis for Segmentation, Classification Trees for Segmentation; Targeting - Choosing Target Segments; Size estimation; Valuation;

Cluster & Discriminant analysis, RFM analysis; Product Positioning using Perceptual Maps- MDS

Module IV: Product Analytics

New Product decision Models; New Product Design, Conjoint Analysis for Product Design, Marketing Decisions; Forecasting the sales of New Products- S curve, Bass Diffusion model and applications. Customer Feedback Metrics- Net Promoter Score

Module V: Analytics for Pricing and Promotion

Pricing – Goals, Analytics for Bundling, Analytics for Price skimming, Conjoint Analysis for Pricing decisions; Revenue management

Promotions – Types of Promotions, Discounting; Measuring Ad effectiveness;

Market Mix Modelling and Sales forecasting using Regression

References

1. Gupta, S., & Jather, A. (2021). *Marketing Analytics.* Wiley.
2. Venkatesan, R., Farris, P., & Wilcox, R. T. (2014). *Cutting-edge marketing analytics: Real world cases and data sets for hands-on learning.* Pearson Education.
3. Winston, W. L. (2021). Marketing Analytics: *Data-driven techniques with Microsoft Excel*. Wiley Publications.
4. Palmatier, R. W., Peterson, A., & Germann, F. (2022*). Marketing Analytics Based on First Principles*. Bloomsbury.
5. Lilien, G. L., Kotler, P., & Moorthy, K. S. (2015). *Marketing Models*. Prentice-Hall.

NEUROMARKETING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B39	Neuromarketing	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B39	Neuromarketing	3	EC	40	60

Objectives:

1. To provide a comprehensive understanding on the underlying mechanism of consumer behavior.
2. To create an understanding of the core neuroscientific concepts, brain anatomy, and the neuroscience tools, with a focus on its implications on marketing practices.
3. To understand the neuroscientific tools for marketing decision-making processes, emotional reactions, and preferences.
4. To enhance the student capability to critically assess and comprehend neuroscientific research findings to support the marketing approaches.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Recall the basic concepts and terms related to neuroscience and neuromarketing like biometric and neurometric measures, different tools and sensory neuromarketing.	1
CO2	Develop a sound understanding about the concepts delivered at remembrance level and the functioning of the nervous system within the neuromarketing framework, their relationship to generating insights towards neuromarketing.	2
CO3	Apply principles of neuroscience and neuromarketing based on the understanding of different contents delivered with the help of real-life case studies and application exercises. To comprehend the application tools of neuromarketing in different context.	3
CO4	Know and be able to apply key technical terminology in neuromarketing. Understand the key differences between major neuromarketing tools and measures. Impart skills to analyze the real-life difficulties and opportunities encountered by marketing managers and the solution driven with neuroscience in industry.	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	2	1	-	-
CO3	3	3	1	3	-
CO4	3	3	2	3	1

Prerequisites: Nil

Syllabus:

Module 1

Introduction to Neuromarketing; Scope of Neuromarketing; 5P's of Consumer Neuroscience; Overview of the brain; Brain Anatomy and the functional structure of the brain; Neurons and signal transmission; Senses and complexity of perception; Biometric and Neurometric measures; Traditional market research and neuromarketing research.

Module 2

Attention and Consciousness; Studies and methods; Sensory Neuromarketing; Galvanic Skin Response; Pupillometry; Heart rate; Facial expression.

Module 3

Arousal and emotions; wanting and liking; Reward and conditioning; Expectations, valuations and decisions; Neurovision; Eye tracking; Visual attention and perception.

Module 4

Learning and memory; Types of memory; Memory and brands; Dual process theory; Brain Scanning; Electroencephalogram (EEG) theory, equipment, data output; functional magnetic resonance imaging (fMRI) for predictions; EEG and fMRI comparison; Other Scanner Techniques.

Module 5

Neuroethics and Consumer Aberrations; NMSBA code of ethics; Neuromarketing in Indian context; Neuroscience gone wrong.

References

1. Atli, D. (2020). *Analyzing the strategic role of neuromarketing and consumer neuroscience*. IGI Global.
2. Briesemeister, B. B., & Selmer, W. K. (2022). *Neuromarketing in business: Identifying Implicit Purchase Drivers and Leveraging them for Sales*. Springer Nature.
3. D, C. M. P. (2019b). *The Ultimate Neuromarketing Research Guide: Neuroscience, Methods, and Ethics*.
4. Dutta, T., & Mandal, M. K. (2018b). *Neuromarketing in India: Understanding the Indian Consumer*. Routledge.
5. Morin, C., & Renvoise, P. (2018). *The persuasion code: How Neuromarketing Can Help You Persuade Anyone, Anywhere, Anytime*. John Wiley & Sons.
6. Zurawicki, L. (2010). *Neuromarketing: Exploring the Brain of the Consumer*. Springer Science & Business Media.

SOCIAL ENTERPRISE MARKETING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B40	**Social Enterprise Marketing**	**3**	**EC**	**50**	**50**
For Recognized Colleges, CUSAT						
	24-37A-0B40	**Social Enterprise Marketing**	**3**	**EC**	**40**	**60**

Objectives:

1. To provide a detailed exploration of foundational principles of social enterprise and social entrepreneurship scope of marketing in social enterprises.

2. To enable students to design marketing strategies that can effectively drive social impact, enhance community engagement, and ensure the sustainability of social enterprise business models.
3. To provide students with the essential skills and knowledge to effectively implement social marketing strategies in real-world scenarios and evaluate their impact.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand key concepts of social enterprise marketing, including the distinction between for-profit and non-profit models and the basics of social innovation and marketing strategies.	2
CO2	Apply theoretical knowledge to practical scenarios, such as market targeting, social product positioning, and managing perceived costs and distribution.	3
CO3	Analyze social marketing environments, consumer behaviors, and market dynamics to adapt marketing strategies for desired social impact while keeping ethical considerations.	4
CO4	Evaluate the effectiveness of social marketing strategies, assess the impact of marketing decisions and financial viability, and measure social impact.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	2	3
CO2	2	2	1	3	3
CO3	3	3	3	3	3
CO4	3	3	3	3	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Basics of Marketing Management

Syllabus:

Module 1: Foundations of Social Enterprise

Introduction to Social Enterprise and Social Entrepreneurship; History and Evolution of Social Enterprises; For-profit vs. Non-profit Social Enterprises; UN Sustainable Development Goals (SDGs)- Challenges & Opportunities for Social Enterprises; Social Innovation and Innovative Products/Services/Business Models.

Module 2: Introduction to Marketing for Social Ventures

Marketing and Social Change; Principles of marketing; Comparing Social Enterprise Marketing with Traditional Marketing; Understanding value proposition in social enterprises marketing; Relevant theories frameworks and models in Social Enterprise Marketing.

Module 3: Development and Execution of Marketing Strategies for social enterprises

The Planning Process in Social Enterprise Marketing; Analysing Consumers and Market Environments; Selecting Target Markets and Understanding Target Behavior; Positioning and Developing the Social Product; Managing Perceived Costs and Distributing the Offer; Designing Effective Promotional Strategies. Utilizing Digital Marketing tools in Social Enterprise Marketing

Module 4: Evaluation and Ethics in Social Enterprise Marketing

Evaluating Social Marketing Strategies; Implementing and Integrating Social Marketing Strategies; Applying Social Marketing Strategies in Practical Scenarios; Ethical Considerations in Marketing for Social Enterprises; Emerging Trends in Marketing for Social Impacts.

Module 5: Financial and Impact Aspects of Social Enterprises

Scaling and Launching Social Enterprises; Financing Options for Social Enterprises; Impact Investing and Social Venture Capital; Measuring Social Impact-Tools, Assessment, Reporting, and Communication; Case Studies of Successful Social Enterprises.

References

1. Lee, N. R., Kotler, P., & Colehour, J. (2023). *Social marketing: Behavior change for good (7th ed.).* Sage Publications.
2. George, G. *et al.* (eds) (2019) *Handbook of inclusive innovation : the role of organizations, markets and communities in social innovation*. Northampton, MA: Edward Elgar Pub.
3. Basil, D. Z., Diaz-Meneses, G., & Basil, M. D. (Eds.). (2019). *Social marketing in action: Cases from around the world.* Springer Nature.
4. Donovan, R., & Henley, N. (2010). *Principles and Practice of Social Marketing.* Cambridge University Press.
5. Kickul, J., & Lyons, T. S. (2012). *Understanding Social Entrepreneurship: The Relentless Pursuit of Mission in an Ever-Changing World.* Routledge.

15.2.3 Organisational Behavior and Human Resource Management (OB & HR)

STRATEGIC HUMAN RESOURCE MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B46	Strategic Human Resource Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B46	Strategic Human Resource Management	3	EC	40	60

Objective:

1. The purpose of the course is to enable students to develop and appreciate the perspective that human resource has a strategic significance in an organisation, and the initiatives needed to achieve the 'fit' with the concerns of the business on a continued basis.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
	After completion of the course, the student will be able to:	
CO1	Demonstrate understanding of the terms, theories, perspectives and techniques related to strategic human resource management (SHRM).	2
CO2	Apply the concepts, theories, and techniques of SHRM in HR decision making to ensure the linkage between business strategy and HR functions.	3
CO3	Assess the business strategy, and HR resources so as to analyse the HR-business strategy fit in organizations.	4
CO4	Evaluate the HR strategies and policies in the light of strategic fit using suitable SHRM tools or frameworks.	5
CO5	Develop a broad framework for ensuring a strategic role for HR in organizations.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	-	3
CO2	3	3	1	-	3
CO3	3	3	1	-	3
CO4	3	3	1	-	3
CO5	3	3	1	-	3
CO6	3	3	1	-	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I

Strategic HRM Concept & Evolution; Theoretical Perspectives of SHRM: Investment perspective of HRM; Strategy & Strategic Management; Process of Strategic management; Strategic positioning of the firm; Strategic Fit; RBV in SHRM; The strategic role of HR. Best practice vs. Best fit approach.

Module II

The Balanced Business Scorecard; HR Scorecard; Organisational Wealth from HR perspective: Intellectual Capital, Human Capital, Social Capital and Organisational Capital. HRM models: Harvard model, Guest model, Warwick model, Fombrun model,Michigan model, the performance, commitment and involvement management models, High-Performance Working Model, High-Commitment Management Model, High-Involvement Management Model, Strategic business partner model,

Module III

Framework of HR strategy: Nature, purpose and types of HR strategies; developing, setting out, implementing and evaluating HR strategies. Human Resource Planning: Objectives of Human resource planning, Types of planning: Aggregate planning, Succession Planning; Design of work systems; high performance work system, components of HPWS.

Module IV

HR strategies: Human Capital Management, HCM and business; Organisational Development, OD and business; Organisational learning; Knowledge Management, Strategic KM issues, KM and business; Employee Resourcing, Employee Value Proposition and strategic resourcing plans; Talent Management, process of TM; Strategic Human Resource Development (SHRD), Elements of HRD; Reward strategy,

Module V

Implementing Strategic Change: Employee engagement, factors affecting and enhancing employee engagement, corporate social responsibility, rationale for CSR, strategic role of HR in CSR. HR practices that improve business performance, Psychological Contract

References

1. Mello, Jeffrey (2007) Strategic Human Resource Management, 2nd edn. Thomson Learning, India.
2. Armstrong, Michael (2011) Armstrong's Handbook of Strategic Human Resource Management, 5th edn. Kogan page, New Delhi.

3. Das, Pulak (2011) Strategic Human Resource Management- A Resource Driven Perspective, Cengage Learning, India Pvt. Ltd., New Delhi.
4. Sharma, Anuradha and Khandekar, Aradhana (2006) Strategic Human Resource Management- An Indian Perspective, Response Books, New Delhi.
5. Dessler, Gary and Varkkey, Biju (2011), Fundamentals of Human Resource Management- Content, Competencies, and Applications, Pearson Prentice Hall, Delhi.

MANAGEMENT OF INDUSTRIAL RELATIONS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B47	Management of Industrial Relations	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B47	Management of Industrial Relations	3	EC	40	60

Objectives:

1. To provide conceptual framework for employee relations at micro and macro levels.
2. To provide theoretical knowledge in relevant aspects of Industrial Law

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
	After completion of the course, the student will be able to:	
CO1	Remember fundamental concepts related to industrial relations like its meaning, scope, and relevance.	2
CO2	Understand complex ideas in industrial relations and its applications in business organisations	2
CO3	Apply the concepts in management of industrial relations to maintain cordial relations between management and employees	3
CO4	Analyze various industrial relations-related issues affecting day today business faced by the organization and their potential impact on the organisation	4
CO5	Evaluate the impact of organisational practices on industrial relations of the organisation.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	-	3
CO2	3	3	1	-	3
CO3	3	3	1	-	3
CO4	3	3	1	-	3
CO5	3	3	1	-	3
CO6	3	3	1	-	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I:

Industrial Relations Perspectives: Conceptual framework and approaches to industrial relations; Influence of the emerging socio-economic scenario on industrial relations; Roles of employer/management, trade union and government in industrial relations; IR at the shop floor, Standing Orders, salient features of Industrial Employment (Standing Orders) Act, 1946. Grievances- Concept, Causes of Grievances, Principles of Grievance Handling, Procedure of Settlement.

Module II:

Trade Union and the employee: Structure, characteristics and functions of trade unions; Trade Union Security; Theories and problems of trade unions; Recognition of trade unions as collective bargaining agents; Essentials of Trade Unions Act, 1926; Collective bargaining; The Collective Bargaining Process Advantages and Disadvantages of Collective Bargaining.

Module III:

Industrial Unrests: Industrial Unrests - causes and cures of industrial disputes; Introduction to Industrial Disputes Act, 1947, Salient features of Industrial Disputes Act, 1947, Types and Classifications of Industrial Disputes, Dispute Resolution Mechanisms.

Module IV:

Direct Actions by the Union; Strike as a tool of gaining concessions from the management; Practical insights into handling a Strike by Workmen; Retrenchment of Workmen, Difference between retrenchment and lay-off; Lockout

Module V:

Industrial Harmony; Basic Principles of creating an organisational culture; Employee Engagement Initiative e. Creating trust in the minds of workmen for actions by

Management; Workers' Participation in Industry; Regular engagement of the Trade Union in all major decisions; Regular consultations with the Union on issues affecting workmen

Employee Empowerment: Industrial Democracy, Workers' Participation in Management: Industrial Peace and International Labour Organisation; IR Policy, Recommendations of II National Commission on Labour; IR and Technological Change. Emerging concepts and Trends.

References

1. Mamoria, C. B., & Mamoria, S. (2016). Dynamics of Industrial Relations in India. Himalaya Publishing House.
2. Sinha, P. R. N., Indu Bala Sinha, et al. (2017). Industrial Relations, Trade Unions and Labour Legislations (3rd ed.). Publisher.
3. Gupta, C. B., Kapoor, N. D., & Tripathi, P. C. (2020). Industrial Relations and Labour Laws. Sultan Chand & Sons.
4. Janardhan, V. (2016). Industrial Relations in India: Towards a New Socio-Political Approach. Orient BlackSwan.

LEARNING AND DEVELOPMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B48	Learning and Development	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B48	Learning and Development	3	EC	40	60

Objectives:

1. To bridge the gap between theoretical leadership concepts and real-world practices, equipping students with the necessary skills for success in Industry 5.0.
2. To enable students to explore various leadership theories and analyse relevant case studies, enhancing their understanding and critical thinking.
3. To develop practical leadership skills that students can apply to their personal and professional lives.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand core concepts, differentiate leadership from management, and identify global leadership attributes and essential skills.	2
CO2	Apply contemporary leadership approaches to organizational scenarios, emphasizing strategy, crisis management, and team dynamics.	3
CO3	Analyze and compare various leadership theories and styles, understanding their impact on organizational behavior.	4
CO4	Evaluate the role of digital leadership, ethics, and global challenges in shaping contemporary leadership practices.	5
CO5	Develop personal leadership skills and create a leadership plan through self-assessment and practical application.	6

CO – PSO Mapping Table:

CO/PSO		PSO1	PSO2	PSO3	PSO4	PSO5
CO1		1	2	2	2	1
CO2		3	3	3	2	2
CO3		3	3	3	3	2
CO4		3	2	3	3	3
CO5		3	3	3	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Basic understanding of the OB and HR concept

Syllabus:

Module 1: Understanding Fundamentals of Leadership

Introduction to Leadership- Definition and Evolution of the Concept. Indicators of Leadership Effectiveness; Leadership and Management**;** Global Leadership Attributes**;** Historical Leaders**;** Leadership Skills - Administrative, Interpersonal, & Conceptual**.** Leadership Attribute and Behavior, Followers Motivation, Satisfaction and Engagement. *(Case administration to analyse the characteristics of emerging leaders is recommended as part of course delivery)*

Module 2: Theoretical Approaches Leadership

Foundational leadership theories; Types of leadership; Compare and contrast authoritarian, democratic, and laissez-faire leadership styles, Personality and trait theories; Behavioural and style theories; Situational leadership; Destructive

Leadership; Leadership Styles: Identification and discussion of various leadership styles. (*Administration of self-assessing leadership questionnaires recommended as part of course delivery)*

Module 3: Modern Approaches to Leadership

Transactional, Transformational, Servant, Charismatic, Authentic, and Post-heroic Leadership. The relationship between leadership and strategy; Entrepreneurial leadership; Leadership in teams and decision groups; Leadership in Crisis and Change Management; Project leadership. *(Activities or assignments involving Business Leadership Analysis recommended as part of course delivery)*

Module 4: Digital Leadership and Contemporary Trends

Emerging Trends in Leadership; Global Challenges and Leadership; Design Thinking; Leadership Style and Gender; Leadership- Diversity, and Inclusion; Cultural Influences on Leadership; Safety and Workplace Climate; Ethics in Leadership; Digital Leadership & Data-Influenced Decisions; Use of Technology in Leadership. *(Projects requiring students analysing a current leadership issue in world scenario, either business-related or a significant social matter, can be administered*

Module 5: Developing leadership

Evaluating Leadership skills, Tools of Leadership Assessments; Identifying key drivers and barriers to improve leadership effectiveness. Activities that impact leadership effectiveness- Understanding various skills (Interpersonal, administrative, conceptual and Emotional Intelligence) and their use in practice. Developing skills for leadership effectiveness- developing decision -making skills using leadership scenarios- Observational exercises in corporate contexts- Reflections and feedback- establishing meaningful and measurable objectives for behavioural change to enhance leadership effectiveness- Personal Leadership Plan Development *(Assessment and activity based hands-on training module for leadership development of participating students and also for learning how to implement leadership development in organisations)*

References

1. Northouse, P. G. (2021). *Introduction to leadership: concepts and practice (5th edition)*. Sage.
2. Day, D. V. (2014). *The Oxford Handbook of Leadership and Organizations.* Oxford University Press.
3. Yukl, G. A. (2019) *Leadership in Organizations (Global Edition, 9th edition).* Pearson.
4. Curphy G. C., Hughes R. L., and Ginnett R. C. (2022) *Leadership: Enhancing the Lessons of Experience (10th edition).* MacGraw-Hill.
5. Bolea, A., & Atwater, L. (2021). *Becoming a Leader: Nine Elements of Leadership Mastery.* Routledge.

GLOBAL HUMAN RESOURCE MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B49	Global Human Resource Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B49	Global Human Resource Management	3	EC	40	60

Objective:

1. This paper helps the students to learn how environmental and institutional constraints, including culture, impact human resource planning and other human resource functions of international firms.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
	After completion of the course, the student will be able to:	
CO1	Demonstrate understanding of the basic concepts related to global human resource management in the context of international mergers and acquisitions, technological advancements, employee discipline and cultural convergence.	2
CO2	Apply theories global human resource management strategies to build a future ready, competent and diverse workforce	3
CO3	Analyse and narrow down different issues related to global HR management affecting organization operating at international level.	4
CO4	Evaluate the impact of relevant global human resource management interventions internationalization on strategic HRM and its practices including staffing, compensation management, HR practices for engagement and employee relations	5
CO5	Evaluate the HR strategies and policies in the light of of increasing globalisation of human resources, with particular reference to HRM in multinational corporations.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	-	3
CO2	3	3	1	-	3
CO3	3	3	1	-	3
CO4	3	3	1	-	3
CO5	3	3	1	-	3
CO6	3	3	1	-	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I:

Key perspectives in Global HRM – Factors influencing the need for Global HRM – Domestic Vs. Global HRM, Strategic International HRM, Design and Structure of the Multinational Enterprise**.**

Module II:

International merger & acquisitions and Global HRM – Competitive HR strategies of MNCs – Global HRP – Global staffing International Workforce Planning and Staffing: Manpower planning, International Recruitment, Selection and Repatriation– Global training and development – Global performance management – Global compensation management, benefits, taxes.

Module III:

Technological advancements and Global HRM – Impacts of demographic changes and migration – Offshore sourcing – Managing international assignments including career planning.

Module IV:

Employee discipline in Global HRM – Cross-national cooperation and conflicts – Workplace discrimination, Employment Law, Labor Standards and Ethics : international perspective.

Module V:

Cultural convergence and divergence in Global HRM – Hofstede's cultural dimensions – Grievance handling in Global HRM - Global employee relations - Global HRM challenges and trends – Case studies

References

1. Charles M. Vance and Yongsun Paik (2009), Managing a Global Workforce, PHI, New Delhi. 2. Biswajeet Pattanayak (2004), Human Resource Management, PHI, New Delhi.
2. Amitabh DeoKodwani and Senthil Kumar, S. (2006), Global Human Resource Management, ICFAI University Press
3. Hugh Scullion and David G. Collings (2011), Global Talent Management, Routledge
4. Peter J. Dowling, Marion Festing, and Sr. Allen D. Engle (2008), International Human Resource Management, Cengage Learning.

REWARD MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B50	Reward Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B50	Reward Management	3	EC	40	60

Objectives:

1. To understand the various components of compensation and rewards
2. To understand the micro and macro factors influencing compensation management
3. To be familiarized with job based and person performance based compensation
4. To design and implement various compensation strategies.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the basic concepts of total rewards, reward structures, linkage of rewards to individual and organization performance.	2
CO2	Use compensation data and apply reward strategies to address organizational challenges	3
CO3	Evaluate various reward packages and analyze the implications on employee motivation and organization performance	5
CO4	Design innovative reward strategies that align with organizational goals and industry trends for different types of organizations.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	3	2	3	-
CO3	3	3	2	3	1
CO4	3	3	2	3	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Must have completed the core course HRM

Syllabus:

Module I: Introduction

Reward- Concept and Importance- Wage and Salary- Components of Reward – Total Reward Concept- Theories Of Wage Determination- Theories of Motivation and Compensation-Factors Influencing Compensation / Rewards

Module II: Legal Framework

Macro and Microeconomics of Labour Market- Legal Machinery for Wages/ Compensation- National Laws – Code of Wages 2019- Provident Fund Act 1952, Minimum Wages Act 1948, Payment Of Wages Act 1948, Payment Of Bonus Act, 1965; International Legislations – Role Of ILO.

Module III: Managing Rewards

Job based compensation- Job Analysis- Job Design-Job Evaluation- Establishing Equity- Internal & External - Pay structures, Broadbanding- Salary surveys and Benchmarking

Module IV: Reward linkages to Performance

Strategic Compensation Plan for Talent Engagement- Performance Linked Compensation- Incentive Plans- Team Based Compensation- Compensation for Salespeople- Executive Compensation – CEO Compensation Plans- Expatriate Compensation Packages; Employee Benefits – Cafeteria Plans- Insurance Benefits- Medical Benefits- Income Continuity Plans.

Module V: Emerging Trends and Practices of Reward Management

Current and Future Trends in Total Rewards Management- ESOP- International Trends in Reward Management- Strategic Importance of Compensation Management- Measuring Impact- Compensation & Reward Practices in Different Sectors.

References

1. Milkovich, G Newman, J., Venkataratnam, C S., (2017) Compensation: Special Indian Edition, McGraw Hill Education
2. Irwin. Richard I. Henderson (2009). Compensation Management in a Knowledge-Based World (10th Edition) Pearson Education.
3. Bhattacharya, D.K.(2014). Compensation Management. Oxford University Press.
4. Martocchio, J. J. (2011). Strategic compensation: A human resource management approach. Pearson Education India.
5. Wilson, T. B. (2003). Innovative reward systems for the changing workplace. McGraw-Hill.

HUMAN RESOURCE PLANNING AND DEVELOPMENT

Semester	Course Code	Course Title	Credit	CC/EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B51	Human Resource Planning and Development	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B51	Human Resource Planning and Development	3	EC	40	60

Objectives:

1. To enable the students to have a clear view of the process of human resource planning like assessing the current human resources, estimating the supplies and demand for labour and matching demand with current supplies of labour.
2. To help the students to apply the knowledge of human resource planning and development in real business scenarios.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand complex ideas in human resource planning and development to make them ready for application in real life business scenarios.	2
CO2	Apply skills in human resource planning and development to build a future ready, competent and diverse workforce	3
CO3	Analyze and identify various human resource planning and development related issues affecting day to day business faced by the organization and solve them.	4
CO4	Analyze the impact of relevant human resource planning and development that facilitate futuristic business strategies.	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	3	3	-
CO2	2	3	2	2	-
CO3	3	3	1	3	-
CO4	1	-	-	-	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Basic understanding of Human Resource Management

Syllabus:

Module I: **Introduction to HRP**

Concepts and process of HRP – Concept, history and features of HRD - HRD mechanisms or subsystems – Micro and Macro level scenario of HRP.

Module II: **Techniques of HRP**

Micro and Macro levels of HRD - Methods and Techniques of manpower demand forecasting - Methods and Techniques of manpower supply forecasting – HRP at corporate level, national level and international level, Competency mapping

Module III: **HRP and career development**

Job analysis and job description - Recruitment, Selection and Placement - Performance appraisal and potential appraisal - Transfer and Promotion - Training and retraining – Career planning and development - Succession planning

Module IV: **Strategic HRP**

HRP as a Strategic Planning -– HR score card- Retention – Redeployment and Exit strategies – Impact of Technology on HRP.

Module V: **Technology in HRP**

Human Resource Information System in Human Resource Planning and Development - Human Resource Audit - Human Resource Accounting - Current trends and issues in HRP – Case studies.

References

1. Biswajeet Pattanayak (2004), Human Resource Management, PHI.
2. Rao, V.S.P. (2000), Human Resource Management, Excel Books.
3. Bhattacharya, Human Resource Planning, Excel Books, New Delhi.
4. William J. Rothwell and H. C. Kazanas (2002), Planning and Managing Human Resources, Human Resource Development Pr.
5. Paul Turner(2002), HR Forecasting and Planning, CIPD Publishing

ORGANISATIONAL CHANGE AND DEVELOPMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B52	Organisational Change and Development	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B52	Organisational Change and Development	3	EC	40	60

Objectives:

1. To prepare students as organisational change facilitators using the knowledge and techniques of behavioural science.
2. To estimate the impact of change technique to address business problems, relating to change and development

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the complex ideas in organizational change and development to make them ready for application in real life business scenarios.	2
CO2	Apply skills in different organizational change and development interventions to build a future ready, competent and diverse workforce	3
CO3	Analyze and identify various organizational change and development related issues affecting day to day business faced by the organization and solve them.	4
CO4	Evaluate the impact of organizational change and development interventions that facilitate futuristic business strategies.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	-	-	-	-
CO2	3	3	3	3	-
CO3	3	3	3	3	-
CO4	3	3	2	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Basic understanding of Organizational Behaviour

Syllabus:

Module I: **Introduction to Organizational Change and OD**

Organisation Change: An overview, Types of changes-Transactional change and Transformational change, Theory E and O, Creating readiness for change-overcoming resistance to change, Introduction to OD, OD process, Kotter's 8 step model.

Module II: **Diagnostic methods**

Approaches to Problem Diagnosis-Diagnosing organizations, open systems model, Force field analysis, Weisbord six box model, Congruence model, Grid OD, Tichy's TPC framework, Stream analysis, Kilmann Model, Mckinsey 7s framework, Extended 7S framework, Burke- Litwin model, Appreciative inquiry, Survey feedback.

Module III: **Types of Interventions-1**

OD Interventions-- Characteristics and Skills. of OD practitioner, Human process and techno structural interventions, T groups, process consultation, third party interventions and team building, Grid OD, organization confrontation meeting, large group interventions,TQM, Organization and work design, Job enrichment

Module IV: **Types of Interventions-2**

OD Interventions – HRM and Strategic interventions- Career planning and development interventions, resources planning and strategy, workforce diversity interventions, and employee wellness interventions,Integrated strategic change, trans organizational development and mergers and acquisitions Organizational transformation

Module V: **Evaluation**

Evaluation of OD, Sustaining change after intervention evaluation Ethics of OD Professionals, Future of OD, Recent trends in OD

References

1. Cummings, T G and Worley C G (2018). Organization Development and Change, 11th edition, Cengage Learning
2. French, W L and Bell C H (2017). Organization Development: Behavioural science interventions for organizational improvement, 6th edition, Pearson Education.
3. Kotter, J P (1996). Leading Change. Boston: Harvard Business School Press. ISBN # 0-87584-747-1.
4. Nilakant, V and Ramnarayan S (2006). Change Management: Altering mindsets in aglobal context. Response Books.
5. Dipak Bhattacharyya, ORGANIZATIONAL CHANGE AND DEVELOPMENT, Oxford University Press, New Delhi, 2011
6. Singh, K (2010). Organizational Change and Development, Excel Books, New Delhi

MANAGING INTERPERSONAL AND GROUP PROCESSES

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B53	Managing Interpersonal and Group Processes	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B53	Managing Interpersonal and Group Processes	3	EC	40	60

Objectives:

1. To equip students with the understanding of group and team dynamics, enhancing their ability to analyze and improve group cohesiveness and team performance.
2. To improve students' interpersonal communication skills, focus on listening, feedback, and trust-building to foster effective organizational collaboration.
3. To train students in practical interpersonal and group intervention techniques, preparing them to address and resolve conflicts.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Recall the definitions, elements, and types of groups and teams, including characteristics of high-performing teams and foundational principles of interpersonal communication.	1
CO2	Understand the dynamics of group formation, distinctions between groups and teams, the process of interpersonal communication, and the theoretical perspectives underpinning these concepts.	2
CO3	Apply knowledge of group roles, team dynamics, and interpersonal skills in practical settings such as role-plays, caselets, team activities, and self-assessment exercises.	3
CO4	Analyze group effectiveness, including decision-making, social facilitation, group polarization, and groupthink, as well as the challenges of interpersonal communication in the digital age.	4
CO5	Evaluate strategies for overcoming obstacles to effective teamwork, enhancing interpersonal effectiveness, and selecting appropriate intervention techniques.	5
CO6	Create strategies for developing successful teams, improving interpersonal relationships, and designing interventions using techniques like counseling, transactional analysis, and sensitivity training	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	2	-
CO2	2	1	2	3	1
CO3	3	3	3	3	1
CO4	3	3	2	3	2
CO5	3	3	3	3	2
CO6	3	3	3	3	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites:

Basic understanding of the organizational behavior concepts and communication.

