DEPARTMENT OF COMMERCE (SELF – FINANCED STREAM)

CHOICE BASED CREDIT SYSTEM (CBCS)
Learning Outcome-based Curriculum Framework (LOCF) SYLLABUS

Master of Commerce
(Computer Oriented Business Applications)
With effect from 2025-2026

MASTER OF COMMERCE
MADRAS CHRISTIAN COLLEGE
(AUTONOMOUS)
College with Potential for Excellence
Affiliated to University of Madras
Tambaram
Chennai – 600 059

MADRAS CHRISTIAN COLLEGE

VISION

Madras Christian College aspires to be an Institution of excellence transforming lives through education with a commitment to service.

MISSION

Madras Christian College (MCC) with the inspiration of the love of God offers to people of all communities education of the whole person, which is congruous with God's revelation in Christof the true nature of humanity and is appropriate to the needs of India and of the world.

Graduate Attributes

On completion of the M.Com (Computer Oriented Business Application) Degree program, the students will be able to:

S. No.	Graduate Attributes	
1.	**GA 1: Intellectual Competencies**	• Graduates of MCC have a comprehensive and incisive understanding of their domain of study as well as the capability for cross-disciplinary learning. • They have the ability to apply the knowledge acquired through the curriculum as well as self-directed learning to a broad spectrum ranging from analytical thinking to synthesis new knowledge through research. • Forming independent individual opinions regarding academic cores and socially relevant issues.
2.	**GA 2: Professional Ethics**	• Graduates of MCC develop ethical and professional behaviour, which will be demonstrated in their chosen careers and constructive citizenship roles. • They imbibe intellectual integrity and ethics in scholarly engagement and develop a spirit of inclusiveness through interactions with people of special needs and diversity.
3.	**GA3: Leadership Qualities**	• Graduates of MCC inculcate leadership qualities & attitudes, and team behaviour along democratic lines through curricular, co-curricular and extra-curricular activities • They develop managerial and entrepreneurial skills to ideate and create new opportunities along with career readiness and capacity to take up various competitive exams.
4.	**GA 4: Holistic Skill Development**	• Graduates of MCC develop critical thinking, problem-solving, effective communication, emotional and social skills • They develop digital competency to live, learn and serve in society.

5.	**GA 5: Cross-Cultural Competencies**	• Graduates of MCC imbibe cross-cultural competencies through engaging with diverse linguistic, ethnic and religious communities providing scope to understand, accept and appreciate individuals at local, national and international levels. • They develop a global perspective through contemporary curriculum, culture, language and international exchange programmes
6.	**GA 6: Service-Oriented Focus**	• Graduates of MCC have sensitivity to social concerns and a conviction toward social justice through a commitment to active social engagement. • They are endowed with a strong sense of environmental awareness through the curriculum and campus eco-system.
7.	**GA 7: Value-Based Spiritual Development**	• Graduates of MCC are rooted in the principles of ethical responsibility and integrity permeated with Christian values leading to the building of character. • They develop virtues such as love, courage, unity, brotherhood, industry and uprightness.

PROGRAM OUTCOME

PO No.	PO	Description of PO	Mapped with GA
PO–1	Domain Knowledge	• Develop intensive and extensive knowledge and expertise in their respective domains. • Evaluate and create/construct domain specific knowledge in areas of learning, research and industry. • Formulate and extrapolate the knowledge gained to apply in real life situations and competitive examinations. • Develop an aptitude for self-directed learning for excellence in their chosen area within the domain of study.	GA1, GA3, GA4
PO–2	Applicative knowledge and Lateral Thinking	• Translate theoretical understanding to experimental knowledge and solve complex problems using Systems/Design Thinking. • Apply advanced knowledge and approaches to solve concrete and abstract problems in domain-related and multi-disciplinary issues. • Able to solve problems using unconventional and creative approaches.	GA1, GA3, GA4
PO–3	Innovation and Research	• Develop aptitude for innovation and entrepreneurship. • Identify contemporary research problems, analyze data and propose solutions.	GA1, GA4, GA5, GA6
PO–4	Scientific Communication skills	• Document, prepare and present scientific work as reports and research articles in academic forums. • Critically assess, review and present theories, principles and concepts.	GA1, GA4, GA5, GA6
PO–5	Digital skills	• Use of domain-related advanced software resources, computational skills and digital tools for data analysis, visualization and interpretation. • Ethically apply digital skills to creatively communicate a wide range of ideas and issues related to academic experiences.	GA1, GA2, GA3, GA4
PO–6	Ethical practices	• Apply domain specific ethical principles and practices in academic, professional and social engagements.	GA2, GA6, GA7
PO–7	Career readiness and higher education	• Choose from diverse career options available in local, national and • international realms. • Carry out further research or pursue higher education in the country or abroad.	GA1, GA2, GA5