Syllabus:

Module I: Groups Dynamics at Work

Group- Definition, Elements of Group Process; Types of groups; properties of groups; Group roles and status relationships; Dynamics of group formation; structure

and dynamics of work groups; group cohesiveness. Dynamics of Informal groups; Group effectiveness- Group decision making, Group Influence- Social Facilitation, Social loafing, Deindividuation, Group Polarisation, Group Think; Group synergy, Conformity, Persuasion and prejudice. *(Administration of role plays and Caselets to understand the group dynamics are recommended as part of course delivery)*

Module II: Team Dynamics

Concept of Teams; Distinguishing Team from groups; Types of teams; Characteristics of High Performing Teams; Obstacles to effective Team Work, overcoming obstacles; Team Process Facilitation-Developing Successful Teams; Training in Team skills- Working with teams, running meetings, etc. *(Administration of team activities to understand the team dynamics are recommended as part of course delivery).*

Module III: Interpersonal Communication

Essential elements of Interpersonal communication Process; Theoretical perspectives; Key interpersonal skills; Self-awareness; Listening; reading non-verbal messages; Interpersonal awareness; Interpersonal Trust- Self assessment exercises on Self-awareness, Self-Management, Interpersonal Needs, Emotional intelligence, listening habits and Providing feedback. *(Administration of self-assessing questionnaires and feedback are recommended as part of course delivery)*

Module IV: Training in Interpersonal effectiveness

Improving interpersonal communication-Johari Window- Interpersonal Conflict and training in interpersonal conflict handling strategies and negotiation-Leadership Effectiveness; Training in Leadership styles - Interpersonal communication in digital Age-Challenges *(Administration of self-assessing questionnaires and activity-based training sessions are recommended as part of course delivery)*

Module V: Intervention Techniques

Counselling Techniques, Grid Management, Transactional Analysis, Sensitivity Training, Process Consultancy, Skill development techniques. *(Training sessions and organisational assignments/projects are recommended as part of the course delivery)*

References

1. Myers, D., & Twenge, J. M. (2022). *Social Psychology*. McGraw-Hill Education.
2. Robbins, S. P., & Hunsaker, P. L. (2011). *Training in Interpersonal Skills: Tips for Managing People at Work*. Pearson.
3. Thompson, L. L. (2021). *Making the Team: A Guide for Managers* (6th ed.). Pearson.
4. Chen, M., & Rybak, C. J. (2018). *Group Leadership Skills: Interpersonal Process in Group Counselling and Therapy*. Sage Publications.
5. de Janasz, S., Dowd, K., & Schneider, B. (2014). *Interpersonal Skills in Organisation* (5th ed.). Tata McGraw-Hill Education.

PERFORMANCE MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B54	Performance Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B54	Performance Management	3	EC	40	60

Objectives:

1. To sensitize the students to the multi-faceted nature of Performance Management.
2. To make them understand the issues, complexities and challenges of Performance Management
3. To enable them to relate the Performance Management to rewards/compensation management and behavioural change.

Course Outcomes:

COs and evised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the fundamental concepts related to performance management in the context of measurement of performance and organizational success.	2
CO2	Apply the design principles in a PMS and Talent Management.	3
CO3	Analyze and assess the PMS and its impact on employee motivation and organization performance. .	4
CO4	Design and develop innovative performance management strategies for future business enhancement.	6

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	2	-
CO2	3	3	2	3	-
CO3	3	3	2	3	1
CO4	3	3	2	3	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites: Must have completed the course HRM

Syllabus:

Module I:

Definition, Scope, Features, Principles, Benefits, History and Process of Performance Management (PM) – Performance Appraisal and PM - PM Cycle – Models of Performance Management - Designing PMS- Designing Talent Management system.

Module II:

Methods of Performance Appraisal – traditional and modern methods; Role of Line managers and HR managers in Performance Appraisal; Performance Appraisal interview – Performance feedback and documentation; Potential appraisal ; Errors by raters.

Module III:

Measurement of Performance – Performance dimensions- Performance approaches – Task, Behavior, Results – Performance Metrics - Criteria for Performance Measure - Organisational Performance, Team Performance and Individual Performance - Balanced Scorecard as a PMS tool- Issues in Measuring Performance – Performance Development Review.

Module IV:

PMS Implementation- Preparation, Communication, Training to raters, Pilot testing, Ongoing evaluation and monitoring ; Leadership and PM – Contributions of HRM Practices on PM - Relating Reward and Career Strategies to PM – Organisational Climate and PM – Links Between Strategic Management and PM – Culture Based PM (Course delivery through case studies)

Module V:

Evaluation of an Effective PM - Issues in performance management; Coaching and Counselling skills in Performance management; Virtual PM; Current Issues and Trends in PM. (Course delivery through case studies).

References

1. Rao T V (2015), Performance Management, Sage Response (2e).
2. Herman Aguinis, (2013), Performance Management, Pearson.
3. Varsha Dixit, (2007), Performance Management, Vrinda Publications.
4. Hutchinson, S. (2013). Performance management: Theory and practice. Kogan Page
5. Publishers.
6. Armstrong, M. (2020). Armstrong's Handbook of Strategic Human Resource Management: Improve Business Performance Through Strategic People Management. Kogan Page Publishers.

HR ANALYTICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B55	HR Analytics	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B55	HR Analytics	3	EC	40	60

Objectives:

1. To familiarise students with the application of statistics in HR decision making, enable the students to integrate knowledge of metrics and analytical models and their implications for HRM
2. To enable the students to display an understanding of transformational HR operations in interactions with other strategic business concepts.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the scope and applications of HR analytics in managerial decision making	2
CO2	Apply the skills in HR analytic based on the understanding of the different contents delivered to apply them with illustrations and cases	3
CO3	Analyse the real HR data to explore and establish relationships in the areas of HR decisions.	4
CO4	Evaluate the impact of analytics on HR decisions, and appraise HR decisions and strategies using descriptive and predictive techniques	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	-	3	3	1
CO2	1	-	3	3	-
CO3	1	1	3	3	-
CO4	-	-	-	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Knowledge of Managerial Statistics and Business Research Methodology

Syllabus:

Module I: Quantitative HRM

Influence of decision science on HR: Linking measures to organizational effectiveness, Contemporary HR measurement and approaches. Evolution of HR Analytics; HR Metrics and HR Analytics; Analytical Pyramid- Descriptive and Predictive models; Intuition versus analytical thinking; Ethical issues in Analytics; HRMS/HRIS and data sources; Analytics frameworks like LAMP, HCM: 21 Model.

HR measurement: Traditional vs. contemporary HR measures; Fundamental analytical concepts from statistics and research design; analytical concepts from economics and finance. Analytical Foundation of HR measurement

Module II: Descriptive Analytics- HR Reporting

Recruitment Metrics; Performance and compensation metrics; Learning and developmental metrics. HR's role in value chain. Human Resources Balanced Score Card.- FTE- Utilization Ratio. - Dashboard creation

Module III: Descriptive Analytics- HR Effectiveness Measures

Measures of efficiency, effectiveness and impact in HR processes and optimizing HR decisions. Linking HR measures to business results; choosing the right measures for scorecards; Identifying and using key HR Metrics. Metrics and organisational Ethics

Module IV: Strategic Analytics

Workforce segmentation and search for critical job roles; Statistical driver analysis – association and causation- Data requirements; identifying data needs and gathering data; HR data quality, validity and consistency; Using historical data; Data exploration; Data visualization; Association between variables; Insights from reports; Root cause analysis of HR issues.(Workshop Mode)

Module V: Predictive Analytics

Descriptive and indicative models for Employee retention and turnover; workforce productivity and performance; scenario planning. (Workshop Mode)

References

1 Becker,B E ., Huafelid,M.A. &Ulrich.D(2001).*The HR Scorecard: Linking people, strategy, and performance*. Harvard Business Review Press.

2 Bhattacharyya, D.K. (2017). *Understanding Theories and Applications of HR Analytics.*Sage Publications.

3 Banerjee, P., Pandey, J., & Gupta, M. (2019). Practical applications of HR analytics: A step-by-step guide. SAGE.

4 Valerie, P., &Andreasson R. HR metrics : Bench marking human resources

5 *HR Metrics standards & glossary published by the HR metrics service*. Version 8.0/December 2012

6 *HR metrics service, HR metrics Interpretation guide published by BC HRMA version 3.4* / December 2012.

WORKPLACE DIVERSITY AND INCLUSION

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B56	Workplace Diversity and Inclusion	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B56	Workplace Diversity and Inclusion	3	EC	40	60

Objectives:

1. The issues discussed in this course will help the students in their future roles as employees and as managers in business, government, non-governmental or not-for-profit organizations.
2. This course will help students to recognize and understand the importance of diversity and inclusion and to acquire skills in its effective management.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the fundamental concepts of diversity and inclusion relevant to the workplace	
CO2	Apply the concepts of diversity and inclusion in the operational aspects of organization	
CO3	Analyze the diversity issues and challenges and to establish relationships in the areas of diversity and inclusion at workplace	
CO4	Evaluate the impact of diversity and inclusion at workplace	

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	2	-	-	-
CO2	3	3	3	1	-
CO3	3	3	3	3	-
CO4	3	3	2	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module 1: Introduction and Overview

Understanding diversity and inclusion. Diversity in an international context. Prejudice,

stereotypes, discrimination -Privilege Differences and conflict- Individual benefits of diversity. Diversity - individual outcomes and organizational effectiveness

Module 2: Diversity and Inclusion in organizations

From Diversity to Inclusion: An Inclusion Equation. Inclusive Human Resource Management. Inclusive Organization Development. Inclusive Leadership Practice and Processes. Creating Inclusive Climates in Diverse Organizations. Models of Global Diversity Management

Module 3: Dimensions of Diversity

Diversity across cultures, ethnicity, generational diversity, sex & gender, physical and mental abilities-Neurodiversity- Multiculturalism

Module 4: Building effective work relationships across differences

Workplace inclusion strategies through corporate leadership, diversity training, mentoring, employee resource groups, supplier diversity programmes, corporate social responsibility initiatives- Flexible work programmes, Addressing workplace bullying and discriminations.

Module 5: Challenges in managing diversity and inclusion

Ethical, legal, media and marketing issues and implications in managing diversity - Recent Trends of Diversity-Role of Technology in Handling Workforce Diversity-Workforce Diversity Management for Creativity and Innovation-Business opportunities and diverse customers

References

1 Carol P. Harvey and M. June Allard, Understanding and Managing Diversity: Readings, Cases, and Exercises, most recent Pearson International Edition (Upper Saddle River: Pear-son Education, Inc.)

2 Mor Barak, M.E. (2014). Managing Diversity: Toward a Globally Inclusive Workplace. Thousand Oaks, CA: Sage (Ch. 3).

3 Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). Cultures and organizations: Softwareof the mind (3rd ed.). New York: McGraw-Hill

4 Sanchez-Burks, J. & Lee, F. 2007. Cultural Psychology of Workways. In In S. Kitayama & D. Cohen, (Eds.) Handbook of Cultural Psychology, Guilford Press

5 Kossek, E.E., Lobel, S.A., & Brown, J. (2006). Human resource strategies to manage work-force diversity: Examining ―the business case.‖ In A. M. Konrad, P. Prasad, & J. K. Pringle. Handbook of workplace diversity. Thousand Oaks, CA: Sage.

LEADERSHIP DEVELOPMENT: THEORY AND PRACTICE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B57	Leadership Development: Theory and Practice	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B57	Leadership Development: Theory and Practice	3	EC	40	60

Objectives:

1. To bridge the gap between theoretical leadership concepts and real-world practices, equipping students with the necessary skills for success in Industry 5.0.
2. To enable students to explore various leadership theories and analyse relevant case studies, enhancing their understanding and critical thinking.
3. To develop practical leadership skills that students can apply to their personal and professional lives.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand core concepts, differentiate leadership from management, and identify global leadership attributes and essential skills.	2
CO2	Apply contemporary leadership approaches to organizational scenarios, emphasizing strategy, crisis management, and team dynamics.	3
CO3	Analyze and compare various leadership theories and styles, understanding their impact on organizational behavior.	4
CO4	Evaluate the role of digital leadership, ethics, and global challenges in shaping contemporary leadership practices.	5
CO5	Develop personal leadership skills and create a leadership plan through self-assessment and practical application.	6

CO – PSO Mapping Table:

CO/PSO		PSO1	PSO2	PSO3	PSO4	PSO5
CO1		1	2	2	2	1
CO2		3	3	3	2	2
CO3		3	3	3	3	2
CO4		3	2	3	3	3
CO5		3	3	3	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Basic understanding of the OB and HR concept

Syllabus:

Module 1: Understanding Fundamentals of Leadership

Introduction to Leadership- Definition and Evolution of the Concept. Indicators of Leadership Effectiveness; Leadership and Management**;** Global Leadership Attributes**;** Historical Leaders**;** Leadership Skills - Administrative, Interpersonal, & Conceptual**.** Leadership Attribute and Behavior, Followers Motivation, Satisfaction and Engagement. *(Case administration to analyse the characteristics of emerging leaders is recommended as part of course delivery)*

Module 2: Theoretical Approaches Leadership

Foundational leadership theories; Types of leadership; Compare and contrast authoritarian, democratic, and laissez-faire leadership styles, Personality and trait theories; Behavioural and style theories; Situational leadership; Destructive Leadership; Leadership Styles: Identification and discussion of various leadership styles. (*Administration of self-assessing leadership questionnaires recommended as part of course delivery)*

Module 3: Modern Approaches to Leadership

Transactional, Transformational, Servant, Charismatic, Authentic, and Post-heroic Leadership. The relationship between leadership and strategy; Entrepreneurial leadership; Leadership in teams and decision groups; Leadership in Crisis and Change Management; Project leadership. *(Activities or assignments involving Business Leadership Analysis recommended as part of course delivery)*

Module 4: Digital Leadership and Contemporary Trends

Emerging Trends in Leadership; Global Challenges and Leadership; Design Thinking; Leadership Style and Gender; Leadership- Diversity, and Inclusion; Cultural Influences on Leadership; Safety and Workplace Climate; Ethics in Leadership; Digital Leadership & Data-Influenced Decisions; Use of Technology in Leadership. *(Projects requiring students analysing a current leadership issue in world scenario, either business-related or a significant social matter, can be administered*

Module 5: Developing leadership

Evaluating Leadership skills, Tools of Leadership Assessments; Identifying key drivers and barriers to improve leadership effectiveness. Activities that impact leadership effectiveness- Understanding various skills (Interpersonal, administrative, conceptual and Emotional Intelligence) and their use in practice. Developing skills for leadership effectiveness- developing decision -making skills using leadership

scenarios- Observational exercises in corporate contexts- Reflections and feedback- establishing meaningful and measurable objectives for behavioural change to enhance leadership effectiveness- Personal Leadership Plan Development *(Assessment and activity based hands-on training module for leadership development of participating students and also for learning how to implement leadership development in organisations)*

References

1. Northouse, P. G. (2021). *Introduction to leadership: concepts and practice (5th edition)*. Sage.
2. Day, D. V. (2014). *The Oxford Handbook of Leadership and Organizations.* Oxford University Press.
3. Yukl, G. A. (2019) *Leadership in Organizations (Global Edition, 9th edition).* Pearson.
4. Curphy G. C., Hughes R. L., and Ginnett R. C. (2022) *Leadership: Enhancing the Lessons of Experience (10th edition).* MacGraw-Hill.
5. Bolea, A., & Atwater, L. (2021). *Becoming a Leader: Nine Elements of Leadership Mastery.* Routledge.

NEGOTIATION SKILLS FOR MANAGERS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B58	Negotiation Skills for Managers	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B58	Negotiation Skills for Managers	3	EC	40	60

Objectives

1. To develop a thorough comprehension of negotiation processes within various business contexts.
2. The course will provide students the essential skills to effectively manage the negotiation process and develop competency to create and formulate a negotiation strategy.
3. To enhance skills in negotiation communication and ethical considerations crucial for attaining mutually beneficial outcomes.

Course Outcomes

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	To enable students understand the negotiation terms and types of negotiation approaches.	2
CO2	Develop ethical awareness and considerations in negotiation, understanding dilemmas, and applying ethical principles to negotiation scenarios.	3
CO3	To analyze negotiation situations, bargaining zone and the motivations and interests of the parties in a negotiation.	4
CO4	Develop competencies to self evaluate ones negotiation styles and design a strategic plan for effective negotiations	6

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	2	3	-
CO2	3	2	3	3	-
CO3	3	3	2	3	-
CO4	2	3	1	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites: Nil

Syllabus:

Module 1: Overview of Negotiation

Negotiation in Business; Relevance and importance; Types of Bargaining - Distributive Bargaining: Claiming Value- Integrative Negotiation: Creating Value- How to Close a Negotiation

Module 11: Preparing the Negotiations

Understanding the subject matter - Setting Goals: identifying goals, options and criteria of success - Identifying BATNA, ZOPA, WATNA ; Assessing the other side- red-teaming - Learning about catalysts and barriers of successful collaboration ; Designing a negotiation plan ; Creating a negotiation team; Creating negotiation strategy; Checklist before negotiation.

Module 111: Communication in Negotiation

Communication – Active listening – Use of open ended Questions- Understanding signs and body language – Micro skills of framing and reframing questions; Managing emotion during negotiation ; Managing Difficult conversations -

Understanding dilemmas in Negotiations; Power in Negotiations- Ethics & Negotiation- Multiparty Negotiations (Dealing with many parties)

Module 1V: Negotiation Process & Tactics

Setting agenda- Understanding Negotiation styles- Accommodative, Competing, Collaborative, Compromising, Avoiding ; Assertion and persuasion techniques; International styles of negotiation and Cross cultural considerations; Dealing with negotiation tactics; Managing deadlocks and Impasse in negotiations

Module V: Closure of Negotiation

Reaching agreements and deals- Documentation and review of agreements- Evaluation of negotiation process and learnings from evaluation outcomes; Continuous improvement of Negotiation- Pillars of negotiation wisdom.

References

1. Cohen, S. P. (2002). Negotiating skills for managers. McGraw-Hill Education.
2. Fisher, R., Ury, W. L., & Patton, B. (2011). Getting to yes: Negotiating agreement without giving in. Penguin.
3. Dawson, R. (2021). Secrets of power negotiating. Red Wheel/Weiser.
4. Diamond, S. (2012). Getting more: How you can negotiate to succeed in work and life. Currency.
5. Malhotra, D., & Bazerman, M. (2007). Negotiation genius: How to overcome obstacles and achieve brilliant results at the bargaining table and beyond. Bantam.

15.2.4 Operations Management

PROJECT MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B61	Project Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B61	Project Management	3	EC	40	60

Objectives:

1. Identify the elements of the Project management life cycle
2. Understand Project management process.
3. Use basic tools and techniques to plan, organize, and manage a project.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes	Course Outcomes	Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Discuss the fundamental concepts and principles of project management across various sectors	1
CO 2	Apply project management techniques to select, plan, execute, and control projects effectively, considering project-specific requirements.	3
CO 3	Develop proficiency in feasibility analysis, risk assessment, estimation, scheduling, and progress monitoring, enabling informed decision-making to maximize project profitability and minimize risks throughout the project lifecycle.	4
CO 4	Develop working competencies in tools such as Project management Software that are used to manage projects for better and more consistent project completion.	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	2	3	-	2	-
CO3	2	3	-	3	-
CO4	-	2	2	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite : Familiarity with basic concepts in financial management and management science

Syllabus:

Module 1: Introduction to Project Management

Meaning and importance of Project, Concepts, and attributes of Project, Types of projects, projects vs day to day operations, Steps in defining the project, Measuring project success, Choosing the appropriate Project Management Structure: Organizational considerations and project considerations, Project life cycle, Project stakeholders, Project Management Office, Potential Benefits and Challenges of Project Management,

Module 2: Project Initiation

Generation of Project ideas – Procedure for Idea Generation, screening of ideas using non-financial models such as Project Rating Index, decision tree and Analytical Hierarchical Processing (AHP), Project feasibility study, components of project feasibility report, Financial Appraisal of a project - Project Cost, Project, Means of Finance, Cost of Capital, Projected Cash Flow Statement, Measuring Project Profitability – Payback Period, Accounting Rate of Return, NPV, Internal Rate of Return and BCR Method, Use of Special Purpose Vehicles (SPVs) in projects.

Module 3: Project Planning

Project scope, project charter, project plan, Work Breakdown Structure, Responsibility matrix, Estimating time, resources and cost, Estimation approaches, issues in estimation, Preparing the project budget, project schedule, Network Diagrams, Critical Path Method, PERT method, Critical chain approach, Precedence diagramming, Crashing of Project Network, resource management in projects, resource-constrained projects, resource levelling, reducing project duration, project fast tracking, Project Risk Management, Risk management framework, identifying important Risk items, risk mitigation strategies

Module 4: Project execution, monitoring, and closure

Measuring project progress, The project control process, Variance analysis, Earned value Method, Change Management, Building high performance teams, Conflict and Negotiation, Project Communication, Project Quality Management, Performance Measurement, project closure, project auditing, Abandonment Analysis

Module 5: Project Management Methodologies

Comparison of methodologies - Waterfall, Agile, Scrum, Lean, Kanban; Agile Principles - Philosophy - Agile Manifesto – Values, Scrum Roles, Scrum Artifacts, Scrum Ceremonies, Implementing Scrum and Agile methods- Tools, Challenges, Pitfalls, Strategies. Practice with project management software- exercises and case studies

References

1. Jack R. Meredith, Scott M. Shafer, Samuel J. Mantel Jr. *Project Management: A Managerial Approach*. Wiley Publications
2. Clegg, S. R., Skyttermoen, T., Vaagaasar, A. L. *Project Management*. Sage Publications.
3. Pinto, J. K., *Project Management.* Pearson Education.
4. Chandra, P. *Projects, Planning, Analysis, Selection, Financing, Implementation and Review.* Tata McGraw Hill.
5. Gido, J., Clements, J., Baker, R. *Mind Tap for Successful Project Management. Cengage Learning.*.
6. Sutherland, J. *Scrum: The Art of Doing Twice the Work in Half the Time.* Crown Business.

CUSTOMER RELATIONSHIP MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B37	Customer Relationship Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B37	Customer Relationship Management	3	EC	40	60

Objectives:

1. Gain in-depth understanding of the principles, strategies, and technologies involved in managing customer relationships effectively.
2. Empower students with the tools and techniques needed to build strong, profitable, and sustainable relationships with customers.
3. Explore various aspects of CRM, including customer acquisition, retention, satisfaction, and loyalty, and learn how to leverage CRM tools and techniques to enhance business performance and competitiveness.

Course Outcomes:

COs and Bloom's Taxonomy Level

Course Outcomes (COs)		Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Gain a comprehensive understanding of CRM concepts and role of IT in CRM	2
CO2	Learn to apply CRM strategy for effective customer acquisition, retention, and loyalty programmes.	3
CO3	Analyse customer profiling, customer journey mapping, clickstream analysis, and profitability data to segment customers effectively and to learn customer behaviour and preferences	4
CO4	Evaluate the effectiveness of CRM strategies, including customer acquisition, retention, and loyalty programmes, in achieving organizational objectives.	5

CO – PSO Mapping:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	-	-	-	-
CO2	3	3	-	3	-
CO3	3	3	-	3	-
CO4	3	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Introduction to CRM

Emergence of CRM; Components of CRM; Customer ladder; Relationship strategy; Buyer- Seller relationship framework; Buyer- Seller Interaction; Customer lifecycle management; Relationship marketing; Cross- selling and upselling.

Module II: CRM strategy

CRM strategy development process; Customer Defections; Customer acquisition and segmentation strategy; Customer retention strategy; Customer life time value; Customer loyalty programmes; Customer Churn and Attrition Management Strategy.

Module III: Role of IT in CRM

Different levels of e- CRM; Sales force automation- sales activity management, contact and lead management, knowledge management, SFA and mobile CRM; CRM in e-business- CRM in B2B, Supplier and partner relationship management.

Module IV: Analytical CRM

Customer journey mapping OLAP; Clickstream analysis; Personalisation and collaborative filtering; Churn management; Customer profiling and profitability analysis; Data protection and privacy codes of practice; Predictive Analytics for Demand Forecasting and Inventory Management.

Module V: Implementing a Technology based CRM

Overview of CRM software and platforms; Planning CRM programme; Choosing the right CRM solution/tools- Need assessment, Vendor selection, CRM score card; CRM implementation; Establishing a CRM performance monitoring system-standards, metrics and key performance indicators. CRM budget and CRM return on investment.

References

1. Specchia, A. (2022). Customer Relationship Management (CRM) for Medium and Small Enterprises: How to Find the Right Solution for Effectively Connecting with Your Customers (1st ed.). Productivity Press.
2. CRM Handbook: A Business Guide to Customer Relationship Management, Jill Dyche, Addison- Wesley 2002

3. Peelen E. D., Customer relationship management, Pearson Education 2010.
4. Adrian Payne, Hand Book of CRM- Achieving Excellence Through Customer Management, Butterworth Hienennan,
5. Francis Buttle, Customer Relationship Management Concepts and Technologies, Butterworth Hienennan
6. Paul Greenberg fourth edition, CRM at the Speed of Light, Tata McGraw Hill.

SUPPLY CHAIN MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B62	Supply Chain Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B62	Supply Chain Management	3	EC	40	60

Objectives:

1. To introduce to the students the principal concepts of SCM & Logistics
2. To equip students to manage efficient and effective supply chains in gaining and maintaining competitive advantage in the marketplace.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Develop a sound understanding of the basic concepts and terms related to Production and Operations, Inventory, Warehousing, Transportation, Customer service and Digital transformation in Supply chain.	2
CO 2	Analyze the various business processes for the effective management of a supply chain	4
CO 3	Evaluate the uncertainties, disruptions and opportunities in the business environment that influence Supply chain performance	5
CO 4	Recommend or make decisions concerning supply chain designs and operations	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	-	-	3
CO2	3	2	-	1	2
CO3	3	2	-	2	3
CO4	3	3	-	3	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Basic knowledge of Operations Management

Syllabus:

Module I:

Introduction to Logistics and Supply Chain - concept, evolution and development, difference – role, scope, functions, and importance – Value Chain Concepts - Porter's Value Chain- The new manufacturing and distribution practices in the light of globalized digital economy – Integrated logistics management – Supply Chain Management - Local and International Supply Chains-Benefits and issues – Types of supply chains and examples- Flows in SC- Decision Phases: Strategic, tactical, and operational decisions in the supply chain. SCM building Blocks, Supply Chain Drivers and Obstacles, International Logistics and Supply Chain Management – The Total Cost Concept and Logistics and SCM Trade-Offs – SC Profitability, Global SCM – Demand Management in SC- Green Supply Chain Management: Concepts and Techniques – Cold Supply Chain Management: Concepts, Importance, Applications.

Module II:

Key supply chain business processes (i.e., planning, sourcing, producing, distributing paying), Managing material flow and distribution- Different views – PUSH and PULL, Cycle views - Distribution and planning Strategy-Development Strategy-Supply Chain Synchronization - Warehousing and Operations Management – Transportation Management, Inventory Management – recent developments in the above areas- Delayed Differentiation - Cross docking – Drop shipping; Packaging and its importance - SCM and Theory of Constraints-Uncertainty in SCM - Management of Uncertainty in SCM- Supply chain Risk-Supply chain vulnerabilities, Risk mitigation and resilience.- Quick Response Logistics

Module III:

Purchasing and Supplier Management, Procurement – Strategies - Sourcing and supplies management, outsourcing, postponement decisions, and strategies - Global Sourcing, e- sourcing and procurement- VMI- Vendor identification, selection, evaluation, development, Supplier Relationship Management, Supplier Quality

Management, Supply Chain Performance, SC Excellence- Benchmarking -Supply Chain Coordination, collaboration and Integration - Impact of Variability in Supply Chains- Supply Chain disruption- Bull Whip effect, components, measures, and design issues - Role of IT- Logistics and Supply Chain Information systems, E-Business- Concepts and Applications of RFID, GIS, GPS - E-Commerce- ERP, SFA- Safety and Security in CS.

Module IV:

Forecasting: Techniques and systems design, Customer Service Management and measurements, CRM, Manufacturing Logistics, Pricing Strategies, Negotiation, SCM relationships- 3PL, 4PL and the emergence of 5 PL, Strategic Partnerships, Co-makerships –SC partnerships - SCM Network design and Facilities development, SCM Planning and Development Strategies- Designing supply chain Network – Design Decision in supply chain network, Factors influencing network design. Framework for Network design decisions, Designing Global Network – Offshoring decisions- Network Synchronisation- total cost considerations– Simulation and Optimization – SC modelling - SCM models, SCOR model – Retail Supply Chains- Importance of pricing strategy in SCM and SC Costing - Activity Based Costing – Reverse Logistics and reverse flows in SCM-importance and Applications.

Module V:

Extended Enterprises – Logistics and SC Information systems- SC DSS - Industry 4.0 and SCM: Importance and Applications- Digital Supply Chain Management - Supply Chain 4.0 - Impact of disruptive digital technologies - Impact of Internet – Digital Transformation in SC- IT enabled SCM – E- SCM-Virtual SCM-e-sourcing – e-procurement- Business Intelligence- Digital Business- Lean, agile and Leagile SCM- Blockchain, ERP, IoT, IIoT, AI & Machine learning, Automation -Robotics and RPA - autonomous mobile robots-Immersive technologies, Intelligent SCM, Automated Vehicles, Simulation -SCM software – Applications of Cloud computing, SC Analytics – Sustainable SC, Circular Supply chain - recent developments- Future of SCM – Trends in logistics and supply chain management.

References

1. Christopher, M. (2022). *Logistics and supply chain management*. Pearson Uk.
2. Chopra, S., & Meindl, P. (2020). *Supply chain management. Strategy, planning & operation*, Pearson.
3. Jeremy F. Shapiro. (2008). *Modelling the Supply Chain.* Brooks/Cole.
4. Bowersox, D. J., Closs, D. J., Cooper, M. B., & Bowersox, J. C. (2020). *Supply chain logistics management*. Mcgraw-hill.Donald J Bowersox, David J Closs, Logistical Management (The integrated SupplyChain Process), TMH.
5. Janat Shah. (2016). Supply *Chain Management*, Pearson Publications.

PURCHASING AND INVENTORY MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B63	Purchasing and Inventory Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B63	Purchasing and Inventory Management	3	EC	40	60

Objectives:

1. To familiarize the students with decision-making processes for the effective and efficient procurement, storage, and flow of materials in both manufacturing and service organizations.
2. To create a comprehensive understanding of cost reduction strategies in pre-purchase, purchase, and post-purchase systems, as well as modern material planning and delivery systems such as MRP and JIT, along with material handling and logistics systems.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Remember fundamental concepts and terminology associated with Production and Operations, Inventory management, Warehousing, Transportation, Customer service, and Optimization, specifically in relation to Materials.	1
CO2	Establish a robust comprehension of the significant role played by Purchasing and Materials Management in the contemporary business environment. Familiarize oneself with prevailing trends in Purchasing and Materials Management.	2
CO3	Apply theories and practices of Purchasing and Materials Management to address diverse contextual challenges in business situations	3
CO4	Analyze and leverage data, theories, and models to assess and implement suitable solutions for issues pertaining to Purchasing and Materials Management.	4
CO5	Evaluate the repercussions of decisions in Purchasing and Materials Management on other functional areas	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	-	-	-
CO2	1	-	-	-	-
CO3	2	3	-	-	-
CO4	3	3	-	2	-
CO5	3	2	-	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module 1

Purchasing and Inventory Management: Introduction, Meaning, Objectives and Importance of Purchasing management, Procurement, Types of Purchasing, Purchasing cycle, Role of purchase manager in an organisation, Materials/Inventory Management - Objectives of Materials Management Department. Duties and Responsibilities of the Materials Manager, Risks faced by Materials Manager, Relation between Materials Department and other functional department in an organization

Module 2

Stores Department: Warehousing, Importance of Warehousing Types of Warehouse, Warehouse operations, Warehouse Management System (WMS), Classification of Materials – classification and coding systems, BOM, Bin cards, Layout of Stores Department, Specification of Materials, Need for Standardization, Inventory Catalogue, Value Analysis, Value Engineering, Materials Audit, ABC, FSN,VED,XYZ,SDE Analysis, Logistic Management.3PL

Module 3

Purchasing Policies and Practices: Make or Buy decisions (MoB), Lease decision, Importance of Make or Buy Strategy, Factors affecting MoB Policies, Capital Equipment purchase, Evaluating Supplier/Vendor Efficiency, Vendor Rating – weighted score method, Price Negotiation, Ethical and legal aspects of purchasing, E-Tender, Significance of outsourcing, Imports, Paper works associated with purchasing - Purchase order. Goods Received Note, Purchase requisite, RFQ, RFP

Module 4

Inventory Planning and control: Inventory Costs – Holding/Carrying Cost, Ordering/Setup Cost, and Shortage cost, EOQ Model, Inventory Control System – Q system, P system, Factors affecting order quantity, Discount and Incremental Discount, Concept of independent and dependent demand, Estimation of demands,

Safety/Buffer stock, Service Level, Fill Rate, Quality of bough-out materials, Sampling and Inspection Techniques

Module 5

Materials Requirement Planning. MRP I, MRP II, Use of ERP Software in materials management, JIT purchasing, SKU, Material handling - Objectives, Costs, Types, Material handling in Stores, Preservation of Stores Material handling devices, Vendor Managed Inventory (VMI), Disposal of Scrap, Surplus and Obsolete materials, Dropshipping, Cross-docking, Cycle count, KPIs in Inventory Management

References

1. Gokarn P. R: *Essentials of Materials Management*, Somaliya Publications.
2. Menon, K. S., & Kulkarni, S. (2009). *Purchasing and Inventory Management*. Shroff.
3. Gopalakrishnan P. and Sudaresan M.: *Materials Management - An Integrated Approach,* Prentice Hall of India.
4. Patidar, J. (2020). *Purchasing and Material'S Management*. S. Chand Publishing.
5. Bose, D. C. (2006). *Inventory management*. PHI Learning Pvt. Ltd..
6. Wild, T. (2017). *Best practice in inventory management*. Routledge.
7. Toomey, J. W. (2000). *Inventory management: principles, concepts and techniques* (Vol.12). Springer Science & Business Media.

QUALITY MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B64	Quality Management	3	EC	50	50
For School Recognized Colleges, CUSAT						
	24-37A-0B64	Quality Management	3	EC	40	60

Objectives:

1. Provide students with a solid foundation in statistical quality control, enabling them to grasp essential concepts and techniques essential for effective quality management. This objective aims to equip students with the knowledge and skills needed to analyze and improve processes through statistical methodologies.
2. Develop a deep understanding of benchmarking, total quality management (TQM), and ISO - 9000 standards. This objective focuses on cultivating the ability to evaluate, implement, and optimize these contemporary methods and systems in quality management.

3. Foster a multi-disciplinary approach to quality management by integrating principles from various fields. This objective emphasizes the application of quality management concepts across diverse business functions. Students will be encouraged to synthesize their knowledge of statistical quality control, benchmarking, TQM, and ISO - 9000 to address real-world challenges and contribute to the overall enhancement of organizational processes.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Remember fundamental principles and terminology associated with Quality Management in both Manufacturing and Service sectors.	1
CO2	Acquire familiarity with widely accepted definitions of Quality and the methodologies, tools, and techniques employed for assessing, regulating, and enhancing Quality.	2
CO3	Effectively apply knowledge of research outcomes and with the approaches, tools and techniques used for detecting issues, measuring, controlling and improving Quality in Manufacturing and Service settings	3
CO4	Investigate, analyse, and synthesize intricate information, scrutinize issues, and relate the principles and practices of Quality Management to address contextual challenges related to Quality in business scenarios.	4
CO5	Assess the repercussions of decisions in Quality Management on other functional domains	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	-	-	-	-
CO2	2	2	-	-	-
CO3	3	3	1	3	-
CO4	3	3	-	3	-
CO5	3	3	2	3	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module 1

Quality Concepts –Understanding Quality, Objectives of Quality Management, Quality Gurus and Principles, Types of Quality. Dimensions of Product and Service Quality, Cost of Quality, Training for Quality Assurance, Quality Organizations and Programmes – BIS, ISO, Value Engineering, Hallmarking

Module 2

Quality Inspection –Metrology, Calibration, Precision and Accuracy, Quality of bought-out materials, Acceptance Sampling – OC curve, Quality Function Deployment, Check sheet. Product Reliability, Taguchi's Loss Function, Quality of bought-out Service –SERVQUAL Model, Statistical Quality Control – Control charts for variables and attributes, Zero Defects

Module 3

Total Quality Management (TQM) - Strategic Quality Planning, Traditional Quality organisation v/s TQM organisation, Principles of TQM, Organising for TQM - Quality Circles, Key elements of TQM, TQM Implementation, Quality Control Tools, CEDAC, Pareto chart, Histogram, 5S Model, Kaizen, Kanban,

Module 4

Total Preventive Maintenance (TPM) – Reliability, eight pillars of TPM, Failure Mode and Effect Analysis (FMEA), Poke Yoke, Benchmarking for Quality Improvement, Types of Benchmarking Foundations and Principles of Six Sigma, DMAIC methodology, DMADV, Lean Six Sigma, Implementing Six Sigma, Six Sigma Training Programmes

Module 5

Quality Standards – ISO Certifications, ISO 9000:2015, ISO 14000, ISO 45000, Auditing and Certification Process, Types of Audit, Typical Audit Activities, Quality Awards – Malcolm Baldrige Quality Award, Deming Prize, Balanced Scorecard.

References

1. James R. Evans and William M. Lindsay, *The Management and Control of Quality*, 9 th Edn. South-Western, New York, 2014
2. Gryna, F. M., Chua, R. C. H., De Feo, J. A., & Juran, J. M. (2007). *Juran's quality planning and analysis: For enterprise quality.*
3. Dennis Lock, *Handbook of Quality Management*, Jaico Publishing House, Mumbai, 1996.

4. Diwan, P. (1996). *Quality in Totality: A Manager's Guide to TQM & ISO 9000*. SS Mubaruk & Bros Pte Limited.
5. Dahlgaard, J. J., Kanji, G. K., & Kristensen, K. (2008*). Fundamentals of total quality management*. Routledge.
6. Charantimath, P. M. (2017). *Total quality management*. Pearson Education India.

INTERNATIONAL LOGISTICS MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B65	**International Logistics Management**	**3**	**EC**	**50**	**50**
For Recognized Colleges, CUSAT						
	24-37A-0B65	**International Logistics Management**	**3**	**EC**	**40**	**60**

Objective:

1. The objective of this course is to impart a general and clear idea of international logistics systems and management.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Ability to recall the basic concepts and terms related to International Trade and Logistics Management. Basics of Export and Import including documentation. Recalling the types of resources used in Sea, Land, and Air transport. Factors influencing Choice of Mode of transport.	1
CO2	Develop a sound understanding of the Characteristics and uses in operation of the important resources used in Logistics such as in different systems for transport of Goods over land, Sea, and Air. The current ways of	2

	operation of the logistics systems, in India and Internationally. Typically understand the cargo movement systems using different modes of transport and the role of storage in it.	
CO3	Effectively apply International Trade and Logistics knowledge and solution approaches, tools and techniques used for planning, directing, and controlling operations in a Logistic system.	3
CO4	Use cognitive skills, technical knowledge to investigate, analyse and synthesize complex information related to practices of International Trade and Logistics in business situations.	4
CO5	Apply technical knowledge and use data, theories, and models to evaluate and implement, appropriate solutions to problems related to Logistics management. Evaluate the impact of the decisions in Logistics management on other functional areas.	5
CO6	Demonstrate and use cognitive, technical, and creative skills to conceive and develop solutions to complex problems related to Logistics Management.	6

CO- PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	2	-
CO2	3	3	2	1	
CO3	3	3	1	1	
CO4	3	3	2	2	1
CO5	3	3	1	1	-
CO6	2	3	1	1	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I :

Introduction to International Trade and importance of Integrated logistics management – concept, evolution, and development; Process of Import and Export, Importance of logistics management in international business, International Logistics: functions and intermediaries. Issues involved in the movement of goods. Logistics information system – positioning information in logistics; logistics information systems design; I.T. in logistics; strategic information linkage. Total cost approach to Logistics. Liabilities of carriers. Marine Insurance for Cargo.

Warehousing, repacking, and other value-added services provided by logistics service providers. 3 PL and 4 PL logistics services. Performance measurement of logistic systems. Introduction to Documentation for Export.

Module II:

The general structure of shipping industry; cargo types; vessels and vessel characteristics; linear operations and tramp operations; chartering of bulk ocean carriers; the ocean linear conference system; freight structure and practices; coordination; role of intermediaries – forwarding and clearing agents; freight brokers; stevedores and shippers agents. Containerisation types of Containers and ICDs. Layout and working of container terminals. Port system and sub systems, port organization and management. Responsibilities of port trusts, Growth and status of Ports in India, Inland water transport. Issues in Sea transport. Regulatory authorities for sea transport and their roles.

Module III:

Introduction to Road transport system, Classification of Vehicles. Road network in India: types of roads, Road transport companies and their operation in Full truckload business and in less than truckload business. Road parcel service business. Fleet management systems. Integrated Logistics provided by Road transport companies. Documents and Permits required in road transport system. Problems in road transport. Regulatory authorities involved with road transport system.

Module IV:

Rail Transport system, Types of railway wagons, rakes, marshalling operations and yards, Railway goods freight structure, Railway Parcel service operations. Railway goods service operations. Procedure for availing railway parcel or goods service and the documentation involved. Operations at a railway goods yard/siding. Operations and control in the railways. Organization of Indian Railways.

Module V:

Introduction to Air transportation, Air transport geography, Types of aircraft, airline, and air cargo operations, Import and export process of cargo by air, Intermediaries in air cargo operations, freight structure, carrier and consignee liabilities. The layout of the Airport: facilities on the Airside and city side for passengers, cargo, and aircraft. Regulatory authorities for air transport and their roles.

Reference Books/Materials

1. James, F. R., Edwin, R. H., & William, C. C. (2011). *The logistics handbook*. Editora: Mc. GrawHill. Hardcover..
2. Wood, D. F., Barone, A., Murphy, P., & Wardlow, D. (2002). *International logistics*. Springer Science & Business Media.
3. Lambert, D. M., & Stock, J. R. (2001). *Strategic logistics management* (Vol. 69). Homewood, IL: Irwin.

4. Brodie, P. (2013). *Dictionary of shipping terms*. Informa Law from Routledge.
5. Bes, J. (1975). *Chartering and Shipping Terms*. Barker & Howard Ltd;
6. Button, K. (2022). *Transport economics*. Edward Elgar Publishing.
7. Kumar, S., & Mehrotra, S. (2010). *Bankruptcy to billions: How the Indian Railways transformed*. OUP Catalogue.

SERVICE OPERATIONS MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B66	Service Operations Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B66	Service Operations Management	3	EC	40	60

Objectives:

1. To expose students to the managerial issues and challenges specific to management of operations in service organizations
2. To equip the students to understand how service performance can be improved by studying service design and delivery systems.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Understand the basic concepts and terms related to Service Operations Management, Customer, Supplier functions, their relationship, service process and factors such as performance, quality, and reliability.	2
CO 2	Apply quantitative models to manage service operations	3
CO 3	Measure and manage the performance of service systems with appropriate methods	4
CO 4	Develop service blueprints considering service design elements, quality factors, capacity constraints and customer experience.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	3	-	2	-
CO3	3	3	-	2	1
CO4	3	3	-	2	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Basic knowledge of Operations Management

Syllabus:

Module I:

Understanding Service operations management: Service economy, Nature of Services, Types of services, Service concept, Service Strategy, Strategic Service Vision, Competitive Service Strategies, Servicification

Module II:

Service Design: Innovation in Services, New Service Development, Service Blueprinting, Approaches to Service System Design, Technology in Services, Supporting Facility and Process Flows, Designing the Customer Experience, Self Service tools.

Module III:

Service Quality, Quality Service by Design, Measurement and Control of Quality of Services, Gap model, Poka-yoke, Quality function deployment, Walk-through audit, Service Recovery, Process Improvement, Quality and Productivity Improvement Process, Service Encounter, Service Profit Chain, Service recovery and Service guarantee.

Module IV:

Service Facility Design and Facility Location: Service Facility Location, Strategic Location Considerations, Facility Location Techniques, Service facility design, Process analysis of facility layouts

Managing Capacity and Demand: Forecasting Demand in Services, Service Capacity Management, Yield management, Resource and Workforce Scheduling in Services, Waiting line management

Module V:

Service Inventory and Supply Chain Management: Service Inventory Management, Service Supply Chains, Service Supply Relationships, Managing Service Relationships, Outsourcing Services

Quantitative Models in Managing Service Operations: Data Envelopment Analysis, Application of simulation in service operations management, Vehicle routing and scheduling

References

1. Fitzsimmons, J. A., & Sullivan, R. S. (2017). *Service operations management.* New York: McGraw-Hill.
2. Fitzsimmons, J. A., & Fitzsimmons, M. J. (2023). *Service management: Operations, strategy, and information technology*. Irwin/McGraw-Hill.
3. Slack, N., Chambers, S., & Johnston, R. (2017). *Operations management*. Pearson education.
4. Metters, R. D., King-Metters, K. H., Pullman, M., & Walton, S. (2012*). Successful service operations management*. South-Western College Publishing.
5. Jacobs, F. R., & Chase, R. B. (2018). *Operations and supply chain management.* McGraw-Hill.
6. Krajewski, L. J., Ritzman, L. P., & Malhotra, M. K. (2022). *Operations management: processes and value chains.''*

SIMULATION AND MODELLING

Semester	Course Code	Course Title	Credit	CC/EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B67	**Simulation and Modelling**	**3**	**EC**	**50**	**50**
For Recognized Colleges, CUSAT						
	24-37A-0B67	**Simulation and Modelling**	**3**	**EC**	**40**	**60**

Objectives:

1. The objective of this course is to teach students methods for modelling of systems using discrete events and System Dynamics simulation.
2. The emphasis of the course will be on modelling and on the use of simulation software. The students are expected to understand the importance of simulation in manufacturing, telecommunication, IT and service industries etc.
3. By the end of the course students will be able to formulate simulation model for a given problem, implement the model in software and perform simulation experiments and analyse results and draw conclusions.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Ability to recall the basic concepts and terms related to Simulation and Modelling with emphasis on discrete event simulation and Systems Dynamics simulations	1
CO2	Develop a sound understanding of the characteristics and functions of the tools and techniques used in Simulation and the steps in building and using a simulation model, with emphasis on discrete event and system dynamics simulations. Understand the data requirements for building a simulation model.	2
CO3	Effectively apply Modelling and Simulation to study small problems related to services and manufacturing involving queues, buffers, machines transport etc, and policy and large system simulation using system dynamics	3
CO4	Use cognitive skills, technical knowledge to investigate, analyse systems using their Models and simulation after proper testing and validation.	4
CO5	Ability to design experiments to evaluate, appropriate solutions to problems related studied using.	5
CO6	Demonstrate and use of Modelling and Simulation to conceive and develop solutions to complex problems related to manufacturing and Services operations.	6

CO- PSO Mapping Table:

CO/PSO	PSO 1	PSO 2	PSO3	PSO4	PSO5	
CO1	**3**	**3**	**1**	**2**	**-**	
CO2	**3**	**2**	**2**	**1**	**1**	
CO3	**2**	**3**	**1**	**1**		
CO4	**3**	**3**	**2**	**2**	**1**	
CO5	**3**	**3**	**1**	**1**	**-**	
CO6	**2**	**3**	**1**	**1**	**1**	

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I:

Introduction to Simulation and Modelling: Simulation – introduction, deciding where simulation is appropriate and not appropriate, advantages and disadvantage, application areas, history of simulation software, an evaluation and selection technique for simulation software, general – purpose simulation packages. System and system environment, components of system, type of systems, model of a system, types of models and steps in simulation study. Manual Simulation of Systems: Simulation of Queuing Systems such as single channel and multichannel queue, lead time demand, inventory system, reliability problem, time shared computer model, job-shop model.

Module II:

Discrete Event Formalisms: Concepts of discrete event simulation, model components, a discrete event system simulation, simulation world views or formalisms, simulation of single channel queue, multi-channel queue, inventory system and dump truck problem using event scheduling approach, Random Number Generation and its use in simulation. Introduction to different techniques to generate random variate. Input Modelling: Introduction, steps to build a useful model of input data, data collection, identifying the distribution with data, parameter estimation, suggested estimators, goodness of fit tests, selection input model without data, covariance and correlation, multivariate and time series input models. Verification and Validation of Simulation Model: Introduction, model building, verification of simulation models, calibration and validation of models:-validation process, face validity, validation of model, validating input-output transformation, test, power of test, input output validation using historical data and Turing test.

Module III:

Introduction to System Dynamics, Definition and fundamentals of system dynamics, Understanding feedback loops and causal relationships, Introduction to stocks and flows, Dynamics of complex systems in business Modelling Techniques, Building stock and flow diagrams, Identifying and modelling feedback loops, Parameterization and calibration of models, Model validation and sensitivity analysis. Simulation Software Tools: Introduction to simulation software (e.g., Vensim, AnyLogic), Hands-on exercises using simulation tools, Creating and running simulation models, Analyzing simulation results.

Module IV:

Applications in supply chain management, marketing, finance, and operations Output Analysis: Experimenting with simulation models, Types of simulations with respect

to output analysis, stochastic nature of output data, measure of performance and their estimation, output analysis of terminating simulators, output analysis for steady state simulation. Lab exercises in DE Simulation and mini simulation project.

Module V:

Business Applications of System Dynamics: Case studies on the use of system dynamics in business decision-making Use of Discrete even simulation in Case Studies: Simulation of manufacturing systems, Simulation of Material Handling system, Simulation of computer systems, Simulation of supermarket, and some service sector examples.

References

1. Banks, J. (2007). *Discrete event system simulation*. Pearson Education India.
2. Law, A. M., Kelton, W. D., & Kelton, W. D. (2007). *Simulation modelling and analysis.* New York: McGraw-Hill.
3. Banks, J. (1998). *Principles of simulation. Handbook of simulation*, 12, 3-30.
4. Bilash Kanti Bala , Fatimah Mohamed Arshad , Kusairi Mohd Noh (2017) System Dynamics: Modelling and Simulation, Springer. ISBN 978-981-10-2043-8

ENTERPRISE RESOURCE PLANNING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B68	**Enterprise Resource Planning**	**3**	**EC**	**50**	**50**
For Recognized Colleges, CUSAT						
	24-37A-0B68	**Enterprise Resource Planning**	**3**	**EC**	**40**	**60**

Objectives:

1. To expose the students to the technical aspects of ERP systems, particularly to those that helps in the process of infrastructure planning, selection, implementation, pitfalls, and administration of these systems.
2. To make the students able to participate in planning and implementation of enterprise-wide systems and technologies in their career.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the need of resources planning in an organization	2
CO2	Understand the role of stakeholders and the ERP implementation life cycle	2
CO3	Apply ERP concepts and techniques to translate business requirements into functional specifications and map business processes.	3
CO4	Select the right ERP solution and roll out strategy and the appropriate technologies for each business scenario.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	-	-	-
CO2	3	3	1	1	-
CO3	3	3	1	1	-
CO4	3	3	1	1	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Basic understanding of business functions, business processes, Information Technology, Software and Database systems

Syllabus:

Module – I:Introduction to ERP

Evolution of ERP, MRP, and MRP II, Challenges of System Islands and Need for Integration, Enterprise-wide Software Solutions: Integrated vs. Traditional Systems, Overview of ERP Packages, Products, and Markets, Benefits, Critical Success Factors, and Pitfalls of ERP Implementation, Impact on Organization Performance and Business Processes, Digital Transformation and ERP: Case Studies.

Module – II:

ERP Implementation:

Importance of Product, Process, and People in ERP, Selection of ERP Products, Consultants, and Vendors, Opportunities and Challenges in ERP Selection and Implementation, Business Process Reengineering (BPR) Concepts, Change

Management and Resistance to Change, Integrating ERP with Other Systems, Post-Implementation Training and Support

Module – III:
Functional Architecture of ERP:

Modules in ERP Systems and their Salient Features, Comparison of Various ERP Modules, Implementation Life Cycle and Framework, Business Process Modelling and Gap Analysis, IT Infrastructure Preparation and Benefits Measurement, Implementation Obstacles and Risk Factors

Module IV:
Technical Architecture of ERP:

Communication and Networking in ERP Systems, Client-Server Systems and Distributed Computing, Database Management Systems and Data Warehousing, Web-Based Technologies and Cloud Architecture, Mobile ERP and Service-Oriented Architecture (SOA), Customization, Configuration, and Integration

Module V:
ERP and Strategic Management:

Extending ERP Scope through Supply Chain Management (SCM), Differentiation between ERP and SCM, Customer Relationship Management (CRM) Concepts and Solutions, Digital Business, E-Business, and ERP, Industry 4.0 and Intelligent ERP, Business Analytics, Big Data, IoT, AI integration, Odoo and Security Issues, Recent Developments, Future Trends, and International Business Implications, Case Studies and Real-world Applications

References

1. Hammer, M., & Champy, J. (2009). *Reengineering the corporation: Manifesto for business revolution*, Harper.
2. Ptak, C. A., & Schragenheim, E. (2003). *ERP: tools, techniques, and applications for integrating the supply chain*. CRC Press.
3. Leon, A. (2014). *ERP demystified*. Tata McGraw-Hill Education.
4. Garg, V. K., & Venkitakrishnan, N. K. (2003). *Enterprise Resource Planning: concepts and practice.* PHI Learning Pvt. Ltd..
5. Motiwalla, L. F. (2011). *Enterprise systems for management*. Pearson Education India..
6. Altekar, R. V. (2004). *Enterprisewide resource planning: theory and practice*. PHI Learning Pvt. Ltd.

SUPPLY CHAIN ANALYTICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B69	Supply Chain Analytics	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B69	Supply Chain Analytics	3	EC	40	60

Objectives:

1. To provide a strong foundation in supply chain analytics in order to handle complex data bases, build advanced analytical models and deliver effective visualization product and comprehensive reports.

2. To equip students with an understanding of the —importance and role of supply chain analytics in the modern business enterprises and how business firms can take advantage with the help of supply chain analytics. Further, for students who wish to specialize in analytics, the course provides a strong foundation for the application of supply chain analytics with analytical platforms.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the basic concepts and applications of Supply Chain management, Inventory, Transportation, warehousing, distribution, Logistics and various analytical methods.	2
CO2	Identify complex business problems in terms of analytical models and make use of the analytical tools for inventory management, facility location and supply chain optimization	3
CO3	Analyze, synthesize and solve complex unstructured SC problems	4
CO4	Design a solution to a business situation, incorporating management practices and theories with principles of Supply Chain and Logistics.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	1	-
CO2	3	3	-	3	-
CO3	3	3	-	3	-
CO4	3	3	-	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites:

1. A basic course in Statistics, Operations Management, Management Science, Supply chain management and Business Analytics
2. Familiarization with any spreadsheet package

Syllabus

Module I

Introduction to Supply Chain Analytics: Supply Chain Management – An Overview Supply Chain Analysis -Types of Supply Chains- Advanced Planning - Definition, relevance and scope Supply Chain Analytics, recent trends in Supply Chain Analytics. – Importance of SC Analytics- Introduction to mathematical modelling as a tool to address challenges in production logistics and supply chains. Approaches for Optimization and Simulation- Modelling– Techniques - Problem formulation and choice of modelling- Linear, dynamic, non-linear and stochastic programming - Modelling software- Overview of different Analytic Models - Descriptive models, Predictive Models, Prescriptive Models-Applications in SC-Decision Analytics, Diagnostics Analytics, Cognitive analytics- Applications

Module II

Overview of Supply Chain Models and Modelling Systems: Descriptive models, Predictive Models, Prescriptive Modelling – Data summarization methods – Data description- Data Visualization - Visualization methods and techniques – Principal components -charts and graphs, data queries – sorting and filtering, summarizing data – Important techniques for exploration - Optimization modes, Transportation, Linear Programming- Assignment and Transhipment Problems, Shortest Path, Maximum Flow, Minimum Cost Flow, Problems Aggregate Planning, Sales & Operations Planning -Prescriptive Modelling with Mixed Integer Programming, Off-the shelf modelling system (SLIM), Supply chain operations reference model (SCOR), The network KEIRETSU, Nature-Inspired Intelligence in Supply Chain Management -Prescriptive Modelling, Simulation and Optimization- Monte Carlo Simulation, Queuing Models, Impact of Variability in Supply Chains- Bullwhip effect.

Module III

Flow and network modelling – Network Design- Some analytical results and use of discrete event simulation - Stochastic inventory models -Bullwhip effects – Time series analysis- Forecasting- Applications in Inventory Management - Reliability and maintenance of the production line - Synchronization of maintenance and production activities- Multivariate regression analysis for analysis of performance data. Statistical techniques for estimation of model parameters-AI & Machine learning and Big Data- Models and visualization of cyber physical systems in real time- multi-criteria Decision-making models– Hierarchical decisions making- Decision trees analysis - Expected Utility theory. Concepts of Advanced Planning Systems -Structure of Advanced Planning Systems- Strategic Network Planning- Demand Planning -Master Planning - Demand Fulfilment and ATP- Production Planning and Scheduling -Purchasing and Material Requirements Planning - Distribution and Transport Planning - Coordination and Integration Collaborative Planning- Implementing Advanced Planning Systems

Module IV

Application of Supply Chain Models: A Calibration Model Establishes Position and Performance Gap, Models for Purchasing, Procurement, and Strategic Sourcing, Logistics Models, from Manufacturing to Accepted Delivery, Models for Forecasting, Demand Management, and Capacity Planning, Models for Order Management and Inventory Management- Network planning and design - Supply Chain and Logistics Networks design- Models for Sales and Operations Planning, Advanced Planning and Scheduling Models, Models for Supplier Relationship Management, Models for Customer Relationship Management, Models for Collaborative Design and Manufacturing, Collaborative Planning, Forecasting, and Replenishment Models- Decision Tree analysis- Heuristics optimization- Interpretation of Managerial implication of results of analytics- Industry 4.0 and SC analytics – Importance and Applications.

Module V

Introduction to SC Analytics tools : different types, Applications – R programming: use of RStudio, Simple arithmetic operation and array operation, R as a calculator - Vectors, Matrices, Data frames, Lists Packages and functions - Reading and writing data - Data Visualization, Data Modelling- Applications in SC analytics - Problems - Python programming: arithmetic operations and array operations, Use of matplotlib for plots and charts –Applications in SC analytics - Problems - Spreadsheet Modelling and Analysis- Data Analysis using MS Excel : Analyzing Data, Creating Charts and Graphics and Producing Report with Pivot Table- VLOOKUP and HLOOKUP- Statistical analysis of Data- Goal seek analysis, what-if analysis - SAS : Concepts and Applications – Data Modelling-Applications in SC analytics -

Problems – Familiarization with Visualization tools - Rattle, Tableau and PowerBI – Lean thinking, Value stream mapping - Applications- Applications in SC analytics - Problems Look at Future State of Supply Chain Modelling: Recent developments in theory technology and practices. Future developments and expected improvement in efficiency levels and operational simplicity- Recent Developments and Current Topics in SC Analytics.

References

1. Winston, W. L. (2022). *Operations research: applications and algorithm*. Thomson Learning, Inc..
2. Chase, R. B. F., & Aquilano, N. J. (2021). *Operations management for competitive advantage*.
3. Finch, B. J. (2008). *Operations now: Supply chain profitability and performance*.
4. Simchi-Levi, D., Kaminsky, P., & Simchi-Levi, E. (2022). *Designing and managing the supply chain: Concepts, strategies, and cases*. New York: McGraw-hill.
5. Shapiro, J. (2008). *Modelling the Supply Chain*. Duxbury Thomson Learning
6. Powell, S. G., & Baker, K. R. (2016). *Management science: The art of modelling with spreadsheets*. Wiley

DESIGN THINKING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B70	Design thinking	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B70	Design thinking	3	EC	40	60

Objectives:

1 Understand the fundamentals of design thinking and its relevance in operations management.

2 Explore the latest developments in design thinking and innovation within the business field.

3 Develop practical skills in applying design thinking principles to real-world operations scenarios.

4 Foster creativity, collaboration, and problem-solving abilities among students. Cultivate an innovation focused mind set and skillset.