PROGRAM SPECIFIC OUTCOME (PSO)

PSO No.	Programme Specific Outcomes Upon completion of the M. Com. (Computer Oriented Business Application) Degree Programme the graduate will be able to:	Mapped with PO#
PSO – 1	Comprehend the concepts and application of tools necessary to understand the emerging role of business and predictive analysis	1, 2, 5
PSO – 2	Acquire the skills for accounting, decision-making, problem-solving affairs ofbusiness.	1,2, 4, 5
PSO – 3	Understand analytical and statistical tools of finance and research.	1, 2, 3,5, 7
PSO – 4	Execute the skills in analysing business data, application of relevant analysis and problem solving in areas of business manually as well as technically.	1,2, 4, 5
PSO – 5	Evolve as competent management, financial professional with strong ethical values, capable of assuming pivotal role in various sectors of commerce and technology.	2, 3, 4,5, 6,7

Curriculum Template for M.Com (COBA)

(Effective from – 2025-26)

Semester	Part	Course Code	Course Title	Instruction Hours per Cycle	Duration of Exam	Marks			Credits
						ICA	ESE	Total	
Semester One	**I Major**		Computerized Financial Accounting	6	3	50	50	100	5
	II Major		Advanced Accounting	6	3	50	50	100	5
	III Major		Advanced Statistics	6	3	50	50	100	4
	IV Major		Advanced Excel & MS Access	6	3	50	50	100	4
	I Elective		**Industry 5.0** / RDBMS / Legal Aspects of Business	6	3	50	50	100	5
			Semester One Total	**30**	**-**	**-**	**-**	**-**	**23**
Semester Two	**V Major**		Accounting for Decision Making	6	3	50	50	100	5
	VI Major		Enterprise Resource Planning	5	3	50	50	100	4
	VII Major		**Python Programming**	5	3	50	50	100	4
	VIII Major		Income Tax Law & Practice	6	3	50	50	100	4
	II Elective		**Web Technologies** / Organizational Behaviour / Managerial Economics	6	3	50	50	100	5
	II		Soft Skills	2	3	50	50	100	-
			Semester Two Total	**30**	**-**	**-**	**-**	**-**	**22**

Semester	Part	Course Code	Course Title	Instruction Hours per Cycle	Duration of Exam	Marks			Credits
						ICA	ESE	Total	
Semester Three	**IX Major**		Research Methodology and Data Analysis using Software Package	6	3	50	50	100	5
	X Major		Financial Management	5	3	50	50	100	4
	XI Major		E-Commerce	5	3	50	50	100	4
	XII Major		Security Analysis & Portfolio Management	6	3	50	50	100	4
	III Elective		**PHP and MySQL** / JAVA / Computerised Auditing	6	3	50	50	100	5
	II		Soft Skills	2	3	50	50	100	8
			Semester Three Total	**30**	**-**	**-**	**-**	**-**	**30**
Semester Four	**XIII Major**		Insurance &Risk Management	6	3	50	50	100	4
	XIV Major		Banking & Financial Services	6	3	50	50	100	4
	XV Major		Project	6	3	50	50	100	5
	XVI Major		Internship	6	3	50	50	100	5
	IV Elective		**Statistical Analysis using R Programming** / Human Resource Management / Marketing Management	6	3	50	50	100	5
	II		Summer Internship						2
			Semester Four Total	**30**					**25**
			Part I Total	**116**	**-**	**-**	**-**	**-**	**90**
			Part II Total	**4**	**-**	**-**	**-**	**-**	**10**
			Grand Total	**120**	**-**	**-**	**-**	**-**	**100**

List of Elective Papers 2025-2026 onwards

(Effective from – 2025-26)

Sem	Part	Course Code	Course Title	Instruction Hours per Cycle	Duration of Exam	Marks			Credits
						ICA	ESE	Total	
1	Elective- I		**Industry 5.0**	6	3	50	50	100	5
			RDBMS						
			Legal Aspects of Business						
3	Elective - II		**Web Technologies**	6	3	50	50	100	5
			Organizational Behaviour						
			Managerial Economics						
4	Elective -III		**PHP and MySQL**	6	3	50	50	100	5
			JAVA						
			Computerised Auditing						
5	Elective - IV		**Statistical Analysis using R Programming**	6	3	50	50	100	5
			Human Resource Management						
			Marketing Management						

Internship:

Internship is an integral part of the Post – Graduate programme. It is essential to expose the students to the real life work situation and to strengthen the conceptual knowledge gained in the classroom. Two months internship shall be in banking, financial institutions, insurance, service sector or any other industrial enterprise or consulting organization involving the use of computers. The candidate should submit a report at the end of the study. The Head of the Department shall issue a certificate to the effect that the student has satisfactorily undergone the internship for the prescribed period. 5 credits will be awarded on successful completion.