5 Develop ideas for innovative products and services by keeping users' needs at the centre of the development process.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the fundamental principles and philosophy of design thinking, including empathy, ideation, prototyping, and iteration.	2
CO2	Apply design thinking techniques to better understand the social, emotional, and physical needs of customers	3
CO3	Analyze operational challenges, demonstrating the ability to conduct user research, define problem statements, ideate solutions, prototype concepts, and test ideas with appropriate techniques to turn customer needs into human-centered solutions.	4
CO4	Develop creative solutions for operational challenges, integrating design thinking principles with innovation concepts, user insights, market trends, and rapid experimentation to drive product and service innovation within organizations	6

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	2	-
CO2	3	3	-	3	-
CO3	3	3	1	3	1
CO4	3	3	1	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Course Outcomes	Cognitive Abilities	Course Outcomes
CO 1	Remembering	Students will recall the fundamental principles and philosophy of design thinking, including empathy, ideation, prototyping, and iteration.
CO 2	Understanding	Students will be able to explain the key concepts of design thinking and its relevance in operations management, distinguishing it from traditional problem-solving approaches. Gain techniques to better understand the social, emotional, and physical needs of customers.
CO 3	Applying	Students will
CO 4	Analysing	Students will critically analyse case studies and examples of design thinking implementations within operations management, evaluating their effectiveness in driving innovation, optimizing processes, and creating value for organizations.
CO 5	Evaluating	Students will evaluate the impact of design thinking on operational efficiency and organizational performance, as well as assess the potential risks and challenges associated with implementing design thinking in various operational contexts.
CO 6	Creating	Students will

Syllabus

Module I: Introduction to Design Thinking (DT)

Understanding Design, Design Thinking, Principles and philosophy of DT, Evolution of DT in business, Design Thinking Mindset, Case studies and examples of successful DT implementations.

Stages of DT, Empathy and Observation Skills, Understanding empathy, Observation techniques, Practical exercises for empathy development, Creativity and Ideation, Principles of creativity, Ideation techniques, Brainstorming sessions and creative exercises

Module II: Design Thinking Process

Overview of the DT Process, Introduction to key concepts: empathy, ideation, prototyping, and iteration, research brief.

Techniques for conducting user research and gathering insights, Defining Problem Statements, Framing and dissecting a design challenge, User segmentation and stakeholder mapping, new concept thinking, Concept generation methodologies,

Prototyping and Experimentation, Principles of prototyping, prototyping technologies, Experimenting/testing

Module III: Applying Design Thinking

Integration of DT into Operations Management, identifying opportunities for innovation and improvement, Case studies of companies using DT in operations Applying design thinking methodologies to optimize processes, Growth and strategic foresight, Visualization Techniques, Use of diagrams and maps in design thinking, Storytelling techniques

Module IV: Design Thinking for Product and Service Innovation

Understanding Customer Needs, Customer journey mapping, Design research and user testing, Designing Customer-Centric Solutions, addressing unmet needs and pain points, developing new product/service concepts and prototypes, Business Acumen and Business Model Design, TRIZ for innovation and problem solving

Module V: Future Trends and Emerging Applications

Current Trends and Developments in DT, Exploration of emerging technologies and methodologies, Integration of DT with Agile and Lean Principles, Ethical Considerations and Social Responsibility, Group Projects and Presentations

References

1. Tim, B., & Barry, K. (2019). *Change by design: how design thinking transforms organizations and inspires innovation.* HarperCollins.
2. Mootee, I. (2013). *Design thinking for strategic innovation: What they can't teach you at business or design school.* John Wiley & Sons.
3. Kelley, T. (2001). *The art of innovation: Lessons in creativity from IDEO, America's leading design firm* (Vol. 10). Currency.
4. Kramer, S. J., Person, A. E., Wolpert, J. D., Craumer, M., Peebles, E., Drucker, P. F., ... & Levitt, T. (2003). *Harvard business review on the innovative enterprise.* Harvard Business School Publishing Corporation, Boston, MA.
5. Savransky, S. D. (2000). *Engineering of creativity: Introduction to TRIZ methodology of inventive problem solving*. CRC press.
6. Orloff, M. A. (2016). *ABC-TRIZ: Introduction to creative design thinking with modern TRIZ modelling*. Springer.

AGILE PROJECT MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B71	Agile Project Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B71	Agile Project Management	3	EC	40	60

Objectives

1. Understand the principles and methodologies of Agile project management, including its iterative and incremental approach, emphasis on teamwork, and focus on rapid delivery and high quality.
2. Explore the key components of Scrum and Extreme Programming (XP), two popular methodologies derived from Agile principles, and comprehend how they differ in their approaches to project management and software development.
3. Learn how Agile methodologies align development activities with customer needs and company goals, fostering a customer-centric and goal-oriented approach to project management.
4. Develop practical skills in applying Agile principles and methodologies to project management scenarios, including implementing iterative development cycles, fostering collaboration among team members, and promoting continuous improvement through inspection and adaptation.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Enable the incumbents to understand the concepts delivered at the remembrance level to make them cognitively fit for application. They should be able to understand the philosophy and principles of Agile.	2
CO 2	Develop skills to apply various agile and modern project management methodologies, incorporating sensitivity to environmental sustainability and corporate governance principles as part of the broader goal of the programme to sensitize students to these key principles.	3
CO 3	Impart skills to analyze, assess, plan, deliver, confirm, and track agile project value	4
CO 4	Make the students capable of evaluating the impact of scrum and other agile methods	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	-	-
CO2	3	3	3	3	3
CO3	-	3	3	-	-
CO4	-	3	-	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites:

1. Communication and Interpersonal Skills
2. Critical Thinking and Problem-Solving Abilities

Syllabus:

Module I

Core Agile Concepts Overview ▪ Traditional Project Management Methodologies ▪ Drawbacks of Waterfall Methodologies ▪ Agile Approach ▪ Agile and Traditional Project Management ▪ Choice of Methodologies/Frameworks ▪ Importance of All Stakeholders Sharing an Agile Perspective

Module II

The Agile Manifesto Overview ▪ Manifesto Contributors ▪ Manifesto Values ▪ Manifesto Principles ▪ Value driven delivery ▪ Common Agile roles▪ Agile Leadership

Module III

Stakeholder Engagement ▪ Team Performance ▪ Agile Estimation ▪ Prioritization ▪ Agile Communication methods ▪ Interpersonal Skills ▪ Continuous Improvement

Module IV

Scrum Methodology Elements and Terminology Overview ▪ Scrum Planning ▪ Scrum Sprint Planning and Executing ▪ Scrum Master/Coach ▪ Product Owner/Customer ▪ Team Members/Developers ▪ Develop Epics and Stories ▪ Create Stories▪Create Product Backlog. Iterations/Sprints Overview ▪ Iteration Planning Meeting ▪ Daily Standup Meetings▪Sprint Reviews ▪ Closing: Sprint, Release, and Product Retrospectives

Module V

Other Agile principles and best practices ▪XP Principles ▪ Dynamic Systems Development Method ▪Lean Software Development Principles and Best Practices ▪ Kanban

References

1. Mike Cohn, Succeeding with Agile: Software Development Using Scrum, Addison-Wesley Professional, 2021.ISBN: 978-0321579362

2. Ken Schwaber and Mike Beedle, Agile Software Development with SCRUM, Prentice-Hall, 2015.ISBN: 978-0130676344
3. Wysocki, Effective project management, traditional, agile and XP,Wiley publishers, 2014,ISBN:978-0-470-42367

BUSINESS PERFORMANCE MEASUREMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B72	Business Performance Measurement	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B72	Business Performance Measurement	3	EC	40	60

Objectives:

1. This course is designed to give students the knowledge and tools needed to develop the expertise in performance measurement and management in an organization.
2. Empower students to engage in performance measurement tailored to diverse stakeholder requirements and perspectives across various functional domains, while also embracing a holistic approach that encompasses all facets of business operations.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand business performance evaluation indicators and the role of performance measurement and control within organizations.	2
CO2	Apply various performance measurement methods and interpret the results in light of the organization's situation.	3
CO3	Assess the impact of management decisions on profitability and processes of a company.	4
CO4	Develop a framework for performance measurement and management for an organization and give recommendations for an optimal management decision	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	2	-	1	-
CO3	3	2	-	1	1
CO4	3	2	-	1	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus

Module I:

Performance - concept, scope, criteria, the system of indicators, Theoretical perspectives, Theories of human motivation and incentives. The interaction between strategy and operational performance measurement, Performance measurement and its role in organisational learning, Performance measurement and governance, Management and organisational controls, Mechanisms for accountability, Performance Management Issues

Module II:

Setting of performance goals and incentives, and the use of diagnostic tools and control; systems to achieve the goals; Strategic Profitability Analysis; Role of size and complexity of firms, types of measures, financial and non-financial measures, measuring performance using Economic Value Added (EVA) methodology; comparison between Return on Investment (ROI) and EVA methodology of measuring performance. Elements of balanced performance measurement, Activity based profitability analysis (ABPA)

Module III:

Methods, techniques and models of performance measurement, financial and non-financial measures and methods to establish key performance indicators (KPI), Product Costing in price estimates and profit management; Techniques to measure and enhance profitability and quality of products and services; Activity Based Management, Target and Kaizen costing; benchmarking and environmental costing; Flexible Budgeting, and Activity Based Budgeting. Balance score card method, Performance prism, EFQM, Shareholder value analysis, Data envelopment analysis, integrated performance measurement systems.

Module IV:

Financial position measurement - definitions, systemic approach, sources of Information, Cost-Volume-Profit Analysis, Indicators of performance measurement through profitability, Performance evaluation through profitability - definitions, systemic approach, Activity Base Costing, Process costs, Cost driver based and cost driver independent costs, Relevant Costing Decisions, Strategic Variance Analysis, Joint and Byproduct, Costing & Transfer Pricing, Process Oriented Calculation, Process Optimization

Module V:

Marketing productivity paradigm, non-pecuniary measures, Market orientation, customer satisfaction, customer loyalty, brand equity, Operational measures, Assessing the performance of human and material resources, Evaluation of value creation management, Goal setting for performance management, Developing Performance Dashboards, and Foundations of Performance Management, Creating a Performance-driven Organization, Measurement of innovation performance, performance measurement in Government, Measuring e-Business performance, Case study on performance measurement in an industry.

References

1. Neely, A. (Ed.). (2011). *Business performance measurement: Theory and practice*. Cambridge university press.
2. Ittner, C. D., Larcker, D. F., & Meyer, M. W. (2003). *Subjectivity and the weighting of performance measures: Evidence from a balanced scorecard*. The accounting review, 78(3), 725-758.
3. Merchant, K. A. (2006). *Measuring general managers' performances: Market, accounting and combination-of-measures systems.* Accounting, Auditing & Accountability Journal, 19(6), 893-917.
4. Cappelli, P., & Tavis, A. (2016). *The performance management revolution*. Harvard business review, 94(10), 58-67.
5. Hatry, H. P. (2006). *Performance measurement: Getting results*. The Urban Insitute.
6. Behn, R. D. (2003). *Why measure performance? Different purposes require different measures.* Public administration review, 63(5), 586-606.

Additional references

1. Joyce, P. (2014). *When Performance Measurement Goes Wrong in Government*. http://www.governing.com/columns/smart-mgmt/col-performance-measurement-scandals-lessons.html
2. Micheli, P., & Mari, L. (2014). *The theory and practice of performance measurement.* Management accounting research, 25(2), 147-156.
3. Meyer, M. W. (2003). *Rethinking performance measurement: Beyond the balanced scorecard*. Cambridge University Press.

15.2.5 Information Technology and Systems

DATA MANAGEMENT DYNAMICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B76	Data Management Dynamics	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B76	Data Management Dynamics	3	EC	40	60

Objectives:

1. Develop a comprehensive understanding of Database Management Systems (DBMS) concepts, models, and technologies.
2. Analyze and evaluate different database management approaches, including recent trends and emerging technologies.
3. Apply database management principles to address managerial challenges and capitalize on opportunities for innovation and strategic decision-making in modern organizations.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Demonstrate an understanding of the architecture, structure, and components of modern database management systems, as well as their role in organizational data management strategies.	2
CO 2	Apply database management techniques, such as SQL querying, normalization, and transaction management, to analyze and solve real-world data management problems.	4
CO 3	Critically analyze database design principles, query optimization techniques, and concurrency control mechanisms to evaluate the performance and efficiency of database systems.	4
CO 4	Assess the impact of emerging trends and technologies in database management, such as NoSQL databases, Big Data analytics, and distributed systems, on organizational data strategies and decision-making processes.	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	2	-
CO2	2	1	1	3	-
CO3	2	1	3	3	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites: Nil

Syllabus

Module I: Introduction to Database Management

Overview of data processing concepts and structures; Evolution from file processing to modern Database Management Systems (DBMS); Taxonomy of Data Management Systems and types of database systems; Three-layered architecture and benefits of using a database; Introduction to Data Modelling and Database Administration; Recent trends: Introduction to NoSQL databases, Big Data concepts, and Cloud-based databases

Module II: Data Models and Normalization Techniques

Understanding Object-Oriented and Record-Based data models; Introduction to Entity-Relationship (E-R) Model and E-R diagram examples; Hierarchical, Network, and Relational Models; Normalization techniques: First, Second, and Third Normal Forms; Transaction management: Concepts, properties, and concurrency control; Recent trends: Introduction to Graph databases, Spatial databases, and Time-Series databases

Module III: Relational Database Management Systems (RDBMS)

Schema design and organization in RDBMS; Structured Query Language (SQL) for database querying and manipulation; Distributed Database Systems and challenges in distributed data access; Introduction to Online Analytical Processing (OLAP) and Object-Oriented Databases

Recent trends: Overview of NewSQL databases, In-Memory databases, and Columnar databases

Module IV: Distributed Database Systems

Concepts and challenges in distributed data processing; Transaction management in distributed environments; Physical database structure and concurrency controls; Query optimization techniques in distributed systems; Implementation considerations for successful distributed database systems; Recent trends: Introduction to Blockchain databases, Federated databases, and Multi-model databases

Module V: Managerial Issues and Emerging Trends

Approaches to database design and evaluation criteria; Performance analysis and database backup/recovery strategies; Implementation, maintenance, and database administration issues Exploration of emerging trends in database management, including Object-Oriented databases Decision Support Systems (DSS); Data Mining and Machine Learning applications; Data Warehousing and Business Intelligence; Multimedia databases and Geographic Information Systems (GIS); Distributed Information Systems and Federated databases

References

1. Chavan, H., & Shaikh, S. (2022). Introduction to DBMS: Designing and Implementing Databases from Scratch for Absolute Beginners. BPB Publications.
2. Chopra, R. (2023). Database Management Systems. Khanna Book Publishing
3. Elmasri, R., and Navathe, S. B. (2020). Fundamentals of Database Systems (8th ed.) Pearson.
4. Ramakrishnan, R., and Gehrke, J. (2023). Database Management Systems (4rd ed.).McGraw-Hill Education.
5. Sinha, P.K. (2019). Data Warehousing and Mining. PHI Learning Private Limited.

ADVANCED BUSINESS PROCESS RE-ENGINEERING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B77	Advanced Business Process Re-Engineering	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B77	Advanced Business Process Re-Engineering	3	EC	40	60

Objectives:

1. Develop a comprehensive understanding of the principles, methodologies, and technologies underpinning Business Process Re-engineering (BPR).
2. Analyze and evaluate the challenges and opportunities associated with implementing BPR in modern business environments, incorporating recent trends and emerging technologies.
3. Apply advanced BPR strategies and techniques to effectively redesign business processes, optimize performance, and drive organizational change and innovation

Course Outcomes

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Demonstrate an understanding of the significance of BPR in responding to evolving business landscapes, as well as the role of Information Technology (IT) and recent trends shaping BPR practices	2
CO 2	Apply various BPR methodologies, tools, and techniques to analyze, redesign, and optimize business processes, addressing challenges and opportunities in real-world scenarios.	4
CO 3	Critically analyze and evaluate business process flows, performance metrics, and major issues in process redesign, identifying constraints and opportunities for improvement	4
CO 4	Assess the effectiveness of BPR implementation strategies, change management practices, and IT integration efforts, evaluating their impact on organizational performance and sustainability	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	2	-
CO2	2	3	1	3	-
CO3	2	3	1	3	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Foundational Concepts in Operations Management

Syllabus

Module I: Foundations of BPR

Historical background and significance of BPR; Conceptual foundations and recent trends; Role of Information Technology (IT) in BPR; Perspectives: from deterministic machines to complex systems

Module II: Managing Process Flows

Business process flows and performance metrics; Cycle Time, Capacity Analysis, and Cycle Time Reduction; Major issues in process redesign and identifying IT levers; Application of Theory of Constraints in process management.

Module III: Implementation Strategies

Workflow management systems and steps in BPR; Methodologies and tools for process redesign; Cross-functional teams and key enablers of BPR success; Designing prototypes and understanding BPR phases.

Module IV: Effective BPR Practices

Typical BPR activities: Change Management, Performance Management; Addressing challenges: top management involvement, IT integration; Utilizing process simulation and optimizing KPIs; Reorganizing people and managing change effectively.

Module V: Integration with ERP Systems

Synergy between BPM and ERP systems; Process-centric organizations and maturity models; Role of ERP in modelling and optimizing processes; Case studies of successful BPR implementation and ERP integration.

References

1. Finn, K. M., Khoshafian, S., & Winkler, K. (2017). BPM Transformation and Real- world Execution. Future Strategies Incorporated.
2. Hammer, M., and ; Champy, J. (2009). Reengineering the corporation: Manifesto for business revolution, a. Zondervan, New York.
3. Mohapatra, S. (2018). Business Process Reengineering: Automation Decision Points in Process Reengineering. CRC Press.
4. Norton, D. (2022). Reengineering for Results: Achieving Strategic Transformation Through Process Change (3rd ed.). McGraw-Hill Education.
5. Weske, M. (2019). Business Process Management: Concepts, Languages, Architectures. Springer Berlin Heidelberg.

SYSTEM ANALYSIS AND DESIGN

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B78	System Analysis and Design	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B78	System Analysis and Design	3	EC	40	60

Objectives:

1. Develop an understanding of the analysis and design principles for computer-based information systems.
2. Learn how to effectively analyze business requirements and translate them into system design specifications.
3. Gain proficiency in using modelling techniques and system architecture concepts to design and develop information systems.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Understand the main points of the system development process. Explain the symbols on a DFD or CLD and can interpret such a model. Describe an information model to an end-user.	2
CO 2	Apply the know-how to create a DFD or CLD based on a prepared narrative, where the key facts are given and extraneous information is removed.	3
CO 3	Gather and draw out significant information regarding requirements from users. Ability able to separate minutiae from relevant facts in users' explanations and recognize inconsistencies or anomalies among users' requirements and choose the correct information models.	4
CO 4	Critique and judge the quality of material given, by applying rules, heuristics, and established criteria like technical/ syntactical correctness of the model and accuracy with which the explicit and implied requirements are captured	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	3	-
CO2	3	3	3		3
CO3	3	3	3	3	-
CO4	3	3	3		1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites:

1. Basic Knowledge of Information System
2. Understanding of Management Principles

Syllabus:

Module I:

Types of information: Operational, tactical, strategic and statutory – why do we need Information systems – management structure – requirements of information at different Levels of management – functional allocation of management – requirements of Information for various functions – qualities of information – Overview of systems analysis and Design.

Module II:

Details of SDLC approach, Business Systems Concept Systems Development Life Cycle -Problem identification – Requirements determination – requirements specifications – feasibility analysis – final specifications — system design –system implementation – system evaluation – system modification.– tools used in system analysis)- Strategies – methods – documenting study – system requirements Specification from narratives of requirements to classification of requirements as strategic, tactical, operational and statutory- hardware and software study and selection Deciding project goals – examining alternative solutions – cost – benefit analysis

Module III:

Data flow diagrams – case study for use of DFD, good conventions – levelling of DFDs – levelling rules – logical and physical DFDs – software tools to create DFDs Procedure specifications in structured English – examples and cases – decision tables for complex logical specifications – specification oriented design vs procedure oriented design- Entity relationship model – E-R diagrams – relationships cardinality and participation.

Module IV:

Data Dictionaries; Process Organisation and Intersections; Decision Analysis; Decision Trees and Tables; Expansion, Explosion and Normalization Detailed Design Modulation; Module Specification File Design; Data Base Design system Control and Quality Assurance; What are objects? – Why objects? – Objects and their properties – classes – inheritance – polymorphism – how to identify objects in an application – how to model systems using objects – some cases of object-oriented system modelling.

Module V:

Audit and security of information systems – why controls are needed – objectives of control – techniques used in control – auditing information systems – auditing around, Introduction to Security: Need for security and control, Types of security and Threats -Risks to Information system data and resources, Definitions of Information security, through and with the computer – Security Planning: Risk and Security policy, Security management, Business continuity planning, Security audit- testing information systems – types of tests – Implementation- how to generate tests – Project management Techniques for Managing Software Projects.

References

1. Hoffer, J. A., George, J. F., & Valacich, J. S. (2017). Modern Systems Analysis and Design. Pearson.
2. Dennis, A., Wixom, B. H., & Roth, R. M. (2018). Systems Analysis and Design (6th ed.). Wiley.

3. Awad Elias M. Systems Analysis and design, New Delhi, Prentice hall of India, 2010
4. Coad Peter and Edward, Yourdon, Object-Oriented Analysis, Englewood Cliff, NewJersey, Yourdon Press 2009
5. Hawsryszkiewyez, I.T. Introduction to Systems analysis and design. New Delhi, Prentice hall of India,2011
6. Marco, T.D. Structured Analysis & System Specification, New Delhi, Yourdon Press,2007
7. Rajaraman, V. Analysis and Design of information systems New Delhi, Prentice hall of India, 2008
8. Van Over, David Foundations of business Systems Fort Worth, Dryden Press, 2009
9. Whitten J L etc. System Analysis and Design methods New Delhi, Galgotia, 201

STRATEGIC DATA MINING FOR BUSINESS INTELLIGENCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B79	Strategic Data Mining for Business Intelligence	3	EC	50	50
For School of Management Studies, CUSAT						
	24-37A-0B79	Strategic Data Mining for Business Intelligence	3	EC	40	60

Objectives:

1. Develop a comprehensive understanding of Data Mining techniques and their applications in Business Intelligence.
2. Analyze and evaluate various supervised and unsupervised learning algorithms for predictive modelling and clustering tasks.
3. Apply advanced Data Mining techniques to extract actionable insights from large datasets, incorporating recent trends and technologies in the field.

Course Outcomes

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Demonstrate an understanding of supervised and unsupervised learning techniques in data mining, including classification, prediction, and clustering algorithms.	2
CO 2	Apply data mining algorithms to real-world business scenarios, utilizing techniques such as logistic regression, decision trees, and k-means clustering to analyze and interpret data.	4
CO 3	Critically analyze the strengths and limitations of various data mining algorithms, evaluating their effectiveness in solving business intelligence problems and extracting meaningful insights from datasets.	4
CO 4	Assess the impact of recent trends and advancements in data mining technologies, such as deep learning and graph-based mining, on business intelligence strategies and decision-making processes.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	2	-
CO2	2	3	1	3	-
CO3	2	3	1	1	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Thorough understanding of Statistical concepts and Business Research Methods and Business Analytics

Syllabus

Module I: Introduction to Data Mining

Overview of Data Mining and its applications in Business Intelligence; Understanding the data mining process and its stages; Recent trends: Introduction to Big Data Analytics and Machine Learning in Data Mining; Exploratory Data Analysis (EDA) techniques for data understanding and visualization; Data pre-processing methods including data cleaning, transformation, and normalization; Variable reduction techniques for feature selection and dimensionality reduction

Module II: Supervised Learning Techniques

Understanding supervised learning for Classification and Prediction tasks; Introduction to Simple Classification Schemes and Naïve Bayes Classifier; Application of K-Nearest Neighbors (KNN) algorithm in classification; Classification and Regression Trees (CART) and Chi-Squared Automatic Interaction Detection (CHAID) for decision tree-based modelling; Recent trends: Introduction to Ensemble Learning methods such as Random Forest and Gradient Boosting

Module III: Advanced Supervised Learning Techniques

Logistic Regression and its application in binary classification problems; Discriminant Analysis for multi-class classification tasks; Introduction to Artificial Neural Networks (ANN) and their role in Directed Data Mining; Recent trends: Deep Learning techniques such as Convolutional Neural Networks (CNN) and Recurrent Neural Networks (RNN) in predictive modelling

Module IV: Unsupervised Learning Techniques

Understanding Unsupervised Learning for Clustering tasks; Application of K-Means Clustering for partitioning data into clusters; Hierarchical Clustering methods including Agglomerative and Divisive Hierarchical Clustering; Recent trends: Introduction to Density-based clustering algorithms like DBSCAN and OPTICS

Module V: Advanced Data Mining Techniques

Dimensionality Reduction techniques such as Principal Component Analysis (PCA) for feature extraction; Affinity Analysis and Market Basket Analysis for discovering association rules; Introduction to the Apriori Algorithm for frequent itemset mining; Recent trends: Graph-based data mining techniques for analyzing complex relationships and networks

References

1. Han, J., Kamber, M., and J., (2007). Data Mining: Concepts and Techniques (3rd ed.) Elsevier.
2. Larose, D.T., and Larose, D.C., (2015). Data Mining and Predictive Analytics (2nd ed.). Wiley.
3. Linoff, G. S., and Berry, M. J. A. (2021). Data Mining Techniques: For Marketing, Sales, and Customer Relationship Management. Wiley.
4. Tan, P. N., Steinbach, M., Karpatne, A., and Kumar, V. (2021). Introduction to data mining (2nd ed.). Pearson.
5. Witten, I. H., Hall, M. A., Pal, C. J., and Frank, E. (2019). Data mining. Elsevier.

ADVANCED DATA ANALYTICS FOR BUSINESS DECISIONS

Semester	Course Code	Course Title	Credit	CC/EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B80	Advanced Data Analytics for Business Decisions	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B80	Advanced Data Analytics for Business Decisions	3	EC	40	60

Objectives:

1. Gain an in-depth understanding of multivariate data analysis, regression, and dimensionality reduction to drive informed and ethical business decisions.
2. Learn to apply statistical techniques like Factor Analysis, PCA, and Regression Analysis in practical business contexts for improved decision-making and prediction.
3. Combine qualitative and quantitative analysis to understand market trends and customer behavior, using Conjoint Analysis and Multidimensional Scaling for strategic insights.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Understand the principles behind various statistical tools and techniques used in advanced data analytics, such as regression analysis, multivariate analysis, and clustering algorithms.	2
CO 2	Analyze complex datasets using regression analysis, dimensionality reduction techniques, and qualitative data analysis methods to extract meaningful insights and patterns.	4
CO 3	Evaluate the effectiveness and appropriateness of different data analytics approaches in addressing specific business problems and making strategic decisions.	4
CO 4	Develop comprehensive data analytics strategies tailored to specific business contexts, integrating quantitative and qualitative data analysis techniques to drive organizational success.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	2	-
CO2	2	3	1	3	-
CO3	2	3	1	3	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Thorough understanding of Statistical concepts, Business Research Methods and Business Analytics

Syllabus:

Module I

Multivariate Data Analysis: Role in business decision-making, ethical considerations; Business Problem Formulation: Defining objectives, translating into data-driven questions; Diagnostic and Inferential applications of Correlation, AVOVA, ANCOVA and MANOVA; Interpreting multivariate effects and interactions; Practical considerations and post-hoc analyses; Business applications and case studies.

Module II

Multiple Regression: Techniques for multicollinearity and advanced diagnostics; Logistic Regression: Binary outcomes (Maximum Likelihood Estimation (MLE)); Advanced Regression Topics: Non-linear models, regularization methods, and prediction accuracy improvement; Discriminant Analysis: function estimation, and observation classification; Advanced Discriminant Analysis: Model validation strategies and high-dimensional data applications; Real-World Applications: Case studies from diverse industries to illustrate the practical use of regression and discriminant analysis

Module III

Dimensionality Reduction Techniques: Factor Analysis: Exploratory and Confirmatory Factor Analysis; Practical Implications in real-world scenarios like psychometric testing, market research, and financial modelling; Principal Component Analysis (PCA): data visualization, dimensionality reduction, and feature extraction; Cluster Analysis: K-means clustering, hierarchical clustering, choosing the right approach; Practical Applications: Discuss real-world uses of dimensionality reduction in areas like customer segmentation and image compression.

Module IV

Qualitative Data Analysis: Introduction to Qualitative Data Analysis: Basic concepts and approaches; Qualitative Data Analysis Techniques: Coding, thematic analysis, content analysis; Integration of Qualitative and Quantitative Data: Mixed methods; Applications in customer feedback analysis and market trend studies.

Module V

Conjoint Analysis: Introduction & Applications; Designing Studies: Attributes, levels, choice tasks; Data Collection Methods; Analysis Techniques: Part-worth utilities, preference share estimation; Interpretation & Managerial Implications; Multidimensional Scaling (MDS): Introduction & Applications; Types of MDS: Metric, Non-metric, Proximity Scaling; Designing Studies: Similarity judgments, dissimilarity data; Interpretation & Visualization

Course Delivery should include Lectures, Case Studies, Guest Lectures, Interactive Workshops, Group Projects and online certifications.

References

1. Bruce, A., Dyson, R., & Martin, D. (2023). Data analysis for business decisions (7th ed.). Pearson Education.
2. Doane, D. P., & Montgomery, D. C. (2022). An introduction to business statistics (6th ed.). John Wiley & Sons.
3. Evans, J. R. (2020). Business analytics: Decision making with data (5th ed.). Pearson Education.
4. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2023). Multivariate data analysis (8th ed.). Pearson Education.

TECHNOLOGY MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B81	Technology Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B81	Technology Management	3	EC	40	60

Objectives:

1. Develop an understanding of the importance of science and technology management and strategy in the development of a nation.
2. Explore the characteristics of science and technology management problems and available solution methodologies.
3. Gain knowledge in technology forecasting and its application in planning and decision-making in both business and government contexts.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Develop a sound understanding of the important role of Management of Technology in today's business environment. Become familiar with the approaches, tools, and techniques used in Technology Management, such as Technology Forecasting, Technology Search, Technology Transfer, etc.,	2
CO 2	Effectively apply knowledge of Technology Management to carry out Technology Forecasts and Technology searches. Preparing a Technology Plan for an organization.	3
CO 3	Analyse data and other inputs to gain understanding and uncover technology Management-related problems.	4
CO 4	Evaluate alternative solutions or decision choices in Technology Management and help in better decision-making using scientific tools and techniques.	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	3	-
CO2	3	3	3	-	3
CO3	-	3	-	3	-
CO4	-	3	3	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites:

1. Familiarity with Technology Concepts
2. Communication Skills
3. Critical Thinking and Analytical Skills

Syllabus:

Module I:

Introduction to Management of Science and Technology, Impact of science and technology on society, Technology forecasting techniques. S&T Policy of India. S & T and their management in selected sectors such as Telecom, Agriculture and Health.

Module II:

Integrating Technology and Strategy, Role of technology leaders and CIOs in organizational strategy, designing a technological strategy, selection of technology. Contemporary global and local technology management issues.

Module III:

Project Management methodologies and tools for technology projects. Managing R&D, study of innovations and management of innovating organizations. Patents for Technologies.

Module IV:

Developing new products and new businesses, Interfaces: marketing, engineering, manufacturing. The new product development learning cycle. Corporate venturing process. Case studies and real world examples of successful technology management initiatives.

Module V:

Technology Transfer, Technology transfer mechanisms and methods, Implementation and assimilation of technology transferred. Agencies for aiding technology transfer. Leveraging emerging technologies for business innovations.

References:

1. Global Technology Management 4.0. (2022). SpringerLink. https://doi.org/10.1007/978-3-030-96929-5
2. Ross, J. W., Beath, C. M., & Quaadgras, A. (2019). Designed for Digital: How to Architect Your Business for Sustained Success. MIT Press.
3. Joseph P. Martino, Technological Forecasting for Decision Making, 2nd Edn.
4. Robert A Burgelman, and Modesto A Maidique, Strategic Management of Technology And Innovation
5. Articles in Journals on Technology Management, Strategic Management, and Harvard Business Review.

DATA SCIENCE USING R AND PYTHON

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B82	Data Science Using R and Python	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B82	Data Science Using R and Python	3	EC	40	60

Objectives:

1. Gain an understanding of the foundational concepts of Data Science, encompassing programming, mathematics, and statistics.
2. Acquire knowledge of various data pre-processing techniques to prepare raw data for analysis.

3. Learn data visualization techniques to effectively communicate insights derived from data analysis.
4. Develop both conceptual and practical skills in applying Data Science principles to real-world scenarios.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Understand the processes of data science identifying the problem to be solved, data collection, preparation, modelling, evaluation, and visualization.	2
CO 2	Develop skills in using R and Python to do exploratory data analysis on real-time datasets	3
CO 3	Impart skills to analyze real-time problems using R and Python	4
CO 4	Make the students capable of evaluating the problem of knowledge extraction as combinations of data filtration, analysis, and exploration methods.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	-	-
CO2	3	3	3	3	-
CO3	1	3	3	-	-
CO4	2	3	3	3	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites:

1. Basic Understanding of Data Concepts
2. Familiarity with Statistical Analysis
3. Basic Understanding of Data Visualization

Syllabus:

Module I

Introduction to Data Science ▪ Data Science in various fields ▪ Data analytics Life cycle ▪ Data scientist▪ Data science team ▪ Types of data ▪ Classification of digital data ▪ Source of data

Module II

Mathematics for DS ▪ Probability ▪ Statistics ▪ Linear algebra ▪ Calculus for DS ▪ ANOVA Hypothesis testing

Module III

Introduction to R ▪ Basic Operations in R ▪ Math Operations in R ▪ Control structures ▪ Functions in R ▪ Import and Export files in R ▪ Joins ▪ One way and Two way tables, Matrices

Module IV

Introduction to Python ▪ Pythons Operations ▪ Packages ▪ Data types ▪ Functions ▪ Error Handling ▪ Data Analytics ▪ Visualization in Python▪ML and AI Packages

Module V

Exploratory Data Analysis ▪Data Preprocessing ▪ Data Transformation ▪ Data reduction Feature extraction ▪ Univariate and multivariate analysis

References

1. *A Tour of Data Science: Learn R and Python in Parallel*. (2020, November 11). Routledge & CRC Press. https://www.routledge.com/A-Tour-of-Data-Science-Learn-R-and-Python-in-Parallel/Zhang/p/book/9780367895860
2. Chantal D. Larose, Daniel T. Larose, Data Science Using Python and R ,Wiley,2019, ISBN: 9781119526810
3. B,UmaMaheswari, R.Sujatha, Introduction to Data Science : Practical Approach with R and Python, Wiley, ISBN: 9789354640506
4. WesMcKinney, Python for data analysis ,OReilly,ISBN:978-1-491-95766
5. Paul Barry,Head First Python, OReilly,ISBN: 9781491919538

ARTIFICIAL INTELLIGENCE FOR BUSINESS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B83	Artificial Intelligence for Business	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B83	Artificial Intelligence for Business	3	EC	40	60

Objectives:

1. To build a relational understanding of Artificial Intelligence (AI) and focus on opportunities, limitations, and challenges related to organizational use of AI for value creation.
2. To introduce different types of AI technologies and how they have emerged.

3. To explore key concepts, applications, and ethical considerations related to AI in various business functions, including marketing, finance, operations, and human resources.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Recognize the emergence of Artificial Intelligence and Machine Learning as a competitive strategy.	1
CO 2	Enable the incumbents to understand AI and the role it can play in delivering benefits for your organization	2
CO 3	Develop skills to apply the fundamental concepts of extraction, clustering, prediction, as well as search and planning techniques.	3
CO 4	Analyze the organizational use of AI and organizational challenges related to the management of AI in businesses.	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	1	-
CO2	3	3	3	3	-
CO3	3	3	3	3	-
CO4	3	3	3	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites:

1. Basic Understanding of Business Concepts
2. Basic Knowledge of Data Analysis
3. Basic Understanding of Information Technology

Syllabus:

Module I

Introduction to AI ▪ Business Innovation with Big data and AI ▪ Business Opportunities and Challenges with AI Adoption ▪ Overlapping of AI with other fields▪ AI Technologies Landscape; ML, DL, NLP etc.

Module II

Introduction to ML ▪ ML Workflow ▪ Learning Algorithms ▪ Supervised Learning Algorithms for Forecasting▪ Supervised Learning Algorithms with Applications in

Predictive Analytics. ▪ Unsupervised Learning Algorithms ▪ Decision trees ▪ Neural networks

Module III

AI Applications in Marketing ▪ Personalization and recommendation systems ▪ Sentimental Analysis and Social Media Mining ▪ Predictive Analytics for Customer Segmentation and Targeting ▪ AI applications in Financial Management ▪ Fraud Detection and Risk Management ▪ Credit Scoring and Loan Approval Systems.

Module IV

AI Applications in Operations ▪ Demand Forecasting and Inventory Optimisation ▪ Predictive Maintenance and Asset Management ▪ Autonomous Vehicles and Smart Logistics ▪ Natural Language Processing ▪ Sentiment technology in business

Module V

AI Applications in HR and Talent Management ▪ Recruitment and Candidate Screening using AI Powered Tools ▪ Workforce Planning and Skill gap Analysis ▪ Ethical and Societal Implications of AI in Business – Privacy and Data Security Concerns in AI Driven Systems ▪ Artificial Intelligence for Growth ▪Practical Exercises Using AI Software Platforms and Tools.

References

1. K, H., & Rodriguez, R.V. (Eds.). (2023). Artificial Intelligence for Business: An Implementation Guide Containing Practical and Industry-Specific Case Studies (1st ed.). Productivity Press. https://doi.org/10.4324/9781003358411
2. Iansiti Marco, Lakhani Karim R, Competing in the age of AI : strategy and leadership when algorithms and networks run the world, Harvard Business Review Press, 2020,ISBN: 9781633697621
3. Davenport Thomas H, The AI advantage : how to put the artificial intelligence revolution to work, Cambridge, Massachusetts ,The MIT Press,2018, ISBN: 9780262039178
4. Upadhyay, M. A. Artificial Intelligence for Managers. BPB Publications. 2020, ISBN :978-9389898385

ADVANCED VISUAL ANALYTICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B84	Advanced Visual Analytics	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B84	Advanced Visual Analytics	3	EC	40	60

Objectives:

1. Develop a comprehensive understanding of data visualization techniques and their applications in decision-making processes.
2. Analyze and evaluate different visualization tools and methods, incorporating recent trends and technologies in the field.
3. Apply advanced data visualization techniques to explore, analyze, and communicate insights from complex datasets effectively.

Course Outcomes

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Demonstrate an understanding of the different types of data and their preprocessing techniques, as well as the principles of visual perception and effective design in data visualization.	2
CO 2	Apply data visualization techniques to explore and analyze datasets, using common visualization tools and chart types to create informative and visually appealing visualizations.	4
CO 3	Analyze complex datasets and evaluate the effectiveness of different visualization techniques for presenting multivariate data, utilizing advanced visualization tools and methods for data analysis	4
CO 4	Assess the strengths and limitations of various data visualization approaches, comparing and evaluating different visualization techniques for different data types and scenarios.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	2	-
CO2	2	3	1	3	-
CO3	2	3	3	3	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Thorough understanding of Business Analytics

Syllabus:

Module 1: Introduction to Data Visualization

Data Visualization and its importance in decision-making; The Visualization Process: From data collection to presentation; Recent trends: Introduction to interactive and real-time data visualization techniques; Determining business goals and identifying target audiences for effective visualization; Principles of visual perception and design elements in data visualization

Module 2: Data Foundations and Preprocessing

Understanding different types of data and their characteristics; Data preprocessing techniques for cleaning, transforming, and integrating data from various sources; Recent trends: Introduction to Big Data visualization and handling large datasets; Field operations, data joining, and working with multiple datasets; Numeric calculations, sorting, and filtering techniques for data manipulation

Module 3: Visualization Techniques for Exploratory Data Analysis

Exploring spatial data visualization techniques; Introduction to common visualization tools and their applications; Recent trends: Advanced spatial visualization techniques including 3D visualization and Virtual Reality (VR) visualization; Overview and application of various chart types: Bar Chart, Pie Chart, Line Chart, Area Chart, etc.; Understanding infographics and their role in conveying complex information effectively

Module 4: Advanced Visualization Techniques for Multivariate Data

Introduction to Data Analysis Expressions (DAX) and calculated fields; Designing effective visualizations for multivariate data analysis; Recent trends: Application of machine learning algorithms in advanced data visualization; Structures for evaluating and comparing different visualization techniques for multivariate data

Module 5: Forecasting, Text Analysis, and Dashboard Building

Forecasting techniques and trend analysis using visualizations; Text analysis and visualization techniques including word clouds, word trees, and tag clouds; Recent trends: Integration of Natural Language Processing (NLP) techniques in text analysis and visualization; Comparing and evaluating visualization techniques for different data types and scenarios; Introduction to dashboard design principles and dynamic dashboard creation using slicers and interactive elements.

References

1. Aakash Gohil, (2022), Data Visualization & Storytelling for Business Analysts: Tips, Techniques, Best Practices and the Mindset, Publisher: Notion Press
2. Alexander Loth, (2019), Visual Analytics using Tableau, Wiley Publishers
3. Andy Kirk, (2012), Data Visualization: a successful design process, Packt Publishing Limited
4. Claus O. Wilke, (2019), Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures, Publisher: Shroff/O'Reilly
5. Scott Murray, (2013), Interactive Data Visualization for the Web, O'Reilly
6. Tamara Munzner, (2014), Visualization Analysis and Design, CRC Press

TEXT ANALYTICS FOR BUSINESS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B85	Text Analytics for Business	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B85	Text Analytics for Business	3	EC	40	60

Objectives:

1. Develop a comprehensive understanding of Text Mining techniques and their applications in business analytics.
2. Analyze and evaluate different text processing methods, incorporating recent trends and technologies in the field.
3. Apply advanced Text Mining techniques to extract actionable insights from textual data, supporting decision-making processes in various business contexts.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Demonstrate an understanding of the differences between data mining and text mining, as well as the challenges and opportunities associated with analyzing text data.	2
CO 2	Apply text mining preprocessing techniques and feature extraction methods to analyze and extract meaningful insights from textual data using freely available tools and libraries.	4
CO 3	Analyze text data using advanced text mining techniques such as sentiment analysis and opinion mining, evaluating the effectiveness of different methods in extracting sentiment and opinions from text.	4
CO 4	Assess the ethical and legal considerations involved in web scraping and text mining, evaluating the reliability and validity of results obtained from text mining analyses.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	2	-
CO2	2	3	1	3	-
CO3	2	3	3	3	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Thorough understanding of Business Analytics

Syllabus

Module 1: Introduction to Text Mining

Overview of Text Mining and its significance in business analytics; Distinction between Data Mining and Text Mining techniques; Recent trends: Predictive Text Analytics and real-time case studies in business scenarios; Understanding Text Characteristics and challenges in text data analysis

Module 2: Basic Text Processing Techniques

Language Modelling and Part-of-Speech (POS) tagging for extracting meaning from text; Tokenization methods including word and sentence tokenization; N-grams: Analyzing individual words and multi-word phrases in context; Recent trends: Application of Transformer models like BERT for text processing.

Module 3: Text Mining Preprocessing and Feature Extraction

Text Corpus creation and preprocessing steps: Removing special characters, stopwords, and performing stemming & lemmatization; Part of Speech Tagging and

feature extraction techniques; Introduction to Bag of Words model and TF-IDF (Term Frequency-Inverse Document Frequency); Exploring freely available text corpora and datasets for analysis

Module 4: Web Scraping for Text Data Acquisition

Introduction to web scraping concepts and tools: BeautifulSoup, Scrapy; Crawling, parsing, and extracting text data from web pages; Handling pagination and scraping images from web sources; Addressing ethical and legal considerations in web scraping

Module 5: Sentiment Analysis and Opinion Mining

Understanding sentiment and polarity in text data; Business applications of Sentiment Analysis and Opinion Mining; Utilizing open-source libraries like NLTK (Natural Language Toolkit) and TextBlob for sentiment analysis;Text Analytics using freely available tools like RapidMiner and Orange

References

1. Dipanjan Sarkar, (2016), Text Analytics with Python: A Practical Real-World Approach to Gaining Actionable Insights from Your Data, Publisher: Apress; 1st ed. Edition, ISBN-10: 148422387X
2. Gabe Ignatow and Rada Mihalcea, (2017), Text Mining: A Guidebook for the Social Sciences, SAGE Publications, Inc
3. Lane, H., Howard, C., & Hapke, H. (2019). Natural Language Processing in Action. Manning Publications.
4. Mitchell, R. (2018). Web Scraping with Python: Collecting Data from the Modern Web. O'Reilly Media.
5. Russell, M. A. (2019). Mining the Social Web: Data Mining Facebook, Twitter, LinkedIn, Instagram, GitHub, and More. O'Reilly Media.

AGILE PROJECT MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B71	Agile Project Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B71	Agile Project Management	3	EC	40	60

Objectives

1. Understand the principles and methodologies of Agile project management, including its iterative and incremental approach, emphasis on teamwork, and focus on rapid delivery and high quality.

2. Explore the key components of Scrum and Extreme Programming (XP), two popular methodologies derived from Agile principles, and comprehend how they differ in their approaches to project management and software development.
3. Learn how Agile methodologies align development activities with customer needs and company goals, fostering a customer-centric and goal-oriented approach to project management.
4. Develop practical skills in applying Agile principles and methodologies to project management scenarios, including implementing iterative development cycles, fostering collaboration among team members, and promoting continuous improvement through inspection and adaptation.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Enable the incumbents to understand the concepts delivered at the remembrance level to make them cognitively fit for application. They should be able to understand the philosophy and principles of Agile.	2
CO 2	Develop skills to apply various agile and modern project management methodologies, incorporating sensitivity to environmental sustainability and corporate governance principles as part of the broader goal of the programme to sensitize students to these key principles.	3
CO 3	Impart skills to analyze, assess, plan, deliver, confirm, and track agile project value	4
CO 4	Make the students capable of evaluating the impact of scrum and other agile methods	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	-	-
CO2	3	3	3	3	3
CO3	-	3	3	-	-
CO4	-	3	-	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites:

1. Communication and Interpersonal Skills
2. Critical Thinking and Problem-Solving Abilities

Syllabus:

Module I

Core Agile Concepts Overview ▪ Traditional Project Management Methodologies ▪ Drawbacks of Waterfall Methodologies ▪ Agile Approach ▪ Agile and Traditional Project Management ▪ Choice of Methodologies/Frameworks ▪ Importance of All Stakeholders Sharing an Agile Perspective

Module II

The Agile Manifesto Overview ▪ Manifesto Contributors ▪ Manifesto Values ▪ Manifesto Principles ▪ Value driven delivery ▪ Common Agile roles▪ Agile Leadership

Module III

Stakeholder Engagement ▪ Team Performance ▪ Agile Estimation ▪ Prioritization ▪ Agile Communication methods ▪ Interpersonal Skills ▪ Continuous Improvement

Module IV

Scrum Methodology Elements and Terminology Overview ▪ Scrum Planning ▪ Scrum Sprint Planning and Executing ▪ Scrum Master/Coach ▪ Product Owner/Customer ▪ Team Members/Developers ▪ Develop Epics and Stories ▪ Create Stories▪Create Product Backlog. Iterations/Sprints Overview ▪ Iteration Planning Meeting ▪ Daily Standup Meetings▪Sprint Reviews ▪ Closing: Sprint, Release, and Product Retrospectives

Module V

Other Agile principles and best practices ▪XP Principles ▪ Dynamic Systems Development Method ▪Lean Software Development Principles and Best Practices ▪ Kanban

References

1. Mike Cohn, Succeeding with Agile: Software Development Using Scrum, Addison-Wesley Professional, 2021.ISBN: 978-0321579362
2. Ken Schwaber and Mike Beedle, Agile Software Development with SCRUM, Prentice-Hall, 2015.ISBN: 978-0130676344
3. Wysocki, Effective project management,traditional,agile and XP,Wiley publishers,2014,ISBN:978-0-470-42367

E-COMMERCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B28	E-Commerce	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B28	E-Commerce	3	EC	40	60

Objectives:

1. To acquaint the students with the E- Commerce business in the competing markets.
2. To get familiarized with E- Commerce platforms and tools to build a career or start a business in E-Commerce

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand different E- Commerce business models, payment systems and distribution models	2
CO2	Apply appropriate business models and strategies for building an E commerce platform	3
CO3	Analyse the opportunities and challenges of E-Commerce in the contemporary business	4
CO4	Evaluate various E- Commerce strategies including marketing, logistics, regulatory issues and opportunities for innovation and differentiation	5
CO5	Create entrepreneurial mindset and creative thinking in developing e-commerce business ideas, products, or services	6

CO – PSO Mapping :

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	3	1	-	-
CO3	3	3	1	-	3
CO4	3	3	-	2	-
CO5	3	3	3	3	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Introduction to E-Commerce

Types of E commerce business B2C, B2B, C2C, P2P, M Commerce; Business models- Market place model, Inventory model, Mixed model, Drop shipping, Subscription model, Private labelling; Types of players- Vertical and Horizontal players; Issues in E Commerce; IT ACT

Module II: Build, Launch and Manage an E-commerce store

Practical application of Domain registration process, Developing and putting online an E commerce store; process of integration of payment system; process of integration of logistics; Policies and legal compliances for E Commerce,

Module III: E Commerce payment system and Pricing strategy

Electronic Payment methods– E- Cash, E- cheque, E- wallets- On-line Credit Card & debit card; Security measures- SSL (Secure Sockets Layer), PCI DSS (Payment Card Industry Data Security Standard), Two-Factor Authentication (2FA), Fraud Detection and Prevention; Revenue and Cost models; Pricing Strategy for products.

Module IV: Logistics for E Commerce

Delivery systems in E commerce; E commerce shipping process; Functioning of fulfilment centre and shipping system- sortation centre, delivery hub, last mile delivery; Distribution models- point-to-point model, Hub and spoke model; E commerce shipping methods and strategies; E commerce shipping cost.

Module V: Marketing for E Commerce

Marketing strategies- Social media marketing, Search Engine Optimization, Content, Influencer, Affiliate and Email marketing; Advertising strategies; Advertising methods- Web banner advertising- frame ads, pop up banners, floating ads, expanding ads, trick banners, news feeds ads, Interstitial ads, Text ads; Online marketing metrics- Audience size or market share metrics, conversion to customer metrics, social marketing metrics, email metrics; Sentiment analysis.

References

1. Laudon, Kenneth C and Traver Carol, E Commerce-Business, Technology and Society, Pearson
2. Cady, G H and Part McGreger, The Internet, BPB Pub. Delhi
3. Carpenter Phil e Brands, HBS Press, Boston
4. Keen, Peter and Mark McDonald The e-Process Edge, Tata McGraw-Hill, Delhi
5. Mann, Catherine, L Global Electronic Commerce, Institute for International Economics, Washington, DC
6. Oberoi, Sundeep-Security and You, Tata McGraw-Hill, Delhi
7. Rich, Jason R. Starting an E-Commerce Business, IDG Books, Delhi

DIGITAL MARKETING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B36	Digital Marketing	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B36	Digital Marketing	3	EC	40	60

Objectives:

1. To acquaint students with the various concepts, tools, techniques and platforms used in the planning and execution of different digital marketing campaigns.
2. To develop a customer centric digital marketing strategic campaign building perspective and campaign optimizing skills in students
3. To sensitize the students to the emerging technologies and changing trends in the field of digital marketing.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the basic concepts, tools and frameworks related to marketing in a digital world	2
CO2	Apply specific concepts and frameworks related to planning search engine marketing campaigns using case studies and mini project	3
CO3	Apply specific concepts and frameworks to plan content marketing related to direct marketing (email & mobile) and social media marketing campaigns	3
CO4	Analyse different digital marketing tactics using various tracking tools with campaign optimisation mindset	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	3	3	1	3	-
CO3	3	3	1	3	-
CO4	3	3	2	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus

Module I

Overview of Digital marketing and the online environment – origins, characteristics, internet users and digital advertising industry size, type, growth. Digital marketing strategy in Owned, earned and paid media. Digital marketing campaign planning process.

Module II

User experience-Website and other digital assets planning, design and development. SEO- onsite and offsite tactics. Content marketing strategy- Video marketing.

Module III

Basics of Search advertising & Online display advertising- concepts, tools and strategies connected to planning and running advertising campaigns.

Module IV

Social Media strategy. Social media advertising – with paid, owned and earned media strategy. Marketing, Social media usage statistics, An Overview of implementing Social media advertising in some of the popular platforms like Facebook, Instagram, LinkedIn, Whatsapp and YouTube. Measuring the effectiveness of social media strategy and advertising- analytics and tools.

Module V

Direct marketing – basics of Email and Mobile marketing. Online PR and Reputation Management. Tracking, analysing, and optimising digital marketing activities- overview of Web Analytics and conversion optimization-. introduction to Universal Analytics and Google Analytics 4. - Understanding Google Analytics Reports.

References

1. E marketing- The essential guide to marketing in the digital world, 7th edition, . Red and Yellow, 2022.
2. Greg Jarboe, Matt Bailey and Michael Stebbins , Digital Marketing Fundamentals- OMCP guide , Wiley, 2023.
3. Seema Gupta, Digital marketing 3rd Edition,.McGrawHill. 2022.
4. Puneet Bhatia , Fundamentals of Digital Marketing , 3rd Edition Pearson, 2023.

ENTERPRISE RESOURCE PLANNING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B68	Enterprise Resource Planning	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B68	Enterprise Resource Planning	3	EC	40	60

Objectives:

1. To expose the students to the technical aspects of ERP systems, particularly to those that helps in the process of infrastructure planning, selection, implementation, pitfalls, and administration of these systems.
2. To make the students able to participate in planning and implementation of enterprise-wide systems and technologies in their career.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the need of resources planning in an organization	2
CO2	Understand the role of stakeholders and the ERP implementation life cycle	2
CO3	Apply ERP concepts and techniques to translate business requirements into functional specifications and map business processes.	3
CO4	Select the right ERP solution and roll out strategy and the appropriate technologies for each business scenario.	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	-	-	-
CO2	3	3	1	1	-
CO3	3	3	1	1	-
CO4	3	3	1	1	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites:

Basic understanding of business functions, business processes, Information Technology, Software and Database systems

Syllabus

Module – I:

Introduction to ERP:

Evolution of ERP, MRP, and MRP II, Challenges of System Islands and Need for Integration, Enterprise-wide Software Solutions: Integrated vs. Traditional Systems, Overview of ERP Packages, Products, and Markets, Benefits, Critical Success Factors, and Pitfalls of ERP Implementation, Impact on Organization Performance and Business Processes, Digital Transformation and ERP: Case Studies.

Module – II:

ERP Implementation:

Importance of Product, Process, and People in ERP, Selection of ERP Products, Consultants, and Vendors, Opportunities and Challenges in ERP Selection and Implementation, Business Process Reengineering (BPR) Concepts, Change Management and Resistance to Change, Integrating ERP with Other Systems, Post-Implementation Training and Support

Module – III:

Functional Architecture of ERP:

Modules in ERP Systems and their Salient Features, Comparison of Various ERP Modules, Implementation Life Cycle and Framework, Business Process Modelling and Gap Analysis, IT Infrastructure Preparation and Benefits Measurement, Implementation Obstacles and Risk Factors

Module IV:

Technical Architecture of ERP:

Communication and Networking in ERP Systems, Client-Server Systems and Distributed Computing, Database Management Systems and Data Warehousing, Web-Based Technologies and Cloud Architecture, Mobile ERP and Service-Oriented Architecture (SOA), Customization, Configuration, and Integration

Module V:

ERP and Strategic Management:

Extending ERP Scope through Supply Chain Management (SCM), Differentiation between ERP and SCM, Customer Relationship Management (CRM) Concepts and Solutions, Digital Business, E-Business, and ERP, Industry 4.0 and Intelligent ERP,

Business Analytics, Big Data, IoT, AI integration, Odoo and Security Issues, Recent Developments, Future Trends, and International Business Implications, Case Studies and Real-world Applications

References

1. Hammer, M., & Champy, J. (2009). *Reengineering the corporation: Manifesto for business revolution*, Harper.
2. Ptak, C. A., & Schragenheim, E. (2003). *ERP: tools, techniques, and applications for integrating the supply chain*. CRC Press.
3. Leon, A. (2014). *ERP demystified*. Tata McGraw-Hill Education.
4. Garg, V. K., & Venkitakrishnan, N. K. (2003). *Enterprise Resource Planning: concepts and practice.* PHI Learning Pvt. Ltd..
5. Motiwalla, L. F. (2011). *Enterprise systems for management*. Pearson Education India..
6. Altekar, R. V. (2004). *Enterprisewide resource planning: theory and practice*. PHI Learning Pvt. Ltd.

STRATEGIC MANAGEMENT OF INFORMATION TECHNOLOGY

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B86	Strategic Management of Information Technology	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B86	Strategic Management of Information Technology	3	EC	40	60

Objectives:

1. To develop an understanding of use of Information Technology as a strategic tool for business management.
2. To focus on development of Information Technology leadership.
3. To enable the participants understand the process of formulating and implementing IT strategies in organizations.

Course Outcomes

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Develop a sound understanding of the intimate relationship between business processes, organizational systems and ways of working with the world of ICT. Understanding importance of new generation technologies, intermediate software and services for a successful business	2
CO 2	To apply the know-how on how strategic direction is supported by ICT and, on the other hand, to understand the importance of strategic direction in the ICT function. Should be able to unite business and technology to generate a common vision.	3
CO 3	Analyzing the IT needs that are required in a business environment and understanding how the information systems are built. Analyzing the organization's current situation and establishing improvements for its processes using ICT tools.	4
CO 4	Evaluate security mechanisms in the treatment of and access to information in a local or distributed processing system. Evaluate how technology can be used to achieve strategic objectives based on the needs of the diverse business areas.	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	-	-
CO2	3	3	3	3	3
CO3	3	3	3	3	-
CO4	-	3	-	3	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites:

1. Basic Understanding of Information Technology (IT) Concepts
2. Basic Project Management Skills
3. Familiarity with Business Management Principles

Syllabus

Module – I

Introduction to IT applications – transaction processing – IS for managerial decisions - Sustaining competitive Advantage by use of IT, -Key issues in Information Systems management and the role of IT leaders- Strategic importance of IT in Business Innovations.

Module – II

Planning for critical success factors – IT planning frame works - Analytical Framework for Strategic IT Initiatives; Frame work focusing on stages of growth –- Value chain analysis – Porter's five forces model management planning and control needs, Creativity.

Module – III

IT implementation – gap analysis - implementation frame work – implementation strategies - BPR- managing change – post implementation issues - Framework for appraising IT implementation- evaluation of inter organizational systems – project planning with IT – application with emerging technologies.

Module – IV

Introduction to Security: Need for security and control, Risks to Information system data and resources, Definitions of Information security, computer crimes and virus, Internal control Types of security; Data input /output control Data encryption; Tele-communication Security Physical security, Logical Access security, Dial-in access security, network management control, Authentication protocols, internet/intranet/ extranet security; Developing IT strategies to support business strategies and initiatives.

Module - V

IT governance frameworks and best practices (e.g., ISO 27001, NIST); Managing IT-related risks, compliance, and security; IT audit and performance measurement for governance effectiveness; Poject management methodologies and tools for IT projects; Building and leading high-performing IT teams; Collaboration and communication strategies for distributed IT teams.

References

1. Ross, J. W., Beath, C. M., & Quaadgras, A. (2019). Designed for Digital: How to Architect Your Business for Sustained Success. MIT Press.
2. Luftman, J. (2016). Managing IT Human Resources: Considerations for Organizations and Personnel. IGI Global.
3. Chew, E. K., & Gottschalk, P. (2009, January 1). *Information Technology Strategy and Management*. https://doi.org/10.4018/978-1-59904-802-4
4. Galliers R D Strategic Information Management Challenges and StrategiesInformation System, Oxford, Butterworth-Heinemann, 1994.
5. McKemmey James : Waves of Change: Business Evolution through Information Technology Boston, HBS Press 1995
6. Neuman, Seev Strategic Information systems: Competition through Information technologies New York, MacMillan College, 1994
7. Nolan Richard L Creative Destructior: A six stage process for transforming the organization Boston, HBS Press 1995.
8. Parker, Marilyn m. Strategic Transformation and Information technology,

Paradigms for Performing while Transforming Englewood Cliffs, New Jersey, Prentice hall Inc. 1996

9. Somogyi, E K and Wallers, Robert, Towards Strategic Information systems, Tunbridge, Kent Publishing 1987
10. Ward, John Strategic Planning for Information Systems, Chichester, John Wiley, 1996.

15.2.6 International Business

INTERNATIONAL FINANCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B12	International Finance	3	EC	50	50
For School of Management Studies, CUSAT						
	24-37A-0B12	International Finance	3	EC	40	60

Objectives:

1. To enhance the understanding on functioning of foreign exchange markets, and use of various instruments.
2. To enhance the understanding on risk exposure and risk management approaches in international business.
3. To develop skills for using derivatives instruments and strategies for in international finance markets, and forming appropriate strategies to advice clients for taking positions in the market.
4. To learn currency quotation, cross currency quotations and arbitrage possibilities.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Understand the micro structure of the internation finance m markets, trading motives mechanism, and payoffs.	2
CO 2	Applying/taking positions with market instruments in line with market outlook/risk management requirements.	3
CO 3	Analysing the technical/ and other parameters of the contract, and connecting with market signals to judge a position.	4
CO 4	Evaluate the international financial market conditions, instrument, currency trends and firm's exposures.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	-	-	2
CO2	2	2	1	2	1
CO3	1	3	1	3	1
CO4	1	3	1	2	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Completion of basic course in financial management/banking

Syllabus:

Module I: Introduction to International Finance and markets

Global Economy -monetary system; Globalization- Balance of payments – significance- preparation of BOP statement – Link between BOP and the economy - Eurocurrency market, international bond market, international equity market, international money market.