Project Work:

Project work which is compulsory carries 100 marks. A student should select a topic for the project work in the third semester itself and submit a project report at the end of the fourth semester. Viva voce would be conducted for the project work. The guide and an external examiner shall evaluate the project report and conduct the viva. The project work shall be related to computer applications in business. 5 credits will be awarded on successful completion.

Computerised Financial Accounting

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part I**	**Core I**	**Practical**
Semester	**I**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• **Help students to work with well-known accounting software.** • **Students will learn to create company, enter accounting vouchers, do reconciliation an arrive at financial statements using Tally Software.**		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	**Remember and relate the accounting concepts electronically**	**PSO1, PSO 2, PSO 3**	**K1**
CO 2	**Understand and demonstrate financial accounting details electronically.**	**PSO 1 PSO,2, PSO 3**	**K2**
CO 3	**Identify and apply the relevant accounting procedure electronically**	**PSO 2,PSO 3, PSO 4, PSO 5**	**K3**
CO4	**Categorize and examine the financial accounting details through an accounting software**	**PSO 2,PSO 3, PSO 4, PSO 5**	**K4**
CO5	**Evaluate and interpret the financial accounting details electronically**	**PSO 2,PSO 3, PSO 4, PSO 5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**COs**	**BLOOM'S TAXONOMY LEVEL**
I	**Manual accounting: Introduction to Financial Accounting – Meaning – Accounting Concepts and Conventions – Single Entry System – Double Entry System – Manual Book Keeping Vs Computerized Accounting.**	**18**	**CO1, CO 2, CO 3, CO 4, CO 5**	**K1,K2,K3,K4,K5**
II	**Computerized Accounting: Ledgers – Vouchers – Sales Voucher – Payment Vouchers– Receipt Voucher – Journal Voucher – Contra Voucher. Final Accounts: Trial balance – Profit and Loss A/c – Balance Sheet.**	**18**	**CO1, CO 2, CO 3, CO 4, CO 5**	**K1,K2,K3,K4,K5**
III	**Account Books: Cash / Bank Book – Sales Register – Purchase Register – Statement of Accounts – Bank Reconciliation Statement.**	**18**	**CO1, CO 2, CO 3, CO 4, CO 5**	**K1,K2,K3,K4,K5**
IV	**Inventory Maintenance – Receipt note – Rejection in – Rejection out – Stock Journal- Physical Stock – Purchase Order – Sales Order – Invoice.**	**18**	**CO1, CO 2, CO 3, CO 4, CO 5**	**K1,K2,K3,K4,K5**
V	**Payroll: Enabling payroll – creating pay heads – employee groups employee head – salary details – configuration of salary details – creating units of work – managing and creating attendance /– F 12 payroll configuration – payroll vouchers – creating payroll voucher types - displaying, altering and deleting payroll documents – payroll reports.**	**18**	**CO1, CO 2, CO 3, CO 4, CO 5**	**K1,K2,K3,K4,K5**

Prescribed Books/Textbooks

1. Computerised Accounting Using Tally.ERP 9 Paperback – 2015- Tally Education Private Limited
2. Financial Accounting and Computerised Accounting, Dr. A. Karim, Dr. S.S. Khanuja, SBPD Publishing House.

References

1. Tally ERP 9 Training guide - 4th revised & updated edition, ashok k. Nadhani, 2018
2. Namarata Agrawal, Financial Accounting on Computers using Tally, 2019.
3. Computerised Accounting System - Manoj Bansal and Ajay Sharma, Sahitya Bhawan Publications.

Suggested Reading

1. Mastering Tally ERP 9, Asok K. Nadhani, BPB Publication
2. Tally ERP 9 Training Guide, Kitabmahal.

Web Resources

https://tallytraining.inwww.udemy.com
www.izito.co.in

Method of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments/Quiz	
	Seminars	
	Attendance and class Participation	
External Evaluation	End Semester Examination	**50 Marks**
Total		**100 Marks**