Module II: Foreign Exchange Market

Forex market- regulator – FEMA- authorized dealers Exchange Rate Mechanism: Exchange rate quotations, direct and indirect quotes, bid and ask quote, Nominal, real and effective exchange rates, cross currency rates- triangular arbitrage.

Module III: Foreign exchange markets – instruments and trading

Spot Market: Meaning, Features, Currency arbitrage: Forward Market: Meaning, Features, Arbitrage in forward market; Market for Currency Futures: Meaning, Forward and Futures Contracts, Hedging in currency Futures Market; Market for Currency Options: Types of Option Market, Types of Options, Option properties and payoffs.

Module IV: Risk exposure and financing for international business

Risk exposure -meaning, Types of Exposure, Hedging of exposure. Purchase power parity- interest rate parity. Portfolio investment - FDI-FII -ADR-GDR-IDR.

Module V: Swaps

Concept -- interest rate swaps -currency swaps- speculation and hedging using swaps- economic advantages and value creation using swaps - credit derivatives

References

1. Apte.P.G. International Financial Management.TataMcGraw Hill, New Delhi
2. John C Hull, *Options Futures and Other Derivatives*, Pearson Education.
3. Francis Cherunilam: International Economics, Tata McGraw-Hill Education PrivateLtd., New Delhi
4. Maurice D. Levi: International Finance – The Markets and Financial Management of Multinational Business

INTERNATIONAL MARKETING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B31	International Marketing	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B31	International Marketing	3	EC	40	60

Objectives:

1. familiarise students with the principles of international marketing.
2. acquaint students with the methods and means of conducting international business.
3. enable students to develop international marketing mix strategies.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Explain the principles of international business.	1
CO 2	State export documentation, procedures and aspects of Indian foreign trade policy	2
CO 3	Examine the global marketing decisions of various firms	3
CO 4	Distinguish international marketing from domestic marketing mechanics	4
CO 5	Appraise international marketing mix strategies for market offerings.	5
CO 6	Formulate international marketing mix designs for products and services.	6

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO5	PSO5
CO1	1	1		2	1
CO2	2	2		2	2
CO3	2	2		2	1
CO4	3	3		3	1
CO5	3	3		3	1
CO6	3	3	1	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Syllabus:

Module I: Introduction to International Marketing

Introduction to international business-Special problems/features of international marketing vis-a-vis domestic marketing; internationalisation stages and international marketing orientations; benefits of international marketing; International Marketing Environment.

Module II: Market Entry decisions

International marketing research; market profiling analysis and selection; market entry and operating strategies ; exporting; licensing; contract manufacturing; foreign assembly, foreign production; joint ventures; production in free areas; third country location; counter trade; strategic alliance.

International market segmentation and market coverage strategies- differentiated marketing; undifferentiated marketing; concentrated marketing; niche marketing.

Module III: International Marketing Mix (Product and Distribution)

Global Product Strategies: Product Design, Packaging and Labeling, Warranty and Service Policies, international marketing and PLC; New Product Development, Global Strategies for Services & Brands. International distribution vs Local distribution mechanisms; e-commerce and e-logistics.

Module IV: International Marketing Mix (Pricing and Promotion)

Pricing decisions: Global Pricing Framework, Pricing Basics, Marginal Cost Pricing and its importance, Transfer Pricing, Counter trade, Systems Pricing, Pricing and Positioning, price quotation – preparation of quotations. Promotion Decisions: Promotions – international advertising – sales promotion in international markets – international advertising – direct mailing – personal selling – exhibition – generic

Module V: Export Import scenario

International marketing organization; export department; subsidiary; foreign branches/offices; global organisation;Foreign direct investment. Import-Export Policy Export Documentation- Export Procedure; International Technology Transfer and Counter Trade; Trade distortions and marketing barriers, legal protection

Foreign trade strategy of India; Foreign Trade Policy, export promotion measures; analysis of global trade and foreign trade of India; major issues within India‘s export sector.

References

1. Keegan, W. (2015). *Global Marketing*. Prentice Hall of India.
2. Cateora, P., & Graham, J. L. (2019*). International Marketing*. McGraw Hill.
3. Onkvisit, S., & Shaw, J. (2019). *International Marketing*. Prentice Hall of India.
4. Korwar, A. (1997). *Creating Markets across the Globe*. Tata McGraw Hill.
5. Rajagopal. (2007). *International Marketing*. Vikas Publishing.

GLOBAL HUMAN RESOURCE MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B49	Global Human Resource Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B49	Global Human Resource Management	3	EC	40	60

Objective:

1. This paper helps the students to learn how environmental and institutional constraints, including culture, impact human resource planning and other human resource functions of international firms.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
	After completion of the course, the student will be able to:	
CO1	Demonstrate understanding of the basic concepts related to global human resource management in the context of international mergers and acquisitions, technological advancements, employee discipline and cultural convergence.	2
CO2	Apply theories global human resource management strategies to build a future ready, competent and diverse workforce	3
CO3	Analyse and narrow down different issues related to global HR management affecting organization operating at international level.	4
CO4	Evaluate the impact of relevant global human resource management interventions internationalization on strategic HRM and its practices including staffing, compensation management, HR practices for engagement and employee relations	5
CO5	Evaluate the HR strategies and policies in the light of of increasing globalisation of human resources, with particular reference to HRM in multinational corporations.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3		PSO4	PSO5
CO1	3	3	1		-	3
CO2	3	3	1		-	3
CO3	3	3	1		-	3
CO4	3	3	1		-	3
CO5	3	3	1		-	3
CO6	3	3	1		-	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus

Module I:

Key perspectives in Global HRM – Factors influencing the need for Global HRM – Domestic Vs. Global HRM, Strategic International HRM, Design and Structure of the Multinational Enterprise**.**

Module II:

International merger & acquisitions and Global HRM – Competitive HR strategies of MNCs – Global HRP – Global staffing International Workforce Planning and Staffing: Manpower planning, International Recruitment, Selection and Repatriation– Global training and development – Global performance management – Global compensation management, benefits, taxes.

Module III:

Technological advancements and Global HRM – Impacts of demographic changes and migration – Offshore sourcing – Managing international assignments including career planning.

Module IV:

Employee discipline in Global HRM – Cross-national cooperation and conflicts – Workplace discrimination, Employment Law, Labor Standards and Ethics : international perspective.

Module V:

Cultural convergence and divergence in Global HRM – Hofstede's cultural dimensions – Grievance handling in Global HRM - Global employee relations - Global HRM challenges and trends – Case studies

References

1. Charles M. Vance and Yongsun Paik (2009), Managing a Global Workforce, PHI, New Delhi. 2. BiswajeetPattanayak (2004), Human Resource Management, PHI, New Delhi.
2. Amitabh DeoKodwani and Senthil Kumar, S. (2006), Global Human Resource Management, ICFAI University Press
3. Hugh Scullion and David G. Collings (2011), Global Talent Management, Routledge
4. Peter J. Dowling, Marion Festing, and Sr. Allen D. Engle (2008), International Human Resource Management, Cengage Learning.

INTERNATIONAL LOGISTICS MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B65	International Logistics Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B65	International Logistics Management	3	EC	40	60

Objective:

1.The objective of this course is to impart a general and clear idea of international logistics systems and management.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Ability to recall the basic concepts and terms related to International Trade and Logistics Management. Basics of Export and Import including documentation. Recalling the types of resources used in Sea, Land, and Air transport. Factors influencing Choice of Mode of transport.	1
CO2	Develop a sound understanding of the Characteristics and uses in operation of the important resources used in Logistics such as in different systems for transport of Goods over land, Sea, and Air. The current ways of operation of the logistics systems, in India and Internationally. Typically understand the cargo movement systems using different modes of transport and the role of storage in it.	2
CO3	Effectively apply International Trade and Logistics knowledge and solution approaches, tools and techniques used for planning, directing, and controlling operations in a Logistic system.	3
CO4	Use cognitive skills, technical knowledge to investigate, analyse and synthesize complex information related to practices of International Trade and Logistics in business situations.	4
CO5	Apply technical knowledge and use data, theories, and models to evaluate and implement, appropriate solutions to problems related to Logistics management. Evaluate the impact of the decisions in Logistics management on other functional areas.	5
CO6	Demonstrate and use cognitive, technical, and creative skills to conceive and develop solutions to complex problems related to Logistics Management.	6

CO- PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	1	2	-
CO2	3	3	2	1	
CO3	3	3	1	1	
CO4	3	3	2	2	1
CO5	3	3	1	1	-
CO6	2	3	1	1	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I :

Introduction to International Trade and importance of Integrated logistics management – concept, evolution, and development; Process of Import and Export, Importance of logistics management in international business, International Logistics: functions and intermediaries. Issues involved in the movement of goods. Logistics information system – positioning information in logistics; logistics information systems design; I.T. in logistics; strategic information linkage. Total cost approach to Logistics. Liabilities of carriers. Marine Insurance for Cargo. Warehousing, repacking, and other value-added services provided by logistics service providers. 3 PL and 4 PL logistics services. Performance measurement of logistic systems. Introduction to Documentation for Export.

Module II:

The general structure of shipping industry; cargo types; vessels and vessel characteristics; linear operations and tramp operations; chartering of bulk ocean carriers; the ocean linear conference system; freight structure and practices; coordination; role of intermediaries – forwarding and clearing agents; freight brokers; stevedores and shippers agents. Containerisation types of Containers and ICDs. Layout and working of container terminals. Port system and sub systems, port organization and management. Responsibilities of port trusts, Growth and status of Ports in India, Inland water transport. Issues in Sea transport. Regulatory authorities for sea transport and their roles.

Module III:

Introduction to Road transport system, Classification of Vehicles. Road network in India: types of roads, Road transport companies and their operation in Full truckload business and in less than truckload business. Road parcel service business. Fleet management systems. Integrated Logistics provided by Road transport companies. Documents and Permits required in road transport system. Problems in road transport. Regulatory authorities involved with road transport system.

Module IV:

Rail Transport system, Types of railway wagons, rakes, marshalling operations and yards, Railway goods freight structure, Railway Parcel service operations. Railway goods service operations. Procedure for availing railway parcel or goods service and the documentation involved. Operations at a railway goods yard/siding. Operations and control in the railways. Organization of Indian Railways.

Module V:

Introduction to Air transportation, Air transport geography, Types of aircraft, airline, and air cargo operations, Import and export process of cargo by air, Intermediaries in air cargo operations, freight structure, carrier and consignee liabilities. The layout of the Airport: facilities on the Airside and city side for passengers, cargo, and aircraft. Regulatory authorities for air transport and their roles.

References

1. James, F. R., Edwin, R. H., & William, C. C. (2011). *The logistics handbook*. Editora: Mc. GrawHill. Hardcover..
2. Wood, D. F., Barone, A., Murphy, P., & Wardlow, D. (2002). *International logistics.* Springer Science & Business Media.
3. Lambert, D. M., & Stock, J. R. (2001). *Strategic logistics management* (Vol. 69). Homewood, IL: Irwin.
4. Brodie, P. (2013). *Dictionary of shipping terms*. Informa Law from Routledge.
5. Bes, J. (1975). *Chartering and Shipping Terms*. Barker & Howard Ltd;
6. Button, K. (2022). *Transport economics*. Edward Elgar Publishing.
7. Kumar, S., & Mehrotra, S. (2010). *Bankruptcy to billions: How the Indian Railways transformed*. OUP Catalogue.

EXPORT AND IMPORT – POLICIES AND PROCEDURES

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B87	Export and Import– Policies and Procedures	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B87	Export and Import– Policies and Procedures	3	EC	40	60

Objectives:

1. To familiarise students with the legal and regulatory frameworks governing international trade, including export and import laws, tariffs, quotas, and trade agreements.

2. To provide in-depth understanding of the legal and regulatory environment surrounding international trade.
3. To equip students with the knowledge and skills necessary to navigate the complex documentation and compliance procedures involved in export and import activities (India).
4. To enable participants to identify potential risks associated with export and import operations and develop effective strategies to mitigate these risks.
5. To empower participants to optimize export and import processes, improve efficiency, and enhance competitiveness in the global marketplace.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the legal and regulatory environment surrounding international trade comprising various trade policies, customs regulations, and compliance requirements established by governmental and international bodies.	2
CO2	Understand how to accurately complete essential documentation for export and imports such as commercial invoices, packing lists, certificates of origin, and customs declarations.	2
CO3	Understand the importance of compliance with trade regulations and will learn best practices to ensure adherence to relevant laws and standards.	2
CO4	Understand common risks in international trade, such as currency fluctuations, geopolitical instability, and regulatory changes.	2
CO5	Analyse risk assessment methodologies and develop risk mitigation plans tailored to specific trade scenarios, including strategies for managing financial, legal, and operational risks.	3

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	2	-	-	-
CO2	3	2	-	-	-
CO3	3	2	-	1	-
CO4	3	2	-	1	-
CO5	3	2	-	1	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Objective:

1. The objective of this course is to give students a thorough understanding of India's Foreign Trade policy, Export-Import procedures and Documentations, Pricing and Payment Terms, and Institutional Framework for the promotion of foreign trade in India.

Module I

International Trade- Reasons, Features, Benefits, ~~Advantages~~. Trade Creation vs Trade Diversion. Export Licensing-registration formalities. Types of Exporters-Manufacturer\Merchant Exporter. Methods of Exporting.

Module II

Documentation – Aligned Document System-commercial and Regulatory Documents, Certificate of Origin, Bill of Lading, GR Form, Shipping Bill, Consular invoice. Pricing-Factors, Objectives, Strategies. Payment Terms-L\C, D\A, D\P. Sale Terms, ICC and Price Quotations, INCOTERMS – FAS, F.O.B, C.I.F, and C&F.

Module III

Foreign Trade Policy (Latest)- Highlights, Special Focus Initiatives, Export incentives, Schemes, Assistance viz. MEIS, SEIS, DBK, Institutional Framework: Export Promotion Councils, Commodity Boards, DGFT, FIEO, ICA, ECGC, EXIM Bank

Module IV

Exports- Processing of an Export Order. Quality Control, Pre-Shipment Inspection, Role of clearing and forwarding agents, and Customs House Agents. Export finance – pre and post shipment credit. Realizing Payment of Export Proceeds, Negotiation of Documents. Special schemes for trade promotion: SEZ, EPZ and EOUs, Deemed Exports, Town of Export Excellence, EPCG Schemes and Other Incentives for Exporters, Retirement of Export Documents.

Module V

Imports – Categories of Importers, Procedures and Policies, legal dimensions of import procedure, Prohibited\Negative\Centralized List. Import documentation-Bill of Entry, Customs Formalities, Warehousing of Imported Goods, Retirement of Import Documents. Excise Formalities and Import restrictions - Tariff and Non-Tariff Barriers. Trade bloc: different forms, European Union, USMCA, AIFTA

References

1. Handbook of Import-Export Procedures, Ministry of Commerce, Government of India, New Delhi
2. Export Import Procedures and Documentation, Khushpat S, Jain, Himalaya Publishing House
3. Export Marketing, TAS Balagopal,Himalaya Publishing House
4. International Marketing (Text and Cases), Francis Cherunilam, Himalaya Publishing House
5. Export: What, Where and How, Paras Ram, Anupam Publishers
6. Exports – Do it Yourself, Mahajan M.I., Snow White Publications
7. Export Documentation and Procedures, , Nabhi Publications
8. Export Management, D.C. Kapoor, Vikas Publishing House

15.2.7 Data Science and Business Analytics

ADVANCED DATA ANALYTICS FOR BUSINESS DECISIONS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B80	Advanced Data Analytics for Business Decisions	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B80	Advanced Data Analytics for Business Decisions	3	EC	40	60

Objectives:

1. Gain an in-depth understanding of multivariate data analysis, regression, and dimensionality reduction to drive informed and ethical business decisions.
2. Learn to apply statistical techniques like Factor Analysis, PCA, and Regression Analysis in practical business contexts for improved decision-making and prediction.
3. Combine qualitative and quantitative analysis to understand market trends and customer behavior, using Conjoint Analysis and Multidimensional Scaling for strategic insights.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Understand the principles behind various statistical tools and techniques used in advanced data analytics, such as regression analysis, multivariate analysis, and clustering algorithms.	2
CO 2	Analyze complex datasets using regression analysis, dimensionality reduction techniques, and qualitative data analysis methods to extract meaningful insights and patterns.	4
CO 3	Evaluate the effectiveness and appropriateness of different data analytics approaches in addressing specific business problems and making strategic decisions.	4
CO 4	Develop comprehensive data analytics strategies tailored to specific business contexts, integrating quantitative and qualitative data analysis techniques to drive organizational success.	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	2	-
CO2	2	3	1	3	-
CO3	2	3	1	3	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Thorough understanding of Statistical concepts, Business Research Methods and Business Analytics

Syllabus:

Module I:

Multivariate Data Analysis: Role in business decision-making, ethical considerations; Business Problem Formulation: Defining objectives, translating into data-driven questions; Diagnostic and Inferential applications of Correlation, AVOVA, ANCOVA and MANOVA; Interpreting multivariate effects and interactions; Practical considerations and post-hoc analyses; Business applications and case studies.

Module II:

Multiple Regression: Techniques for multicollinearity and advanced diagnostics; Logistic Regression: Binary outcomes (Maximum Likelihood Estimation (MLE)); Advanced Regression Topics: Non-linear models, regularization methods, and prediction accuracy improvement; Discriminant Analysis: function estimation, and observation classification; Advanced Discriminant Analysis: Model validation strategies and high-dimensional data applications; Real-World Applications: Case studies from diverse industries to illustrate the practical use of regression and discriminant analysis

Module III:

Dimensionality Reduction Techniques: Factor Analysis: Exploratory and Confirmatory Factor Analysis; Practical Implications in real-world scenarios like psychometric testing, market research, and financial modelling; Principal Component Analysis (PCA): data visualization, dimensionality reduction, and feature extraction; Cluster Analysis: K-means clustering, hierarchical clustering, choosing the right approach; Practical Applications: Discuss real-world uses of dimensionality reduction in areas like customer segmentation and image compression.

Module IV:

Qualitative Data Analysis: Introduction to Qualitative Data Analysis: Basic concepts and approaches; Qualitative Data Analysis Techniques: Coding, thematic analysis,

content analysis; Integration of Qualitative and Quantitative Data: Mixed methods; Applications in customer feedback analysis and market trend studies.

Module V:

Conjoint Analysis: Introduction & Applications; Designing Studies: Attributes, levels, choice tasks; Data Collection Methods; Analysis Techniques: Part-worth utilities, preference share estimation; Interpretation & Managerial Implications; Multidimensional Scaling (MDS): Introduction & Applications; Types of MDS: Metric, Non-metric, Proximity Scaling; Designing Studies: Similarity judgments, dissimilarity data; Interpretation & Visualization

Course Delivery should include Lectures, Case Studies, Guest Lectures, Interactive Workshops, Group Projects and online certifications.

References

1. Bruce, A., Dyson, R., & Martin, D. (2023). Data analysis for business decisions (7th ed.). Pearson Education.
2. Doane, D. P., & Montgomery, D. C. (2022). An introduction to business statistics (6th ed.). John Wiley & Sons.
3. Evans, J. R. (2020). Business analytics: Decision making with data (5th ed.). Pearson Education.
4. Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2023). Multivariate data analysis (8th ed.). Pearson Education.

DATA SCIENCE USING R AND PYTHON

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B82	Data Science Using R and Python	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B82	Data Science Using R and Python	3	EC	40	60

Objectives:

1. Gain an understanding of the foundational concepts of Data Science, encompassing programming, mathematics, and statistics.
2. Acquire knowledge of various data pre-processing techniques to prepare raw data for analysis.

3. Learn data visualization techniques to effectively communicate insights derived from data analysis.
4. Develop both conceptual and practical skills in applying Data Science principles to real-world scenarios.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Understand the processes of data science identifying the problem to be solved, data collection, preparation, modelling, evaluation, and visualization.	2
CO 2	Develop skills in using R and Python to do exploratory data analysis on real-time datasets	3
CO 3	Impart skills to analyze real-time problems using R and Python	4
CO 4	Make the students capable of evaluating the problem of knowledge extraction as combinations of data filtration, analysis, and exploration methods.	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	-	-
CO2	3	3	3	3	-
CO3	1	3	3	-	-
CO4	2	3	3	3	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites:

1. Basic Understanding of Data Concepts
2. Familiarity with Statistical Analysis
3. Basic Understanding of Data Visualization:

Syllabus:

Module I

Introduction to Data Science ▪ Data Science in various fields ▪ Data analytics Life cycle ▪ Data scientist▪ Data science team ▪ Types of data ▪ Classification of digital data ▪ Source of data.

Module II

Mathematics for DS ▪ Probability ▪ Statistics ▪ Linear algebra ▪ Calculus for DS ▪ ANOVA Hypothesis testing

Module III

Introduction to R ▪ Basic Operations in R ▪ Math Operations in R ▪ Control structures ▪ Functions in R ▪ Import and Export files in R ▪ Joins ▪ One way and Two way tables, Matrices

Module IV

Introduction to Python ▪ Pythons Operations ▪ Packages ▪ Data types ▪ Functions ▪ Error Handling ▪ Data Analytics ▪ Visualization in Python▪ML and AI Packages

Module V

Exploratory Data Analysis ▪Data Preprocessing ▪ Data Transformation ▪ Data reduction Feature extraction ▪ Univariate and multivariate analysis

References

1 *A Tour of Data Science: Learn R and Python in Parallel*. (2020, November 11). Routledge & CRC Press. https://www.routledge.com/A-Tour-of-Data-Science-Learn-R-and-Python-in-Parallel/Zhang/p/book/9780367895860

2 Chantal D. Larose, Daniel T. Larose, Data Science Using Python and R,Wiley, 2019, ISBN: 9781119526810

3 B,UmaMaheswari, R.Sujatha, Introduction to Data Science : Practical Approach with R and Python, Wiley, ISBN: 9789354640506

4 WesMcKinney, Python for data analysis ,OReilly,ISBN:978-1-491-95766

5 Paul Barry,Head First Python, OReilly,ISBN: 9781491919538

ADVANCED VISUAL ANALYTICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B84	**Advanced Visual Analytics**	**3**	**EC**	**50**	**50**
For Recognized Colleges, CUSAT						
	24-37A-0B84	**Advanced Visual Analytics**	**3**	**EC**	**40**	**60**

Objectives

1. Develop a comprehensive understanding of data visualization techniques and their applications in decision-making processes.
2. Analyze and evaluate different visualization tools and methods, incorporating recent trends and technologies in the field.

3. Apply advanced data visualization techniques to explore, analyze, and communicate insights from complex datasets effectively.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Demonstrate an understanding of the different types of data and their preprocessing techniques, as well as the principles of visual perception and effective design in data visualization.	2
CO 2	Apply data visualization techniques to explore and analyze datasets, using common visualization tools and chart types to create informative and visually appealing visualizations.	4
CO 3	Analyze complex datasets and evaluate the effectiveness of different visualization techniques for presenting multivariate data, utilizing advanced visualization tools and methods for data analysis	4
CO 4	Assess the strengths and limitations of various data visualization approaches, comparing and evaluating different visualization techniques for different data types and scenarios.	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	2	-
CO2	2	3	1	3	-
CO3	2	3	3	3	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Thorough understanding of Business Analytics

Syllabus:

Module 1: Introduction to Data Visualization

Overview of Data Visualization and its importance in decision-making; The Visualization Process: From data collection to presentation; Recent trends: Introduction to interactive and real-time data visualization techniques; Determining business goals and identifying target audiences for effective visualization; Principles of visual perception and design elements in data visualization.

Module 2: Data Foundations and Preprocessing

Understanding different types of data and their characteristics; Data preprocessing techniques for cleaning, transforming, and integrating data from various sources; Recent trends: Introduction to Big Data visualization and handling large datasets; Field operations, data joining, and working with multiple datasets; Numeric calculations, sorting, and filtering techniques for data manipulation

Module 3: Visualization Techniques for Exploratory Data Analysis

Exploring spatial data visualization techniques; Introduction to common visualization tools and their applications; Recent trends: Advanced spatial visualization techniques including 3D visualization and Virtual Reality (VR) visualization; Overview and application of various chart types: Bar Chart, Pie Chart, Line Chart, Area Chart, etc.; Understanding infographics and their role in conveying complex information effectively

Module 4: Advanced Visualization Techniques for Multivariate Data

Introduction to Data Analysis Expressions (DAX) and calculated fields; Designing effective visualizations for multivariate data analysis; Recent trends: Application of machine learning algorithms in advanced data visualization; Structures for evaluating and comparing different visualization techniques for multivariate data

Module 5: Forecasting, Text Analysis, and Dashboard Building

Forecasting techniques and trend analysis using visualizations; Text analysis and visualization techniques including word clouds, word trees, and tag clouds; Recent trends: Integration of Natural Language Processing (NLP) techniques in text analysis and visualization; Comparing and evaluating visualization techniques for different data types and scenarios; Introduction to dashboard design principles and dynamic dashboard creation using slicers and interactive elements.

References

1. Aakash Gohil, (2022), Data Visualization & Storytelling for Business Analysts: Tips, Techniques, Best Practices and the Mindset, Publisher: Notion Press
2. Alexander Loth, (2019), Visual Analytics using Tableau, Wiley Publishers
3. Andy Kirk, (2012), Data Visualization: a successful design process, Packt Publishing Limited
4. Claus O. Wilke, (2019), Fundamentals of Data Visualization: A Primer on Making Informative and Compelling Figures, Publisher: Shroff/O'Reilly
5. Colin Ware, (2008), Visual Thinking for Design, Publisher: Morgan Kaufmann
6. Nathan Yau, (2011), Visualize This- The FlowingData Guide to Design, Visualization, and Statistics, Wiley.
7. Scott Murray, (2013), Interactive Data Visualization for the Web, O'Reilly
8. Tamara Munzner, (2014), Visualization Analysis and Design, CRC Press

ARTIFICIAL INTELLIGENCE FOR BUSINESS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B83	Artificial Intelligence for Business	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B83	Artificial Intelligence for Business	3	EC	40	60

Objectives

1. To build a relational understanding of Artificial Intelligence (AI) and focus on opportunities, limitations, and challenges related to organizational use of AI for value creation.
2. To introduce different types of AI technologies and how they have emerged.
3. To explore key concepts, applications, and ethical considerations related to AI in various business functions, including marketing, finance, operations, and human resources.

Course Outcomes

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Recognize the emergence of Artificial Intelligence and Machine Learning as a competitive strategy.	1
CO 2	Enable the incumbents to understand AI and the role it can play in delivering benefits for your organization	2
CO 3	Develop skills to apply the fundamental concepts of extraction, clustering, prediction, as well as search and planning techniques.	3
CO 4	Analyze the organizational use of AI and organizational challenges related to the management of AI in businesses.	4

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	1	-
CO2	3	3	3	3	-
CO3	3	3	3	3	-
CO4	3	3	3	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites:

1. Basic Understanding of Business Concepts
2. Basic Knowledge of Data Analysis
3. Basic Understanding of Information Technology

Syllabus:

Module I

Introduction to AI ▪ Business Innovation with Big data and AI ▪ Business Opportunities and Challenges with AI Adoption ▪ Overlapping of AI with other fields▪ AI Technologies Landscape; ML, DL, NLP etc.

Module II

Introduction to ML ▪ ML Workflow ▪ Learning Algorithms ▪ Supervised Learning Algorithms for Forecasting▪ Supervised Learning Algorithms with Applications in Predictive Analytics. ▪ Unsupervised Learning Algorithms ▪ Decision trees ▪ Neural networks

Module III

AI Applications in Marketing ▪ Personalization and recommendation systems ▪ Sentimental Analysis and Social Media Mining ▪ Predictive Analytics for Customer Segmentation and Targeting ▪ AI applications in Financial Management ▪ Fraud Detection and Risk Management ▪ Credit Scoring and Loan Approval Systems.

Module IV

AI Applications in Operations ▪ Demand Forecasting and Inventory Optimisation ▪ Predictive Maintenance and Asset Management ▪ Autonomous Vehicles and Smart Logistics ▪ Natural Language Processing ▪ Sentiment technology in business

Module V

AI Applications in HR and Talent Management ▪ Recruitment and Candidate Screening using AI Powered Tools ▪ Workforce Planning and Skill gap Analysis ▪ Ethical and Societal Implications of AI in Business – Privacy and Data Security Concerns in AI Driven Systems ▪ Artificial Intelligence for Growth ▪Practical Exercises Using AI Software Platforms and Tools.

References

1. K, H., & Rodriguez, R.V. (Eds.). (2023). Artificial Intelligence for Business: An Implementation Guide Containing Practical and Industry-Specific Case Studies (1st ed.). Productivity Press. https://doi.org/10.4324/9781003358411
2. Iansiti Marco, Lakhani Karim R, Competing in the age of AI: strategy and leadership when algorithms and networks run the world, Harvard Business Review Press, 2020, ISBN: 9781633697621

3. Davenport Thomas H, The AI advantage : how to put the artificial intelligence revolution to work, Cambridge, Massachusetts. The MIT Press,2018, ISBN: 9780262039178
4. Upadhyay, M. A. Artificial Intelligence for Managers. BPB Publications.2020, ISBN :978-9389898385

DATA MANAGEMENT DYNAMICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B76	Data Management Dynamics	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B76	Data Management Dynamics	3	EC	40	60

Objectives:

1. Develop a comprehensive understanding of Database Management Systems (DBMS) concepts, models, and technologies.
2. Analyze and evaluate different database management approaches, including recent trends and emerging technologies.
3. Apply database management principles to address managerial challenges and capitalize on opportunities for innovation and strategic decision-making in modern organizations.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Demonstrate an understanding of the architecture, structure, and components of modern database management systems, as well as their role in organizational data management strategies.	2
CO 2	Apply database management techniques, such as SQL querying, normalization, and transaction management, to analyze and solve real-world data management problems.	4
CO 3	Critically analyze database design principles, query optimization techniques, and concurrency control mechanisms to evaluate the performance and efficiency of database systems.	4
CO 4	Assess the impact of emerging trends and technologies in database management, such as NoSQL databases, Big Data analytics, and distributed systems, on organizational data strategies and decision-making processes.	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	1	1	2	-
CO2	2	1	1	3	-
CO3	2	1	3	3	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation

Prerequisites: Nil

Syllabus:

Module I: Introduction to Database Management

Overview of data processing concepts and structures; Evolution from file processing to modern Database Management Systems (DBMS); Taxonomy of Data Management Systems and types of database systems; Three-layered architecture and benefits of using a database; Introduction to Data Modelling and Database Administration; Recent trends: Introduction to NoSQL databases, Big Data concepts, and Cloud-based databases

Module II: Data Models and Normalization Techniques

Understanding Object-Oriented and Record-Based data models; Introduction to Entity-Relationship (E-R) Model and E-R diagram examples; Hierarchical, Network, and Relational Models; Normalization techniques: First, Second, and Third Normal Forms; Transaction management: Concepts, properties, and concurrency control; Recent trends: Introduction to Graph databases, Spatial databases, and Time-Series databases

Module III: Relational Database Management Systems (RDBMS)

Schema design and organization in RDBMS; Structured Query Language (SQL) for database querying and manipulation; Distributed Database Systems and challenges in distributed data access; Introduction to Online Analytical Processing (OLAP) and Object-Oriented Databases

Recent trends: Overview of NewSQL databases, In-Memory databases, and Columnar databases

Module IV: Distributed Database Systems

Concepts and challenges in distributed data processing; Transaction management in distributed environments; Physical database structure and concurrency controls; Query optimization techniques in distributed systems; Implementation considerations for successful distributed database systems; Recent trends: Introduction to Blockchain databases, Federated databases, and Multi-model databases

Module V: Managerial Issues and Emerging Trends

Approaches to database design and evaluation criteria; Performance analysis and database backup/recovery strategies; Implementation, maintenance, and database administration issues Exploration of emerging trends in database management, including Object-Oriented databases Decision Support Systems (DSS); Data Mining and Machine Learning applications; Data Warehousing and Business Intelligence; Multimedia databases and Geographic Information Systems (GIS); Distributed Information Systems and Federated databases

References

1. Chavan, H., & Shaikh, S. (2022). Introduction to DBMS: Designing and Implementing Databases from Scratch for Absolute Beginners. BPB Publications.
2. Chopra, R. (2023). Database Management Systems. Khanna Book Publishing
3. Elmasri, R., and Navathe, S. B. (2020). Fundamentals of Database Systems (8th ed.) Pearson.
4. Ramakrishnan, R., and Gehrke, J. (2023). Database Management Systems (4rd ed.). McGraw-Hill Education.
5. Sinha, P.K. (2019). Data Warehousing and Mining. PHI Learning Private Limited.

FINANCIAL MODELLING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B17	Financial modelling	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B17	Financial modelling	3	EC	40	60

Objectives:

1. Impart Spreadsheet skills to the students for building abstract representations (models) of real-world financial decision contexts related to accounting and finance such as interpretation of financial documents, project evaluation, performance of a financial asset or portfolio, project, or any other investment and so on.
2. Build financial decision models for inventory, receivables, cash, working capital estimation, financing, investment and dividend.
3. Practise optimisation techniques for portfolio optimisation and VaR estimation related to investments.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the uses and applications of MS Excel's inbuilt general functions and financial functions to build financial models.	2
CO2	Understand the financial modelling process, features of financial modelling, factors to be considered in constructing efficient financial models.	2
CO3	Develop application skills through case studies to build financial models relating to different decision-making contexts.	3
CO4	Acquire competencies for suggesting measures for improving models, reconstructing models and to make error-free financial models.	4

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	2	-
CO2	3	1	-	2	-
CO3	3	3	-	2	-
CO4	3	3	-	2	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Familiarity with Spreadsheet Applications (Not essential)

Syllabus:

Module I: Introduction to MS Excel and Financial Modelling

Introduction to Excel, Understanding Advanced Features of Excel, VLOOKUP, HLOOKUP, Match Function, Index Function, Index plus Match Function, What if Analysis, Goal seek Analysis-Modelling Database Functions in Excel-Introduction to Financial Modelling, approach to Financial Modelling, Guidelines for Creating Effective Financial Model. Modelling EMI, DEI, WEI, FEI-Creation of Amortisation Schedule- Application of advanced excel features to retrieve information from Amortisation Schedule/data bases.

Module II: Creating Financial Models in MS Excel

Project evaluation through excel modelling-Discount Rate-cost of debt-cost of Equity- modelling CFATs-XNPV-XIRR. Risk Analysis in Project Appraisal. Cash book modelling-inventory modelling-working capital estimation modelling.

Module III: Forecasting Financial Statements in MS Excel

Scenario Analysis and Sensitivity Analysis-Common uses of Scenarios-Sources of Scenarios-Data Tables. Case studies on Scenario and Sensitivity Analysis of companies. Forecasting Financial Statements using Excel-Case studies.

Module IV: Modelling Asset Pricing in MS Excel

Expected Return and Asset Pricing Modelling-Single factor model (CAPM), threefactor model (FFM), four factor model (Carhart), five factor model (FFM). Modelling portfolio return and risk-Jenson Alpha-portfolio optimization-MPT Case studies.

Module V: Risk analysis related to valuation

PDURATION-NPER-IMPT-Modelling valuation of Bonds and Shares-sensitivity and risk analysis related to valuation. Value at Risk (VaR)

References

1. Michael Rees, Principles of Financial Modelling: Model Design and Best Practices Using Excel and VBA, Wiley
2. Joachim Häcker & Dietmar Ernst, Financial Modelling: An Introductory Guide to Excel and VBA Applications in Finance, Palgrave
3. Danielle Stein Fairhurst, Using Excel for Business and Financial Modelling: A Practical Guide, Wiley
4. Jules Nkansah Love to Excel: A Financial Modelling Master class for the Analyst in You, Partridge
5. Danielle Stein Fairhurst, Financial Modelling in Excel for Dummies, Wiley

HR ANALYTICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B55	HR Analytics	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B55	HR Analytics	3	EC	40	60

Objectives :

1. To familiarise students with the application of statistics in HR decision-making, enable the students to integrate knowledge of metrics and analytical models and their implications for HRM
2. To enable the students to display an understanding of transformational HR operations in interactions with other strategic business concepts.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the scope and applications of HR analytics in managerial decision making	2
CO2	Apply the skills in HR analytic based on the understanding of the different contents delivered to apply them with illustrations and cases	3
CO3	Analyse the real HR data to explore and establish relationships in the areas of HR decisions.	4
CO4	Evaluate the impact of analytics on HR decisions, and appraise HR decisions and strategies using descriptive and predictive techniques	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	-	3	3	1
CO2	1	-	3	3	-
CO3	1	1	3	3	-
CO4	-	-	-	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Knowledge of Managerial Statistics and Business Research Methodology

Syllabus:

Module I: Quantitative HRM

Influence of decision science on HR: Linking measures to organizational effectiveness, Contemporary HR measurement and approaches. Evolution of HR Analytics; HR Metrics and HR Analytics; Analytical Pyramid- Descriptive and Predictive models; Intuition versus analytical thinking; Ethical issues in Analytics; HRMS/HRIS and data sources; Analytics frameworks like LAMP, HCM: 21 Model.

HR measurement: Traditional vs. contemporary HR measures; Fundamental analytical concepts from statistics and research design; analytical concepts from economics and finance. Analytical Foundation of HR measurement.

Module II: Descriptive Analytics- HR Reporting

Recruitment Metrics; Performance and compensation metrics; Learning and developmental metrics. HR's role in the value chain. Human Resources Balanced Score Card.- FTE- Utilization Ratio. - Dashboard creation

Module III: Descriptive Analytics- HR Effectiveness Measures

Measures of efficiency, effectiveness and impact in HR processes and optimizing HR decisions. Linking HR measures to business results; choosing the right measures for scorecards; Identifying and using key HR Metrics. Metrics and organisational Ethics

Module IV: Strategic Analytics

Workforce segmentation and search for critical job roles; Statistical driver analysis – association and causation- Data requirements; identifying data needs and gathering data; HR data quality, validity and consistency; Using historical data; Data exploration; Data visualization; Association between variables; Insights from reports; Root cause analysis of HR issues.(Workshop Mode)

Module V: Predictive Analytics

Descriptive and indicative models for Employee retention and turnover; workforce productivity and performance; scenario planning. (Workshop Mode)

References

1. Becker,B E ., Huafelid,M.A. &Ulrich.D(2001).*The HR Scorecard: Linking people, strategy, and performance*. Harvard Business Review Press.
1. Bhattacharyya, D.K. (2017). *Understanding Theories and Applications of HR Analytics.*Sage Publications.
2. Banerjee, P., Pandey, J., & Gupta, M. (2019). Practical applications of HR analytics: A step-by-step guide. SAGE.
3. Valerie, P., &Andreasson R. HR metrics : Bench marking human resources
4. *HR Metrics standards & glossary published by the HR metrics service*. Version 8.0/December 2012
5. *HR metrics service, HR metrics Interpretation guide published by BC HRMA version 3.4* / December 2012.

MARKETING ANALYTICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B38	Marketing Analytics	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B38	Marketing Analytics	3	EC	40	60

Objectives:

1. to demonstrate the importance of marketing analytics in solving marketing problems.

2. to acquaint students with various techniques for analyzing marketing data to help make decisions.
3. to enable students to solve business problems using analytical techniques.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's taxonomy levels
After the completion of the course, the student will be able to:		
CO 1	Demonstrate the value of taking an analytical approach to marketing decision-making.	2
CO 2	Apply key marketing analytics techniques in solving marketing problems	3
CO 3	Deploy data analytics tools in marketing decision-making	4
CO 4	Assess business scenarios from patterns in data.	5
CO 5	Solve business problems through modern analytical approaches.	6

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO5	PSO5
CO1	2	2		2	
CO2	2	2		2	
CO3	3	3		3	
CO4	3	3		3	
CO5	3	3		3	

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: The Art and Science of Marketing Decisions

Introduction to Marketing Analytics: Meaning and scope, Sources of marketing data, Data Analysis - Exploratory Analysis, Descriptive Analysis, Predictive Analytics, Prescriptive Analytics; Marketing analytics in the age of big data- Ethical issues.

Module II: Customer Analytics and Digital Analytics

Customer Journey mapping- Process; Use of analytics; Customer Lifetime Value- Need, computation; Churn rate and its computation; Market basket analysis; Logistic regression

Digital Analytics- Web metrics, Conversion rate. Exit Rate, Bounce rate, Click-through rate, Page views, Unique visitors; A/B testing; Social Media Analytics

Module III: Analytics for Segmentation, Targeting and Positioning

Segmentation- Data collection and analysis for Segmentation, Classification Trees for Segmentation; Targeting - Choosing Target Segments; Size estimation; Valuation; Cluster & Discriminant analysis, RFM analysis; Product Positioning using Perceptual Maps- MDS

Module IV: Product Analytics

New Product decision Models; New Product Design, Conjoint Analysis for Product Design, Marketing Decisions; Forecasting the sales of New Products- S curve, Bass Diffusion model and applications. Customer Feedback Metrics- Net Promoter Score

Module V: Analytics for Pricing and Promotion

Pricing – Goals, Analytics for Bundling, Analytics for Price skimming, Conjoint Analysis for Pricing decisions; Revenue management

Promotions – Types of Promotions, Discounting; Measuring Ad effectiveness; Market Mix Modelling and Sales forecasting using Regression

References

1. Gupta, S., & Jather, A. (2021). *Marketing Analytics.* Wiley.
2. Venkatesan, R., Farris, P., & Wilcox, R. T. (2014). *Cutting-edge marketing analytics: Real world cases and data sets for hands-on learning.* Pearson Education.
3. Winston, W. L. (2021). Marketing Analytics: *Data-driven techniques with Microsoft Excel*. Wiley Publications.
4. Palmatier, R. W., Peterson, A., & Germann, F. (2022*). Marketing Analytics Based on First Principles*. Bloomsbury.
5. Lilien, G. L., Kotler, P., & Moorthy, K. S. (2015). *Marketing Models*. Prentice-Hall.

SIMULATION AND MODELLING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B67	Simulation and Modelling	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B67	Simulation and Modelling	3	EC	40	60

Objectives:

1. The objective of this course is to teach students methods for modelling of systems using discrete events and System Dynamics simulation.

2. The emphasis of the course will be on modelling and on the use of simulation software. The students are expected to understand the importance of simulation in manufacturing, telecommunication, IT and service industries etc.
3. By the end of the course students will be able to formulate a simulation model for a given problem, implement the model in software and perform simulation experiments and analyze results and draw conclusions.

Course Outcomes

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		**Revised Bloom's Taxonomy Level**
After completion of the course, the student will be able to:		
CO1	Ability to recall the basic concepts and terms related to Simulation and Modelling with emphasis on discrete event simulation and Systems Dynamics simulations	1
CO2	Develop a sound understanding of the characteristics and functions of the tools and techniques used in Simulation and the steps in building and using a simulation model, with emphasis on Discrete event and system dynamics simulations. Understand the data requirements for building a simulation model.	2
CO3	Effectively apply Modelling and Simulation to study small problems related to services and manufacturing involving queues, buffers, machines transport etc, and policy and large system simulation using system dynamics	3
CO4	Use cognitive skills, technical knowledge to investigate, analyze systems using their Models and simulation after proper testing and validation.	4
CO5	Ability to design experiments to evaluate, appropriate solutions to problems related studied using.	5
CO6	Demonstrate and use of Modelling and Simulation to conceive and develop solutions to complex problems related to manufacturing and Services operations.	6

CO- PSO Mapping Table

CO/PSO	PSO 1	PSO 2	PSO3	PSO4	PSO5	
CO1	**3**	**3**	**1**	**2**	**-**	
CO2	**3**	**2**	**2**	**1**	**1**	
CO3	**2**	**3**	**1**	**1**		
CO4	**3**	**3**	**2**	**2**	**1**	
CO5	**3**	**3**	**1**	**1**	**-**	
CO6	**2**	**3**	**1**	**1**	**1**	

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I:

Introduction to Simulation and Modelling: Simulation – introduction, deciding where simulation is appropriate and not appropriate, advantages and disadvantage, application areas, history of simulation software, an evaluation and selection technique for simulation software, general – purpose simulation packages. System and system environment, components of system, type of systems, model of a system, types of models and steps in simulation study. Manual Simulation of Systems: Simulation of Queuing Systems such as single channel and multichannel queue, lead time demand, inventory system, reliability problem, timeshared computer model, job-shop model.

Module II:

Discrete Event Formalisms: Concepts of discrete event simulation, model components, a discrete event system simulation, simulation world views or formalisms, simulation of single channel queue, multi-channel queue, inventory system and dump truck problem using event scheduling approach, Random Number Generation and its use in simulation. Introduction to different techniques to generate random variate. Input Modelling: Introduction, steps to build a useful model of input data, data collection, identifying the distribution with data, parameter estimation, suggested estimators, goodness of fit tests, selection input model without data, covariance and correlation, multivariate and time series input models. Verification and Validation of Simulation Model: Introduction, model building, verification of simulation models, calibration and validation of models:-validation process, face validity, validation of model, validating input-output transformation, test, power of test, input output validation using historical data and Turing test.

Module III:

Introduction to System Dynamics, Definition and fundamentals of system dynamics, Understanding feedback loops and causal relationships, Introduction to stocks and flows, Dynamics of complex systems in business Modelling Techniques, Building stock and flow diagrams, Identifying and modelling feedback loops, Parameterization and calibration of models, Model validation and sensitivity analysis. Simulation Software Tools: Introduction to simulation software (e.g., Vensim, AnyLogic), Hands-on exercises using simulation tools, Creating and running simulation models, Analyzing simulation results.

Module IV:

Applications in supply chain management, marketing, finance, and operations Output Analysis: Experimenting with simulation models, Types of simulations with respect to output analysis, stochastic nature of output data, measure of performance and their estimation, output analysis of terminating simulators, output analysis for steady state simulation. Lab exercises in DE Simulation and mini simulation project.

Module V:

Business Applications of System Dynamics: Case studies on the use of system dynamics in business decision-making Use of Discrete even simulaion in Case Studies: Simulation of manufacturing systems, Simulation of Material Handling system, Simulation of computer systems, Simulation of super market, and some service sector examples.

References

1. Banks, J. (2007). *Discrete event system simulation*. Pearson Education India.
2. Law, A. M., Kelton, W. D., & Kelton, W. D. (2007). *Simulation modelling and analysis*. New York: McGraw-Hill.
3. Banks, J. (1998). *Principles of simulation. Handbook of simulation*, 12, 3-30.
4. Bilash Kanti Bala , Fatimah Mohamed Arshad , Kusairi Mohd Noh (2017) System Dynamics: Modelling and Simulation, Springer. ISBN 978-981-10-2043-8

STRATEGIC DATA MINING FOR BUSINESS INTELLIGENCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B79	Strategic Data Mining for Business Intelligence	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B79	Strategic Data Mining for Business Intelligence	3	EC	40	60

Objectives:

1. Develop a comprehensive understanding of Data Mining techniques and their applications in Business Intelligence.
2. Analyze and evaluate various supervised and unsupervised learning algorithms for predictive modelling and clustering tasks.

3. Apply advanced Data Mining techniques to extract actionable insights from large datasets, incorporating recent trends and technologies in the field.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Demonstrate an understanding of supervised and unsupervised learning techniques in data mining, including classification, prediction, and clustering algorithms.	2
CO 2	Apply data mining algorithms to real-world business scenarios, utilizing techniques such as logistic regression, decision trees, and k-means clustering to analyze and interpret data.	4
CO 3	Critically analyze the strengths and limitations of various data mining algorithms, evaluating their effectiveness in solving business intelligence problems and extracting meaningful insights from datasets.	4
CO 4	Assess the impact of recent trends and advancements in data mining technologies, such as deep learning and graph-based mining, on business intelligence strategies and decision-making processes.	5

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	2	-
CO2	2	3	1	3	-
CO3	2	3	1	1	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Thorough understanding of Statistical concepts and Business Research Methods and Business Analytics

Syllabus

Module I: Introduction to Data Mining

Overview of Data Mining and its applications in Business Intelligence; Understanding the data mining process and its stages; Recent trends: Introduction to Big Data Analytics and Machine Learning in Data Mining; Exploratory Data Analysis (EDA) techniques for data understanding and visualization; Data pre-processing methods including data cleaning, transformation, and normalization; Variable reduction techniques for feature selection and dimensionality reduction

Module II: Supervised Learning Techniques

Understanding supervised learning for Classification and Prediction tasks; Introduction to Simple Classification Schemes and Naïve Bayes Classifier; Application of K-Nearest Neighbors (KNN) algorithm in classification; Classification and Regression Trees (CART) and Chi-Squared Automatic Interaction Detection (CHAID) for decision tree-based modelling; Recent trends: Introduction to Ensemble Learning methods such as Random Forest and Gradient Boosting

Module III: Advanced Supervised Learning Techniques

Logistic Regression and its application in binary classification problems; Discriminant Analysis for multi-class classification tasks; Introduction to Artificial Neural Networks (ANN) and their role in Directed Data Mining; Recent trends: Deep Learning techniques such as Convolutional Neural Networks (CNN) and Recurrent Neural Networks (RNN) in predictive modelling

Module IV: Unsupervised Learning Techniques

Understanding Unsupervised Learning for Clustering tasks; Application of K-Means Clustering for partitioning data into clusters; Hierarchical Clustering methods including Agglomerative and Divisive Hierarchical Clustering; Recent trends: Introduction to Density-based clustering algorithms like DBSCAN and OPTICS

Module V: Advanced Data Mining Techniques

Dimensionality Reduction techniques such as Principal Component Analysis (PCA) for feature extraction; Affinity Analysis and Market Basket Analysis for discovering association rules; Introduction to the Apriori Algorithm for frequent itemset mining; Recent trends: Graph-based data mining techniques for analyzing complex relationships and networks

References

6. Han, J., Kamber, M., and J., (2007). Data Mining: Concepts and Techniques (3rd ed.) Elsevier.
7. Larose, D.T., and Larose, D.C., (2015). Data Mining and Predictive Analytics (2nd ed.). Wiley.
8. Linoff, G. S., and Berry, M. J. A. (2021). Data Mining Techniques: For Marketing, Sales, and Customer Relationship Management. Wiley.
9. Tan, P. N., Steinbach, M., Karpatne, A., and Kumar, V. (2021). Introduction to data mining (2nd ed.). Pearson.
10. Witten, I. H., Hall, M. A., Pal, C. J., and Frank, E. (2019). Data mining. Elsevier.

SUPPLY CHAIN ANALYTICS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B69	Supply Chain Analytics	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B69	Supply Chain Analytics	3	EC	40	60

Objectives:

1. To provide a strong foundation in supply chain analytics in order to handle complex data bases, build advanced analytical models and deliver effective visualization products and comprehensive reports.
2. To equip students with an understanding of the —importance and role of supply chain analytics in the modern business enterprises and how business firms can take advantage with the help of supply chain analytics. Further, for students who wish to specialize in analytics, the course provides a strong foundation for the application of supply chain analytics with analytical platforms.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the basic concepts and applications of Supply Chain management, Inventory, Transportation, warehousing, distribution, Logistics and various analytical methods.	2
CO2	Identify complex business problems in terms of analytical models and make use of the analytical tools for inventory management, facility location and supply chain optimization	3
CO3	Analyze, synthesize and solve complex unstructured SC problems	4
CO4	Design a solution to a business situation, incorporating management practices and theories with principles of Supply Chain and Logistics.	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	1	-
CO2	3	3	-	3	-
CO3	3	3	-	3	-
CO4	3	3	-	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites:

1. A basic course in Statistics, Operations Management, Management Science, Supply chain management and Business Analytics
2. Familiarization with any spreadsheet package

Syllabus:

Module I

Introduction to Supply Chain Analytics: Supply Chain Management – An Overview Supply Chain Analysis -Types of Supply Chains- Advanced Planning - Definition, relevance and scope Supply Chain Analytics, recent trends in Supply Chain Analytics. – Importance of SC Analytics- Introduction to mathematical modelling as a tool to address challenges in production logistics and supply chains. Approaches for Optimization and Simulation- Modelling– Techniques - Problem formulation and choice of modelling- Linear, dynamic, non-linear and stochastic programming - Modelling software- Overview of different Analytic Models - Descriptive models, Predictive Models, Prescriptive Models-Applications in SC-Decision Analytics, Diagnostics Analytics, Cognitive analytics- Applications

Module II

Overview of Supply Chain Models and Modelling Systems: Descriptive models, Predictive Models, Prescriptive Modelling – Data summarization methods – Data description- Data Visualization - Visualization methods and techniques – Principal components -charts and graphs, data queries – sorting and filtering, summarizing data – Important techniques for exploration - Optimization modes, Transportation, Linear Programming- Assignment and Transhipment Problems, Shortest Path, Maximum Flow, Minimum Cost Flow, Problems Aggregate Planning, Sales & Operations Planning -Prescriptive Modelling with Mixed Integer Programming, Off-the shelf modelling system (SLIM), Supply chain operations reference model (SCOR), The network KEIRETSU, Nature-Inspired Intelligence in Supply Chain Management - Prescriptive Modelling, Simulation and Optimization- Monte Carlo Simulation, Queuing Models, Impact of Variability in Supply Chains- Bullwhip effect.

Module III

Flow and network modelling – Network Design- Some analytical results and use of discrete event simulation - Stochastic inventory models -Bullwhip effects – Time series analysis- Forecasting- Applications in Inventory Management - Reliability and maintenance of the production line - Synchronization of maintenance and production activities- Multivariate regression analysis for analysis of performance data. Statistical techniques for estimation of model parameters-AI & Machine learning and Big Data- Models and visualization of cyber physical systems in real time- multi-criteria Decision-making models– Hierarchical decisions making- Decision trees analysis - Expected Utility theory. Concepts of Advanced Planning Systems - Structure of Advanced Planning Systems- Strategic Network Planning- Demand Planning -Master Planning - Demand Fulfilment and ATP- Production Planning and Scheduling -Purchasing and Material Requirements Planning -Distribution and Transport Planning - Coordination and Integration Collaborative Planning- Implementing Advanced Planning Systems

Module IV

Application of Supply Chain Models: A Calibration Model Establishes Position and Performance Gap, Models for Purchasing, Procurement, and Strategic Sourcing, Logistics Models, from Manufacturing to Accepted Delivery, Models for Forecasting, Demand Management, and Capacity Planning, Models for Order Management and Inventory Management- Network planning and design - Supply Chain and Logistics Networks design- Models for Sales and Operations Planning, Advanced Planning and Scheduling Models, Models for Supplier Relationship Management, Models for Customer Relationship Management, Models for Collaborative Design and Manufacturing, Collaborative Planning, Forecasting, and Replenishment Models- Decision Tree analysis- Heuristics optimization- Interpretation of Managerial implication of results of analytics- Industry 4.0 and SC analytics – Importance and Applications.

Module V

Introduction to SC Analytics tools : different types, Applications – R programming: use of RStudio, Simple arithmetic operation and array operation, R as a calculator - Vectors, Matrices, Data frames, Lists Packages and functions - Reading and writing data - Data Visualization, Data Modelling- Applications in SC analytics - Problems - Python programming: arithmetic operations and array operations, Use of matplotlib for plots and charts –Applications in SC analytics - Problems - Spreadsheet Modelling and Analysis- Data Analysis using MS Excel : Analyzing Data, Creating Charts and Graphics and Producing Report with Pivot Table- VLOOKUP and HLOOKUP- Statistical analysis of Data- Goal seek analysis, what-if analysis - SAS : Concepts and Applications – Data Modelling-Applications in SC analytics -

Problems – Familiarization with Visualization tools - Rattle, Tableau and PowerBI – Lean thinking, Value stream mapping - Applications- Applications in SC analytics - Problems Look at Future State of Supply Chain Modelling: Recent developments in theory technology and practices. Future developments and expected improvement in efficiency levels and operational simplicity- Recent Developments and Current Topics in SC Analytics.

References

1. Aaker, D. A., Biel, A. L., & Biel, A. (2013). *Brand equity & advertising: advertising's role in building strong brands*. Psychology Press.
2. Batra, R., Myers, J. G., & Aaker, D. A. (2006). Advertising management. Pearson.
3. Blakeman, R. (2023). *Integrated marketing communication: creative strategy from idea to implementation*. Rowman & Littlefield.
4. Clow, K. E. (2012). *Integrated advertising, promotion and marketing communications, 4/e*. Pearson Education India.
5. Juska, J. M. (2021). *Integrated marketing communication: advertising and promotion in a digital world*. Routledge.
6. Kazmi, S. H. H., & Batra, S. K. (2009). *Advertising and sales Promotion*. Excel Books India.
7. Luck, E., Barker, N., Sassenberg, A. M., Chitty, B., Shimp, T. A., & Andrews, J. C. (2020). *Integrated Marketing Communications*. Cengage AU.
8. Percy, L. (2008). *Strategic integrated marketing communications*. Routledge..
9. Schultz, D., Patti, C. H., & Kitchen, P. J. (Eds.). (2013). *The evolution of integrated marketing communications: The customer-driven marketplace*. Routledge.
10. Sutherland, M. (2020). *Advertising and the mind of the consumer: what works, what doesn't and why*. Routledge.

TEXT ANALYTICS FOR BUSINESS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B85	Text Analytics for Business	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B85	Text Analytics for Business	3	EC	40	60

Objectives:

1. Develop a comprehensive understanding of Text Mining techniques and their applications in business analytics.
2. Analyze and evaluate different text processing methods, incorporating recent trends and technologies in the field.

3. Apply advanced Text Mining techniques to extract actionable insights from textual data, supporting decision-making processes in various business contexts.

Course Outcomes

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Demonstrate an understanding of the differences between data mining and text mining, as well as the challenges and opportunities associated with analyzing text data.	2
CO 2	Apply text mining preprocessing techniques and feature extraction methods to analyze and extract meaningful insights from textual data using freely available tools and libraries.	4
CO 3	Analyze text data using advanced text mining techniques such as sentiment analysis and opinion mining, evaluating the effectiveness of different methods in extracting sentiment and opinions from text.	4
CO 4	Assess the ethical and legal considerations involved in web scraping and text mining, evaluating the reliability and validity of results obtained from text mining analyses.	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	2	3	1	2	-
CO2	2	3	1	3	-
CO3	2	3	3	3	-
CO4	2	3	1	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Thorough understanding of Business Analytics

Syllabus:

Module 1: Introduction to Text Mining

Overview of Text Mining and its significance in business analytics; Distinction between Data Mining and Text Mining techniques; Recent trends: Predictive Text Analytics and real-time case studies in business scenarios; Understanding Text Characteristics and challenges in text data analysis

Module 2: Basic Text Processing Techniques

Language Modelling and Part-of-Speech (POS) tagging for extracting meaning from text; Tokenization methods including word and sentence tokenization; N-grams: Analyzing individual words and multi-word phrases in context; Recent trends: Application of Transformer models like BERT for text processing.

Module 3: Text Mining Preprocessing and Feature Extraction

Text Corpus creation and preprocessing steps: Removing special characters, stopwords, and performing stemming & lemmatization; Part of Speech Tagging and feature extraction techniques; Introduction to Bag of Words model and TF-IDF (Term Frequency-Inverse Document Frequency); Exploring freely available text corpora and datasets for analysis

Module 4: Web Scraping for Text Data Acquisition

Introduction to web scraping concepts and tools: BeautifulSoup, Scrapy; Crawling, parsing, and extracting text data from web pages; Handling pagination and scraping images from web sources; Addressing ethical and legal considerations in web scraping

Module 5: Sentiment Analysis and Opinion Mining

Understanding sentiment and polarity in text data; Business applications of Sentiment Analysis and Opinion Mining; Utilizing open-source libraries like NLTK (Natural Language Toolkit) and TextBlob for sentiment analysis;Text Analytics using freely available tools like RapidMiner and Orange

References

1. Dipanjan Sarkar, (2016), Text Analytics with Python: A Practical Real-World Approach to Gaining Actionable Insights from Your Data, Publisher: Apress; 1st ed. Edition, ISBN-10: 148422387X
2. Gabe Ignatow and Rada Mihalcea, (2017), Text Mining: A Guidebook for the Social Sciences, SAGE Publications, Inc
3. Lane, H., Howard, C., & Hapke, H. (2019). Natural Language Processing in Action. Manning Publications.
4. Mitchell, R. (2018). Web Scraping with Python: Collecting Data from the Modern Web. O'Reilly Media.
5. Russell, M. A. (2019). Mining the Social Web: Data Mining Facebook, Twitter, LinkedIn, Instagram, GitHub, and More. O'Reilly Media.