	Course Articulation Matrix												
Course Outcomes	**Programme Outcomes**							**Programme Specific Outcomes**					**Cognitive Level**
	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO7**	**PSO1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**	
CO 1	**3**	**3**	**2**	1	**3**	**-**	1	**3**	**2**	**2**	**-**	**-**	**K1**
CO 2	**3**	**3**	**2**	**2**	**3**	**-**	**2**	**3**	**2**	**2**	**-**	**-**	**K2**
CO 3	**3**	**3**	**2**	**3**	**3**	**2**	**3**	**-**	**2**	**3**	**3**	**3**	**K3**
CO 4	**3**	**3**	**2**	**3**	**3**	**2**	**3**	**-**	**2**	**3**	**3**	**3**	**K4**
CO 5	**3**	**3**	**2**	**3**	**3**	**2**	**3**	**-**	**2**	**3**	**3**	**3**	**K5**
Wt. Avg.	**3**	**3**	**2**	**2.4**	**3**	**2**	**2.4**	**3**	**2**	**2.6**	**3**	**3**	
	Overall Weighted average (PO)						**2.54**	**Overall Weighted Average (PSO)**				**2.72**	

Weightage for Correlation		
0 ≦C ≦ 5%	**No correlation**	**-**
5% <C ≦ 40%	**Low / Slight**	**1**
40% <C < 60%	**Moderate**	**2**
60% ≦C < 100%	**Substantial / High**	**3**

Advanced Accounting

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part I**	**Core II**	**Theory**
Semester	**I**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To prepare financial statements of companies • To interpret companies' financial statements and reports		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	**Remember and recall the accounting standards related to company accounts.**	**PSO 1, PSO 2**	**K1**
CO 2	**Understand and demonstrate the concept of company accounts**	**PSO 1, PSO 2**	**K2**
CO 3	**Identify and apply the various accounting standards**	**PSO2, PSO 3, PSO 4, PSO 5**	**K3**
CO 4	**Analyze the company's statements based on accounting standards**	**PSO 2, PSO 3, PSO 4, PSO 5**	**K4**
CO 5	**Evaluate and interpret financial statements and reports of companies.**	**PSO 2, PSO 3, PSO 4, PSO 5**	**K5**

SYLLABUS

UNIT	CONTENT	HOURS	COs	BLOOM'S TAXONOMY LEVEL
I	Company accounts- Financial statements: Preparation of financial statements-Statutory and Accountingstandard requirements-Balancesheet and Profit and Loss account-Adjustments-Deferred taxes, Taxable income and accounting income, Deferred tax assets andliabilities, Divisible profits and Dividends and Issue of Bonus debentures.	**18**	**CO1, CO2, CO 3,CO4, CO 5**	**K1,K2,K3,K4, K5**
II	Amalgamation–Absorption-External Reconstruction–Internal Reconstruction	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
III	Liquidation of Companies- Modes of winding up-Statement of affairs- Liquidator's final statement of account (Theory and Problems) Corporate financial reporting-Requirements and forms(Theory only)	**18**	**CO1,CO2, CO3,CO4, CO 5**	**K1,K2,K3,K4, K5**
IV	Consolidated financial statements- Consolidation procedure as per Accounting standards-Disclosure requirements as per AS21--Adjustments: Elimination of Intra- group transactions-Contingent liabilities-Unrealized profits- Revaluation of assets and liabilities-Double entry-Bonus shares-Dividends-Sale of shares-Change in parent company equities.	**18**	**CO1,CO2, CO3,CO4, CO 5**	**K1,K2,K3,K4, K5**
V	Value added statements- Format & Contents (Theory only). Segment Reporting- Issues, Primary & Secondary segments, Format-Technical aspects of segment reporting (Problems)	**18**	**CO1,CO2, CO3,CO4, CO 5**	**K1,K2,K3,K4, K5**

Prescribed Books/Textbooks :

1. Gupta and Radhaswamy, Corporate accounting–Sultan chand & sons.
2. Shukla and Grewal, Advanced Accounting - Vikas Publishing house.

References

1. Jain and Narang, Corporate Accounting ,Kalayani publishers
2. Chakraborthi DK,Developmentof Corporate Accountingin India,VenusPubHouse,1994.
3. Advanced Accounting – Dr. Arulnandam and Dr. Raman, Himalaya Publishing house, Mumbai.