ANALYTICS FOR FINANCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B18	Analytics for Finance	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B18	Analytics for Finance	3	EC	40	60

Objectives:

1. Master analytical finance tools and techniques to proficiently utilize a range of tools and techniques in analytical finance, including time-series analysis methods, interest rate modelling, exotic derivatives pricing models, and risk analytics methodologies and demonstrate competence in applying these tools through hands-on exercises, case studies, and theoretical discussions.
2. Apply software skills for financial analysis to develop proficiency in using software tools such as R, EViews, Gretel and MS Excel for financial analysis.
3. Provide students with a foundation for performing data analytics in finance-related roles in commercial and investment banking, venture capital, private equity, asset management.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Develop understanding of the basics of time-series analysis.	2
CO2	Apply the concepts of time-series analysis in modelling and forecasting.	3
CO3	Apply the concepts of interest rate modelling.	3
CO4	Apply the Monte Carlo techniques in pricing exotic options with variance reduction techniques.	3
CO5	Apply the concept of Copula modelling in estimating VaR.	3

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	-	1	-
CO2	3	3	-	1	-
CO3	3	3	-	1	-
CO4	3	3	-	1	-
CO5	3	3	-	1	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Basic knowledge of statistics

Syllabus:

Module I: Introduction to Financial Analytics

Meaning, uses in decision making, tools and skills required for doing analytics in finance, Discussion on the basics of probability, random variables, density and distribution function, different discrete & continuous distributions, and descriptive statistics.

Module II: Financial Time Series Analysis

Time series data, stationarity, auto-covariance, ACF, white noise, joint test of autocorrelation, Identify the orders of AR, MA, ARMA models, fit the model, generate forecasts and evaluate the forecasts based on statistical and economic significance. Volatility modelling and forecasting based on GARCH family of models with evaluation based on statistical and economic significance.

Module III: Stochastic Calculus for Finance

Concepts and characteristics of stochastic process, Markov process, Martingale, Random Walk, Brownian motion, Brownian bridge, Brownian motion with drift, geometric Brownian motion, stochastic integral, Ito's lemmas, Ornstein-Ulenbeck Process.

Module IV: Interest Rate Modelling

Implementation of bootstrapping, cubic spline without knot and with knots, NS and NSS for yield curve modelling. Implementation of short rate modelling including Vasicek and CIR models.

Module V: Exotic Option Pricing and VaR

Implementation of Monte Carlo simulation for exotic option pricing. Implementation of the antithetic and control variate variance reduction techniques. Basics of various concordance measures and copula. Implement the copula measure in VaR estimation based on Monte Carlo simulation.

References

1. Ruey S. Tsay, Analysis of Financial Time Series (Third Edition), Wiley Publication.
2. Christopher Dougherty, Introduction to Econometrics, Oxford University Press, Indian Edition.
3. D. N. Gujarati and D.C. Porter, Essentials of Econometrics, McGraw Hill, International Edition..
4. Jan Kmenta, Elements of Econometrics, Indian Reprint, Khosla Publishing House.

15.2.8 Entrepreneurship

DESIGN THINKING

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B70	Design thinking	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B70	Design thinking	3	EC	40	60

Objectives:

1. Understand the fundamentals of design thinking and its relevance in operations management.
2. Explore the latest developments in design thinking and innovation within the business field.
3. Develop practical skills in applying design thinking principles to real-world operations scenarios.
4. Foster creativity, collaboration, and problem-solving abilities among students. Cultivate an innovation focused mind set and skillset.
5. Develop ideas for innovative products and services by keeping users' needs at the centre of the development process.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Understand the fundamental principles and philosophy of design thinking, including empathy, ideation, prototyping, and iteration.	2
CO2	Apply design thinking techniques to better understand the social, emotional, and physical needs of customers	3
CO3	Analyze operational challenges, demonstrating the ability to conduct user research, define problem statements, ideate solutions, prototype concepts, and test ideas with appropriate techniques to turn customer needs into human-centered solutions.	4
CO4	Develop creative solutions for operational challenges, integrating design thinking principles with innovation concepts, user insights, market trends, and rapid experimentation to drive product and service innovation within organizations	6

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	2	-
CO2	3	3	-	3	-
CO3	3	3	1	3	1
CO4	3	3	1	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus

Module I: Introduction to Design Thinking (DT)

Understanding Design, Design Thinking, Principles and philosophy of DT, Evolution of DT in business, Design Thinking Mindset, Case studies and examples of successful DT implementations.

Stages of DT, Empathy and Observation Skills, Understanding empathy, Observation techniques, Practical exercises for empathy development, Creativity and Ideation, Principles of creativity, Ideation techniques, Brainstorming sessions and creative exercises

Module II: Design Thinking Process

Overview of the DT Process, Introduction to key concepts: empathy, ideation, prototyping, and iteration, research brief.
Techniques for conducting user research and gathering insights, Defining Problem Statements, Framing and dissecting a design challenge, User segmentation and stakeholder mapping, new concept thinking, Concept generation methodologies, Prototyping and Experimentation, Principles of prototyping, prototyping technologies, Experimenting/testing

Module III: Applying Design Thinking

Integration of DT into Operations Management, identifying opportunities for innovation and improvement, Case studies of companies using DT in operations
Applying design thinking methodologies to optimize processes, Growth and strategic foresight, Visualization Techniques, Use of diagrams and maps in design thinking, Storytelling techniques

Module IV: Design Thinking for Product and Service Innovation

Understanding Customer Needs, Customer journey mapping, Design research and user testing, Designing Customer-Centric Solutions, addressing unmet needs and pain points, developing new product/service concepts and prototypes, Business Acumen and Business Model Design, TRIZ for innovation and problem solving

Module V: Future Trends and Emerging Applications

Current Trends and Developments in DT, Exploration of emerging technologies and methodologies, Integration of DT with Agile and Lean Principles, Ethical Considerations and Social Responsibility, Group Projects and Presentations

References

1. Tim, B., & Barry, K. (2019). *Change by design: how design thinking transforms organizations and inspires innovation.* HarperCollins.
2. Mootee, I. (2013). *Design thinking for strategic innovation: What they can't teach you at business or design school.* John Wiley & Sons.
3. Kelley, T. (2001). *The art of innovation: Lessons in creativity from IDEO, America's leading design firm* (Vol. 10). Currency.
4. Kramer, S. J., Person, A. E., Wolpert, J. D., Craumer, M., Peebles, E., Drucker, P. F., ... & Levitt, T. (2003). *Harvard business review on the innovative enterprise.* Harvard Business School Publishing Corporation, Boston, MA.
5. Savransky, S. D. (2000). *Engineering of creativity: Introduction to TRIZ methodology of inventive problem solving*. CRC press.
6. Orloff, M. A. (2016). *ABC-TRIZ: Introduction to creative design thinking with modern TRIZ modelling*. Springer.

MARKETING RESEARCH

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B29	Marketing Research	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B29	Marketing Research	3	EC	40	60

Objectives:

1. To encourage students to adopt an applied approach toward marketing research by deploying the case study method.
2. To familiarize students with real-world marketing scenarios that present research opportunities by undertaking research projects.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Demonstrate research aptitude using research tools	3
CO2	Examine data collected from student projects for drawing research insights to marketing problems.	4
CO3	Appraise the effectiveness of adopted strategies against the tactical and strategic objectives of firms.	5
CO4	Develop innovative approaches in research methods for marketing applications	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	3	-	3	-
CO2	1	3	-	3	-
CO3	1	2	1	3	-
CO4	1	3	-	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Business Research Methods, Marketing Management

Syllabus:

Module I: Introduction to Marketing Research

The global marketing research industry, classification of marketing research, Marketing research in business-to-business, marketing research brief and its components, writing a marketing research proposal, defining the marketing research problem, components of the research approach, objective/theoretical framework, analytical model, research questions, and hypotheses.

Module II: Research Methods

Research design classification, relationships between exploratory, descriptive and causal research. Secondary data - internal and external, its collection and analysis. Primary data- qualitative vs. quantitative research, rationale for using qualitative research, ethnographic research, grounded theory, action research

Module III: Qualitative and Quantitative Research

Qualitative research. Focus group discussions- planning and conducting FGDs, offline vs. online FGDs, moderator's role- Triangulation. In-depth interviews vs. Projective techniques. Data analysis- Grounded theory, content analysis, semiotics, qualitative data analysis software. Quantitative research. Survey methods, Observation techniques, Experiments and Test markets

Module IV: Data Collection Tools

Measurement and Scaling- multi-item scales, scale evaluation. Questionnaire design, cross-cultural survey designs. Social media research and social listening, sentiment analysis, research with image and video data

Module V: Data Analysis

Testing of hypothesis using various multivariate analysis tools- Factor Analysis, Cluster Analysis, Discriminant Analysis, Multidimensional Scaling (MDS), Conjoint Analysis, Structural Equation Modelling (SEM), Canonical Correlation Analysis, Correspondence Analysis, MANOVA (Multivariate Analysis of Variance). Report preparation and presentation

References

1. Aaker, D. A., Kumar, V., & Day, G. S. (2008). *Marketing research*. John Wiley & Sons.
2. Hair, J. F., Bush, R. P., & Ortinau, D. J. (2009). Marketing research in a digital environment.
3. Joseph, F. H. J. R., Barry, J. B., Rolph, E. A., & Rolph, E. A. (2010). *Multivariate data analysis*. Pearson Prentice Hall.

4. Kinnear, T. C., & Taylor, J. R. (1996). *Marketing research: an applied approach*. McGraw-Hill.
5. Malhotra, N. K. (2020). *Marketing research: an applied orientation*. Pearson.
6. Malhotra, N. K., Nunan, D., and Birks, D. F. (2017). *Marketing Research: An applied approach*. Pearson.
7. McDaniel Jr, C., & Gates, R. (2018). *Marketing research*. John Wiley & Sons.

PROJECT MANAGEMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B61	Project Management	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B61	Project Management	3	EC	40	60

Objectives:

1. Identify the elements of the Project management life cycle
2. Understand Project management process.
3. Use basic tools and techniques to plan, organize, and manage a project.

Course Outcomes

COs and Revised Bloom's Taxonomy Level

Course Outcomes	Course Outcomes	Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO 1	Discuss the fundamental concepts and principles of project management across various sectors	1
CO 2	Apply project management techniques to select, plan, execute, and control projects effectively, considering project-specific requirements.	3
CO 3	Develop proficiency in feasibility analysis, risk assessment, estimation, scheduling, and progress monitoring, enabling informed decision-making to maximize project profitability and minimize risks throughout the project lifecycle.	4
CO 4	Develop working competencies in tools such as Project management Software that are used to manage projects for better and more consistent project completion.	4

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	-	-
CO2	2	3	-	2	-
CO3	2	3	-	3	-
CO4	-	2	2	3	-

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Familiarity with basic concepts in financial management and management science

Syllabus:

Module 1: Introduction to Project Management

Meaning and importance of Project, Concepts, and attributes of Project, Types of projects, projects vs day to day operations, Steps in defining the project, Measuring project success, Choosing the appropriate Project Management Structure: Organizational considerations and project considerations, Project life cycle, Project stakeholders, Project Management Office, Potential Benefits and Challenges of Project Management,

Module 2: Project Initiation

Generation of Project ideas – Procedure for Idea Generation, screening of ideas using non-financial models such as Project Rating Index, decision tree and Analytical Hierarchical Processing (AHP), Project feasibility study, components of project feasibility report, Financial Appraisal of a project - Project Cost, Project, Means of Finance, Cost of Capital, Projected Cash Flow Statement, Measuring Project Profitability – Payback Period, Accounting Rate of Return, NPV, Internal Rate of Return and BCR Method, Use of Special Purpose Vehicles (SPVs) in projects.

Module 3: Project Planning

Project scope, project charter, project plan, Work Breakdown Structure, Responsibility matrix, Estimating time, resources and cost, Estimation approaches, issues in estimation, Preparing the project budget, project schedule, Network Diagrams, Critical Path Method, PERT method, Critical chain approach, Precedence diagramming, Crashing of Project Network, resource management in projects, resource-constrained projects, resource levelling, reducing project duration, project fast tracking, Project Risk Management, Risk management framework, identifying important Risk items, risk mitigation strategies

Module 4: Project execution, monitoring, and closure

Measuring project progress, The project control process, Variance analysis, Earned value Method, Change Management, Building high performance teams, Conflict and

Negotiation, Project Communication, Project Quality Management, Performance Measurement, project closure, project auditing, Abandonment Analysis

Module 5: Project Management Methodologies

Comparison of methodologies - Waterfall, Agile, Scrum, Lean, Kanban; Agile Principles - Philosophy - Agile Manifesto – Values, Scrum Roles, Scrum Artifacts, Scrum Ceremonies, Implementing Scrum and Agile methods- Tools, Challenges, Pitfalls, Strategies. Practice with project management software- exercises and case studies

References

1. Jack R. Meredith, Scott M. Shafer, Samuel J. Mantel Jr. *Project Management: A Managerial Approach*. Wiley Publications
2. Clegg, S. R., Skyttermoen, T., Vaagaasar, A. L. *Project Management*. Sage Publications.
3. Pinto, J. K., *Project Management.* Pearson Education.
4. Chandra, P. *Projects, Planning, Analysis, Selection, Financing, Implementation and Review.* Tata McGraw Hill.
5. Gido, J., Clements, J., Baker, R. *Mind Tap for Successful Project Management. Cengage Learning..*
6. Sutherland, J. *Scrum: The Art of Doing Twice the Work in Half the Time*. Crown Business.

MANAGING INTERPERSONAL AND GROUP PROCESSES

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B53	Managing Interpersonal and Group Processes	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B53	Managing Interpersonal and Group Processes	3	EC	40	60

Objectives:

1. To equip students with the understanding of group and team dynamics, enhancing their ability to analyze and improve group cohesiveness and team performance.
2. To improve students' interpersonal communication skills, focus on listening, feedback, and trust-building to foster effective organizational collaboration.
3. To train students in practical interpersonal and group intervention techniques, preparing them to address and resolve conflicts.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Recall the definitions, elements, and types of groups and teams, including characteristics of high-performing teams and foundational principles of interpersonal communication.	1
CO2	Understand the dynamics of group formation, distinctions between groups and teams, the process of interpersonal communication, and the theoretical perspectives underpinning these concepts.	2
CO3	Apply knowledge of group roles, team dynamics, and interpersonal skills in practical settings such as role-plays, caselets, team activities, and self-assessment exercises.	3
CO4	Analyze group effectiveness, including decision-making, social facilitation, group polarization, and groupthink, as well as the challenges of interpersonal communication in the digital age.	4
CO5	Evaluate strategies for overcoming obstacles to effective teamwork, enhancing interpersonal effectiveness, and selecting appropriate intervention techniques.	5
CO6	Create strategies for developing successful teams, improving interpersonal relationships, and designing interventions using techniques like counseling, transactional analysis, and sensitivity training	6

CO – PSO Mapping Table:

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	1	1	1	2	-
CO2	2	1	2	3	1
CO3	3	3	3	3	1
CO4	3	3	2	3	2
CO5	3	3	3	3	2
CO6	3	3	3	3	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites:

Basic understanding of the organizational behavior concepts and communication.

Syllabus:

Module I: Groups Dynamics at Work

Group- Definition, Elements of Group Process; Types of groups; properties of groups; Group roles and status relationships; Dynamics of group formation; structure and dynamics of work groups; group cohesiveness. Dynamics of Informal groups; Group effectiveness- Group decision making, Group Influence- Social Facilitation, Social loafing, Deindividuation, Group Polarisation, Group Think; Group synergy, Conformity, Persuasion and prejudice. *(Administration of role plays and Caselets to understand the group dynamics are recommended as part of course delivery)*

Module II: Team Dynamics

Concept of Teams; Distinguishing Team from groups; Types of teams; Characteristics of High Performing Teams; Obstacles to effective Team Work, overcoming obstacles; Team Process Facilitation-Developing Successful Teams; Training in Team skills- Working with teams, running meetings, etc. *(Administration of team activities to understand the team dynamics are recommended as part of course delivery).*

Module III: Interpersonal Communication

Essential elements of Interpersonal communication Process; Theoretical perspectives; Key interpersonal skills; Self-awareness; Listening; reading non-verbal messages; Interpersonal awareness; Interpersonal Trust- Self assessment exercises on Self-awareness, Self-Management, Interpersonal Needs, Emotional intelligence, listening habits and Providing feedback. *(Administration of self-assessing questionnaires and feedback are recommended as part of course delivery)*

Module IV: Training in Interpersonal effectiveness

Improving interpersonal communication-Johari Window- Interpersonal Conflict and training in interpersonal conflict handling strategies and negotiation-Leadership Effectiveness; Training in Leadership styles - Interpersonal communication in digital Age-Challenges *(Administration of self-assessing questionnaires and activity-based training sessions are recommended as part of course delivery)*

Module V: Intervention Techniques

Counselling Techniques, Grid Management, Transactional Analysis, Sensitivity Training, Process Consultancy, Skill development techniques. *(Training sessions and organisational assignments/projects are recommended as part of the course delivery)*

References

1. Myers, D., & Twenge, J. M. (2022). *Social Psychology*. McGraw-Hill Education.
2. Robbins, S. P., & Hunsaker, P. L. (2011). *Training in Interpersonal Skills: Tips for Managing People at Work*. Pearson.

3. Thompson, L. L. (2021). *Making the Team: A Guide for Managers* (6th ed.). Pearson.
4. Chen, M., & Rybak, C. J. (2018). *Group Leadership Skills: Interpersonal Process in Group Counselling and Therapy*. Sage Publications.
5. de Janasz, S., Dowd, K., & Schneider, B. (2014). *Interpersonal Skills in Organisation* (5th ed.). Tata McGraw-Hill Education.

CREATIVITY FOR INNOVATION AND ENTREPRENEURSHIP

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B89	Creativity for Innovation and Entrepreneurship	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B89	Creativity for Innovation and Entrepreneurship	3	EC	40	60

Objectives

1. To enable the application of theoretical frameworks to analyze the relationship between creativity and innovation in entrepreneurship.
2. To understand the effectiveness of various creativity techniques in solving real-world entrepreneurial challenges.
3. Develop practical skills in implementing creativity techniques to drive entrepreneurial innovation and success.

Course outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Utilize creativity tools to develop innovative solutions for entrepreneurial challenges	3
CO2	Evaluate the effectiveness of different creativity techniques in entrepreneurial contexts.	5
CO3	Assess the feasibility and potential impact of creative ideas on entrepreneurial ventures.	4
CO4	Generate novel entrepreneurial strategies leveraging design thinking and creativity methodologies.	6

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	2	3	-
CO2	3	3	3	1	-
CO3	3	3	2	1	-
CO4	3	3	3	1	2

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisite: Nil

Syllabus:

Module 1: Understanding Creativity and Innovation

Introduction to creativity and innovation in entrepreneurship-relationship between creativity and innovation-Historical perspectives - Theoretical frameworks -Case studies of innovative entrepreneurs and their creative processes- Creative process-Creative problem solving- Divergent/ Lateral thinking

Module 2: Cultivating a Creative Mindset

Developing a growth mindset conducive to creativity-Techniques for enhancing divergent thinking and idea generation- Overcoming creative blocks and fostering resilience in the face of failure- Cultivating curiosity, openness to new experiences, and tolerance for ambiguity-Practices for mindfulness and creativity

Module 3: Design Thinking for Entrepreneurial Innovation

Introduction to design thinking -The design thinking process: empathize, define, ideate, prototype, and test-Methods and tools-Applying design thinking to solve real-world entrepreneurial challenge- Case studies of successful entrepreneurial ventures utilizing design thinking principles

Module 4: Creativity Techniques and Tools

Overview of creativity techniques - brainstorming, mind mapping, and SCAMPER-Lateral Thinking-Application of creativity tools-Collaborative creativity: techniques for facilitating group ideation sessions- technology and digital tools to enhance creativity and innovation- Practical exercises and workshops to apply creativity techniques in an entrepreneurial context

Module 5: Implementing Creative Solutions for Entrepreneurial Success

Assessing and selecting innovative ideas for implementation- Prototyping and testing creative solutions in an entrepreneurial context- Strategies for overcoming resistance to change and fostering a culture of innovation-Leveraging creativity for competitive advantage and sustainable growth- Ethical considerations in entrepreneurial innovation and creativity

References

1. Catmull, E., with Wallace, A. (2014). Creativity, Inc.: Overcoming the unseen forces that stand in the way of true inspiration. New York: Random House.
2. Dyer, J., Gregersen, H., & Christensen, C. (2019). Innovator's DNA: Mastering the five skills of disruptive innovators. Boston: Harvard Business School Press.
3. Ina Goller, John Bessant (2024), Creativity for Innovation Management, Second Edotion, Routledge
4. H James Harrington, (2019), Creativity, Innovation and Entrepreneurship, Taylor & Francis

NEW PRODUCT DEVELOPMENT

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B90	**New Product Development**	**3**	**EC**	**50**	**50**
For Recognized Colleges, CUSAT						
	24-37A-0B90	**New Product Development**	**3**	**EC**	**40**	**60**

Objectives:

1. To help students understand stages in the development of a new product
2. To familiarize students with the various nuances of new product development process
3. To equip the students with the best way to manage the new product development process

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Examine various new product decision scenarios using case studies.	3
CO2	Assess the challenges and opportunities involved in new product development.	4
CO3	Appraise the product management process for firms.	5
CO4	Generate scenarios of new product development through the capstone project	6

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	3	2	1	--
CO2	2	3	2	1	1
CO3	2	3	3	3	--
CO4	3	3	3	3	1

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Pre requisites: Nil

Syllabus

Module I: Foundations of New Product Development

New product options- make or buy-types of new products-challenges in new product development- innovation imperative-new product success-new product failure - organising and managing new product development -business models for new products

Module II: Ideation and Concept Development

Managing ideation process-Ideation- generation of ideas-idea screening-concept development-concept testing-marketing strategy development-business analysis—estimating costs and profits

Module III: Product Development Management

Managing product development process – identifying new product opportunities, market research for new product development- creativity techniques- development architecture for prototyping and manufacturing- intellectual property issues in product development

Module IV: Market Testing and Commercialization

Market testing-consumer goods market testing-business goods market testing-commercialisation-Consumer adoption process – stages in the adoption process-influencing adoption process- building markets and creating demand for new products-

Module V: New Product Development Capstone Project

New product business model canvas- Capstone project – New product development – theme based ideation, concepting and business model preparation and presentation

References

1. Philip Kotler and Kevin Lane Kelley, 2021, Marketing Management, Pearson Publishers (16th Edition)
2. Karl.T Ulrich, Steven D Eppinger & Maria C Yong, Product Design and Development, Mc Graw Hill Publishers (7th Edition)
3. Christoph Loch & Stylianos Kavadias, Handbook of New Product Development Management

NEW BUSINESS MODELS

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For School of Management Studies, CUSAT						
	24-37A-0B91	New Business models	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B91	New Business models	3	EC	40	60

Objectives:

1. To develop an understanding of different business models
2. Explore key elements of business model for innovation and transformation.
3. Assess the impact of core business by competitive forces and rethink how organizations capture values in the digital economy.

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Analyze traditional and modern business models, identifying components and reasons for failure.	4
CO2	Apply digital business model concepts to assess platform and subscription-based strategies.	3
CO3	Evaluate FinTech and SaaS business models, including metrics for growth and competition dynamics.	5
CO4	Create business models using the Business Model Canvas, integrating digital transformation principles.	6
CO5	Evaluate and propose sustainable business models	5

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	-	2	-	-	-
CO2	2	3	-	-	-
CO3	2	3	-	2	-
CO4	3	3	3	3	2
CO5	3	3	2	3	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites: Nil

Syllabus:

Module I: Understanding Business Models

Business Models-definition-Understanding -traditional business models-modern business models- Components of business models- Customer Value Proposition-profit formula-resources and capabilities, Business Model Failure: Reasons and Remedies

Module II: Digital Business Models

Platform business models-network effects-challenges to network mobilization and strategies-pipeline business models-introduction-features-comparison- Introduction to subscription-based and membership-driven business models-Understanding the value proposition and customer retention strategies -Case studies

Introduction to platforms and market places-B2B market places- examples – digital business models: merchant models - competition in online markets-competitive advantage in online markets-drivers of choice between merchant and platform business models

Module III: FinTech & SaaS Business Models

Modern business – SaaS business model, delving deeper into SaaS bm fintech business model- fintech segments-Aggregator and on-demand business models- introduction to D2C model -introduction to metrics-type of metrics- metrics for business growth

Module IV: Building Business Models

Business Model canvas-elements- case studies-Digital transformation- shifts in product/customer value proposition and revenue model enabled through digitalization: resources, capabilities, and constraints for digital transformation.

Module V: Business Models for Sustainability

Sustainable Business Model Frameworks-Triple Bottom Line Approach- Circular Economy Principles-Sustainable Supply Chain Management-Sustainable Innovation and Product Development-Social Entrepreneurship Models-Case Studies on Sustainable Business Models

References

1. Philip Kotler and Kevin Lane Kelley, 2021, Marketing Management, Pearson Publishers (16th Edition)
2. R Srinivasan, 2023, Platform Business Models for Executives, Springer
3. Staffan Heden, 2023, Business Model Innovation, Taylor & Francis Publishing
4. Henk Wijtze Volberda, Frans A, J, Van Den Bosch, Kevin Heij, 2018, Oxford University Press
5. Bernd W Wirtz, Business Model Management-Design-Process-Instruments, 2021, Spinger

ENTREPRENEURIAL FINANCE

Semester	Course Code	Course Title	Credit	CC/ EC	Marks	
					Internal	External
For the School of Management Studies, CUSAT						
	24-37A-0B92	**Entrepreneurial Finance**	3	EC	50	50
For Recognized Colleges, CUSAT						
	24-37A-0B92	**Entrepreneurial Finance**	3	EC	40	60

Objectives:

1. To develop an understanding of different sources of finance for enterprises
2. To have deeper understanding about the unconventional modes of finance

Course Outcomes:

COs and Revised Bloom's Taxonomy Level

Course Outcomes (COs)		Revised Bloom's Taxonomy Level
After completion of the course, the student will be able to:		
CO1	Analyse the importance of finance in entrepreneurial ventures and evaluate financial challenges and opportunities.	4
CO2	Apply financial planning techniques to develop comprehensive financial plans for startup ventures.	3
CO3	Evaluate funding sources for entrepreneurs and apply negotiation skills in securing financing.	5
CO4	Analyse valuation methods for startups, assess financial risks, and devise appropriate exit strategies.	4

CO – PSO Mapping Table

CO/PSO	PSO1	PSO2	PSO3	PSO4	PSO5
CO1	3	1	-	1	-
CO2	3	1	1	-	-
CO3	3	3	2	3	3
CO4	3	3	3	3	3

Note: Correlations Levels: 1 = Low, 2 = Medium, 3 = High, "-" = No correlation.

Prerequisites:

Syllabus

Module 1: Introduction to Entrepreneurial Finance

Entrepreneurial Finance -Overview -Importance of finance in entrepreneurial ventures-Types of entrepreneurial finance (equity, debt, grants, etc.)-Financial challenges and opportunities for entrepreneurs-Case studies of successful and failed entrepreneurial ventures

Module 2: Preparing Financial Plan

Developing a financial plan for a startup-Forecasting revenues, expenses, and cash flows- Budgeting and resource allocation-Financial modelling techniques for startups-Evaluation of financial performance metrics and key performance indicators (KPIs)

Module 3: Funding Sources for Entrepreneurs

-Angel investors, venture capital, and private equity-Crowdfunding platforms and strategies-Government grants and subsidies for startups-Bank loans and alternative financing options-Negotiating terms with investors and lenders

Module 4: Valuation Methods and Techniques

Understanding the valuation process for startups-Common valuation methods (DCF, comparables, etc.)-Factors influencing startup valuation-Valuation challenges and uncertainties-Case studies on the valuation of early-stage ventures

Module 5: Managing Financial Risks and Exit Strategies

-Identifying and managing financial risks in entrepreneurial ventures-Hedging strategies for startups-Exit strategies for investors and founders (acquisition, IPO, etc.)-Financial due diligence processes-Ethical considerations in entrepreneurial finance

References

1. Leach and Melicher, “Entrepreneurial Finance”; 4th edition, ISBN # 13:978-0-538-47815, or 5th edition,
2. Venture Deals, by Brad Feld and Jason Mendelson, Second Edition Steven Rogers, Entrepreneurial Finance: Finance and Business Strategies for the Serious Entrepreneur 3e, Tata Mc Graw Hill, 2014.
3. Douglas Cumming, Entrepreneurial Finance, Oxford University Press, 2012.
4. M J Alhabeeb, Entrepreneurial Finance: Fundamentals of Financial Planning and Management for Small Business, Wiley, 2015.
5. Philip J. Adelman, Alan M. Marks, Entrepreneurial Finance, 5e, Pearson, 2011.
6 Brad Feld and Jason Mendelson ,Venture Deals, Second Edition

APPENDICES

Reg. No.								

1. Model Question Paper for MBA Degree (FT/ Evening-Regular) for SMS

Course code & Course name
Regular/Supplementary

Time: 3 Hours **Max. Marks: 50**

Course Outcomes: On completion of the course, the student will be able to:-

CO1	
CO2	
CO3	
CO4	
CO5	
CO6	

BL – Bloom's Taxonomy: *(L1- Remember, L2 - Understand, L3 – Apply, L4-Analyse, L5-Evaluate, L6-Create)*

PART A

(***Answer ALL questions. Each question carries 2 marks***)

Q. Nos.	Questions	Marks	BL	CO
1		2		
2		2		
3		2		
4		2		
5		2		

(5 x 2 = 10 marks)

PART B

(***Answer ANY FIVE Questions. Each question carries 4 marks***)

Q. Nos.	Questions	Marks	BL	CO
6		4		
7		4		
8		4		
9		4		
10		4		
11		4		
12		4		

(5 x 4 = 20 marks)

PART C

(***Answer ANY TWO questions. Each question carries 10 marks***)

Q. Nos.	Questions	Marks	BL	CO
13		10		
14		10		
15		10		

(2 x 10 = 20 marks)

Reg. No.								

2. Model Question Paper for MBA Degree (FT for Recognised Colleges/ Institutions)

Course code & course name
Regular/Supplementary

Time: 3 Hours **Max. Marks: 60**

Course Outcomes: On completion of the course, the student will be able to:-

CO1	
CO2	
CO3	
CO4	
CO5	
CO6	

BL – Bloom's Taxonomy: *(L1- Remember, L2 - Understand, L3 – Apply, L4-Analyse, L5-Evaluate, L6-Create)*

PART A

(***Answer ALL questions. Each question carries 2 marks***)

Q. Nos.	Questions	Marks	BL	CO
1		2		
2		2		
3		2		
4		2		
5		2		

(5X2=10 marks)

PART B

(***Answer ANY FIVE Questions. Each question carries 5 marks***)

Q. Nos.	Questions	Marks	BL	CO
6		5		
7		5		
8		5		
9		5		
10		5		
11		5		
12		5		

(5X5=25 marks)

PART C

(***Answer ANY TWO questions. Each question carries 12.5 marks***)

Q. Nos.	Questions	Marks	BL	CO
13		12.5		
14		12.5		
15		12.5		

(2x12.5=25 marks)

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