Suggested Reading

1. S.N.Maheswari– AdvancedAccountancy,SultanChand&Son
2. Advanced Accounting – S.P. Lyengar, Chand & Sons, New Delhi.

Web Resources

1. https://vipss.yolasite.com/resources/PCC_BOOKS/Advanced%20Accounting%20Vol.%201.pdf
2. https://resource.cdn.icai.org/54233bos43539cp4-u5.pdf
3. https://www.mca.gov.in/Ministry/notification/pdf/AS_17.pdf

Course Articulation Matrix													
Course Outcomes	**Programme Outcomes**							**Programme Specific Outcomes**					**Cognitive Level**
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	
CO 1	**3**	**3**	**-**	**2**	**3**	**-**	**-**	**3**	**3**	**-**	**-**	**-**	**K 1**
CO 2	**3**	**3**	**-**	**2**	**3**	**-**	**-**	**3**	**3**	**-**	**-**	**-**	**K 2**
CO 3	**3**	**3**	**2**	**3**	**3**	**1**	**3**	**-**	**3**	**3**	**2**	**3**	**K 3**
CO 4	**3**	**3**	**2**	**3**	**3**	**1**	**3**	**-**	**3**	**3**	**2**	**3**	**K 4**
CO 5	**3**	**3**	**2**	**3**	**3**	**1**	**3**	**-**	**3**	**3**	**2**	**3**	**K 5**
Wt. Avg.	**3**	**3**	**2**	**2.6**	**3**	**1**	**3**	**3**	**3**	**2.7**	**2**	**3**	
	Overall Weighted average (PO)						**2.51**	**Overall Weighted average (PSO)**				**2.74**	

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments / Open Book Test / Quiz	
	Seminars / Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**50 Marks**
	Total	**100 Marks**

Weightage for Correlation		
0 ≦C ≦ 5%	**No correlation**	**-**
5% <C ≦ 40%	**Low / Slight**	**1**
40% <C < 60%	**Moderate**	**2**
60% ≦C < 100%	**Substantial / High**	**3**

Advanced Statistics

Course Code			
Credits	**4**		
Hours / Cycle	**6**		
Category	**Part - I**	**Core - III**	**Theory**
Semester	**I**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To calculate and apply measures of location and dispersion. • Perform Test of Hypothesis.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	**Define the fundamental concepts in exploratory data analysis.**	**PSO1, PSO2, PSO3, PSO4**	**K1**
CO 2	**Demostrate the concepts of sampling distribution and estimate population parameters.**	**PSO 2,PSO3, PSO4**	**K2**
CO 3	**Apply ethical and professional practices in statistical analysis.**	**PSO2,PSO3, PSO4,PSO5**	**K3**
CO 4	**Analyze the results for data collected through various statistical tools.**	**PSO 1, PSO2, PSO3, PSO 4**	**K4**
CO 5	**Evaluate statistical techniques to make informed decisions and recommendations.**	**PSO2, PSO 3, PSO4, PSO5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**COs**	**BLOOM'S TAXONOMY LEVEL**
I	Statistics – Definition, Types. Types of variables – Organising data - Descriptive Measures. Basic definitions and rules for probability, conditional probability independence of events, Baye‟s theorem, and random variables, Probability distributions: Binomial, Poisson, Uniform and Normal distributions.	**15**	**CO1, CO2, CO3, CO4, CO 5**	**K1,K2,K3,K4, K5**
II	Introduction to sampling distributions, sampling distribution of mean and proportion, application of central limit theorem, sampling techniques. Estimation: Point and Interval estimates for population parameters of large sample and small samples, determining the sample size.	**15**	**CO1, CO2, CO3, CO4, CO 5**	**K1,K2,K3,K4, K5**
III	Correlation analysis, estimation of regression line. Time series analysis: Variations in time series, trend analysis, cyclical variations, seasonal variations and irregular variations. Index Numbers – Laspeyre's, Paasche's and Fisher's Ideal index.	**15**	**CO1, CO2, CO3, CO4, CO 5**	**K1,K2,K3,K4, K5**
IV	Hypothesis testing: one sample and two sample tests for means and proportions of large samples (z-test), one sample and two sample tests for means of small samples (t-test), F-test for two sample standard deviations. ANOVA one and two way – Design of experiments.	**15**	**CO1, CO2, CO3, CO4, CO 5**	**K1,K2,K3,K4, K5**
V	Chi-square test for single sample standard deviation. Chi-square tests for independence of attributes and goodness of fit.	**15**	**CO1, CO2, CO3, CO4, CO 5**	**K1,K2,K3,K4, K5**

Prescribed Books/Textbooks:

1. Business Statistics : Gupta S P & Gupta M P, S Chand & Co.
2. Business Statistics : R S Bhardwaj , Excel Books.

References

1. Fundamentals Of Mathematical Statistics : S C Gupta & V K Kapoor, Sultan Chand & Sons.
2. Fundamentals Of Applied Statistics : S C Gupta & V K Kapoor, Sultan Chand & Sons.

Suggested Reading

1. Statistical Methods In Managerial Decision :Mustafi , Mcmillan2.Basic Statistics : B L Agarwal, New Age International Publishers

Web Resources

1. https://youtu.be/gbzHwBYvYsY
2. https://www.wisdomjobs.com/e-university/quantitative-techniques-formanagement-tutorial-297/about-quantitative-technique-9810.html
3. https://www.scribd.com/document/337308608/quantitative-techniques-formanagement-pdf
4. https://www.tutorialspoint.com/management_concepts/decision_making_proces s.htm
5. https://www.researchgate.net/publication/320042464_decision-making

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments / Open Book Test / Quiz	
	Seminars / Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**50 Marks**
	Total	**100 Marks**

	Course Articulation Matrix												
Course Outcomes	Programme Outcomes							**Programme Specific Outcomes**					**Cognitive Level**
	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PSO1**	**PSO2**	**PSO3**	**PSO 4**	**PSO 5**	
CO 1	2	3	3	3	3	-	3	3	3	3	1	-	K1
CO 2	3	2	3	3	3	-	2	-	2	3	3	-	K2
CO 3	2	3	3	2	2	3	2	-	3	2	3	3	K3
CO 4	3	2	3	2	1	-	3	2	3	2	3	-	K4
CO 5	2	3	2	3	3	3	2	-	3	3	2	3	K5
Wt. Avg.	**2.4**	**2.6**	**2.8**	**2.6**	**2.4**	**3**	**2.4**	**2.5**	**2.8**	**2.6**	**2.4**	**3**	
	Overall Weighted average (PO)						**2.6**	**Overall Weighted Average (PSO)**				**2.66**	

Weightage for Correlation		
0 ≦C ≦ 5%	**No correlation**	**-**
5% <C ≦ 40%	**Low / Slight**	**1**
40% <C < 60%	**Moderate**	**2**
60% ≦C < 100%	**Substantial / High**	**3**

ADVANCED EXCEL AND MS ACCESS

Course Code			
Credits	**4**		
Hours / Cycle	**6**		
Category	**Part - I**	**Core - IV**	**Practical**
Semester	**I**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To learn the advanced formulae to be used in Excel. • To explore the magic of analysing data using Excel • To learn to get report using Excel.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	**Remember the functions and advanced formulae to lay data in readiness for analysis.**	**PSO1, PSO2, PSO3,PSO4, PSO5**	**K1**
CO 2	**Understand the advanced techniques for report visualisation.**	**PSO1, PSO2, PSO3,PSO4, PSO5**	**K2**
CO 3	**Apply the leverage on various methodologies of summarising data.**	**PSO1, PSO2, PSO3,PSO4, PSO5**	**K3**
CO 4	**Analyse the various Calculation, Formula and Functions. Modify worksheet & Formatting Worksheet.**	**PSO 1, PSO2, PSO 3,PSO 4, PSO 5**	**K4**
CO 5	**Evaluate the new ways or refresh skills to perform calculations using formulas, functions, tables, macros, diagrams, graphs and charts.**	**PSO1, PSO2, PSO3,PSO4, PSO5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOU1RS**	**COs**	**BLOOM'S TAXONOMY LEVEL**
I	Overview of excel:- what is excel used for- naming parts of the excel window- defining excel vocabulary – moving around in excel- naming cells, entering data and selecting cells – resizing columns and rows to fit data-formatting cells-auto format number – alignment – font – boarder –patter–formatting columns or rows at a time.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
II	Auto fill data series:- cut, copy, paste, insert – menu bar – toolbar – right clicking – fill handle –inserting, deleting, and moving, rows, columns, sheets–printing, print preview, printing a selected part, pageset up – margins – header/footer – print titles(printing and viewing) – scaling. Calculations:- mathematical symbols, auto sum, formula bar(NPV,IRR), editing formula – using presetfunction– order of operation– combination words from different cells into one cell.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
III	Charting:- charting wizard – selecting objects in a chart – customizing a chart – resizing a chart – printing a chart on a whole page – create column, line, pie, and combination charts – change a chart type and subtype–edit chart text–change legend position.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
IV	Introduction to database:- Starting access and opening a database understanding the access program screen – form:- copying, and pastingdata, closing a database and exiting – creating andworking with a database – planning a database –creating a database using database wizard –creating ablank database – creating a table using the tablewizard – modifying a table and understanding datatypes – creating a new table from scratch – creating aquery in design view – modifying aquery, sorting a query using multiple fields– Developing AND and OR operators.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
V	Working with tables and fields – understanding field properties – indexing a field adding a primary key to a table–inserting –deleting and reordering fields– changing a field's data type using field description, adding a caption–changing the field size, formatting number, currency, and date ⁄ time field by hand – formatting text field , setting a default value – requiring data Entry-Validating data.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**

Prescribed Books/Textbooks

1. Ruth Maran, Teachy ourself visually excel. Publisher-John Willy & sons Edition: Illustrated

edition

2. Curtis Frye, Microsoft Excel plain and simple Publisher: Microsoft Press

References

1. Kate Shoup, Microsoft Office 2010 simplified Publisher: Visual Edition:1
2. Steve Lambert, M. Dow Lambert: Microsoft office Access2 007 Step by step Publisher: Microsoft Press, Edition1

Suggested Reading

1. MS Excel (Basic to Advance) - ACCA Amarjit Kaur
2. RogerJenningsMicrosoftAccess2010in Depth Publisher: Que; I edition

Web Resources

1. https://www.simplilearn.com/tutorials/excel-tutorial/advanced-excel-functions
2. https://www.tutorialspoint.com/advanced_excel/index.htm
3. https://www.shastacoe.org/uploaded/Dept/it/training_docs/Excel/Excel_Advanced_Training_Packet.pdf
4. https://www.guru99.com/ms-access-tutorial.html

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Method of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments/Quiz	
	Seminars	
	Attendance and class Participation	
External Evaluation	End Semester Examination	**50 Marks**
Total		**100 Marks**

	Course Articulation Matrix												
Course Outcomes	**Programme Outcomes**							**Programme Specific Outcomes**					**Cognitive Level**
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	
CO 1	3	3	2	3	3	3	3	3	3	3	3	3	K1
CO 2	3	3	3	3	3	3	3	3	3	3	3	3	K2
CO 3	3	3	3	3	3	3	3	3	3	3	3	3	K3
CO 4	3	3	2	3	3	3	3	3	2	3	2	3	K4
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	K5
Wt. Avg.	3	3	2.6	3	3	3	3	3	2.8	3	2.8	3	
Overall Mapping PO = 2.94								**Overall Mapping PSO = 2.92**					

Weightage for Correlation		
0 ≦C ≦ 5%	**No correlation**	**-**
5% <C ≦ 40%	**Low / Slight**	**1**
40% <C < 60%	**Moderate**	**2**
60% ≦C < 100%	**Substantial / High**	**3**

Accounting for Decision Making

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part - II**	**Core - V**	**Theory**
Semester	**I**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• The students will be able to gain a better perspective of financial reports. • Use appropriate techniques to study and interpret financial data.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	**Remember the accounting tools used for financial analysis and planning.**	**PSO1, PSO2, PSO 3**	**K1**
CO 2	**Understand the concept of managerial accounting**	**PSO 1, PSO2, PSO 4**	**K2**
CO 3	**Apply the cost and management accounting techniques in decision making**	**PSO 1, PSO2, PSO 3, PSO 4, PSO 5**	**K3**
CO 4	**Examine and Analyze the cost and management accounting statements**	**PSO 2,PSO 3, PSO 4, PSO 5**	**K4**
CO 5	**Construct and evaluate cost and management accounting statements**	**PSO 2,PSO 3, PSO 4, PSO 5**	**K5**

SYLLABUS				
UNIT	CONTENT	HOURS	COs	BLOOM'S TAXONOMY LEVEL
I	Management Accounting-Definition, Nature and Scope-Functions-Role of Management Accountant-Tools of Financial Analysis and Planning- Ratio, Fund Flow and Cash Flow Analysis.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
II	Cost Concept- Absorption vs Variable costing- Cost center- Profit center-Marginal Costing-Break – even and CVP Analysis and Decision Making- Application of Marginal costing in Managerial Decision Making-Advanced Problems.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
III	Activity based costing(ABC)–Introduction-Concept of ABC-Approaches to ABC-Allocation of overheads under ABC- Characteristics of ABC- Implementation of ABC system, ABC supports to corporate strategy, Pricing Decision-Black flush costing-Life Cycle Costing.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
IV	Standard Costing- Setting Standards-Variance analysis and reporting-Material, Labour, Overhead, Sales and Profit Variances-Reporting and Investigation of Variances.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
V	Budget and Budgetary Control- Forecasting vs Budget- Preparation of Functional Budget-Types of budgets-Zero Base Budgeting- Programme Budgeting and Performance Budgeting.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**

Prescribed Books/Textbooks :

1. S.N. Maheswari, Management Accounting, Sultan Chand and Sons.
2. Khan &Jain, Management Accounting, Tata Mc Graw Hill.

References

1. N. P. Sreenivasan,, Management Accounting, Stosius Inc/Advent BooksDivision,1986
2. ManMohan & SN Goyal, Principles o fManagement Accounting, Wheeler Publisher.

Suggested Reading

1. Saxena & Vashist, Advanced Cost and Management Accounting, Sultan Chand & Sons, 2000

Web Resources

1. http://www.microbuspub.com/pdfs/chapter2.pdf
2. https://www.icsi.edu/media/webmodules/publications/FULL_BOOK_PP-CMA-2017-JULY_4.pdf
3. https://www.researchgate.net/publication/273851648_Managerial_Accounting_and_Decision_Making_in_Energy_Industry

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments / Open Book Test / Quiz	
	Seminars / Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**50 Marks**
	Total	**100 Marks**

Course Articulation Matrix													
Course Outcomes	**Programme Outcomes**							**Programme Specific Outcomes**					**Cognitive Level**
	PO1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**	
CO 1	**3**	**3**	**2**	**2**	**3**	**-**	**2**	**3**	**3**	**3**	**-**	**-**	**K1**
CO 2	**3**	**3**	**-**	**2**	**3**	**-**	**-**	**3**	**3**	**-**	**2**	**-**	**K2**
CO 3	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**3**	**2**	**2**	**K3**
CO 4	**3**	**3**	**3**	**2**	**2**	**3**	**2**	**-**	**3**	**3**	**3**	**2**	**K4**
CO 5	**3**	**3**	**3**	**2**	**2**	**3**	**3**	**-**	**3**	**3**	**2**	**2**	**K5**
Wt. Avg.	**3**	**3**	**2.75**	**2.2**	**2.6**	**3**	**2.5**	**3**	**3**	**3**	**2.25**	**2**	
Overall Mapping PO = 2.72								**Overall Mapping PSO = 2.65**					

Weightage for Correlation		
0 ≦C ≦ 5%	**No correlation**	**-**
5% <C ≦ 40%	**Low / Slight**	**1**
40% <C < 60%	**Moderate**	**2**
60% ≦C < 100%	**Substantial / High**	**3**

Enterprise Resource Planning

Course Code			
Credits	**4**		
Hours / Cycle	**5**		
Category	**Part II**	**Core VI**	**Theory**
Semester	**II**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To comprehend the technical aspects of ERP. • To understand the Steps and activities in the ERP life cycle. • To understand concepts of reengineering and how they relate to ERP.		

CO #	Course Outcome(s)	PSO Addressed	Bloom's Taxonomy Levels (K1 to K5)
On completing the course successfully, the student will be able to			
CO 1	**Define the basics of ERP and its application in various enterprises**	**PSO1, PSO4 PSO,5**	**K1**
CO 2	**Understand the technologies used in ERP software for betterment of the enterprise.**	**PSO 1, PSO2, PSO 4, PSO 5**	**K2**
CO 3	**Apply the concepts of ERP software in various departments across organisations.**	**PSO 2, PSO3, PSO 4, PSO 5**	**K3**
CO 4	**Discover the benefits and its drawbacks of ERP software in real world scenario.**	**PSO 1, PSO3, PSO 4**	**K4**
CO 5	**Determine the importance of ERP in present and the future of various organisations and disciplines**	**PSO 1, PSO2, PSO 4, PSO 5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**COs**	**BLOOM'S TAXONOMY LEVEL**
I	Introduction: Introduction to ERP–The Enterprise– Benefits of ERP–ERP and Related Technologies – BPR – Data Warehousing – Data Mining – OLAP – Supply Chain Management.	**15**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
II	ERP Implementation: ERP Implementation lifecycle – Implementation Methodology – Not allpackage are created equal – Package Selection – ERP Implementation – The Hidden Costs – Organizing the Implementation – Vendors – consultants and users – Contracts with Vendors – consultants and employees –Project Management & Monitoring–After ERP implementation.	**15**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
III	The Business Modules: Business Modules of an ERP Package – Finance – Manufacturing –Human Resources – Plant Maintenance – Materials Management – Quality Management – Sales & Distribution.	**15**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
IV	The ERP Market: ERP Market place–SAPAG– People Soft– Baan Company–J–D–Edwards –Oracle Corporation–QAD–SSA.	**15**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
V	ERP – Present and Future: Turbo charge the ERP system – Enterprise Integration Applications (EIA)– ERP and E–commerce–ERP and Internet– Future Directions in ERP.	**15**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**

Prescribed Books/Textbooks

1. Alexis Leon, ERPDemystified,TataMcGrawHill.
2. Enterprise Resource Planning, Jaiswa, HAPPY BOOK DEPO.

References

1. Clewett, Network Resource Planning for SAPR\3, BAANIV & PeopleSoft, Tata McGraw Hill.
2. Ghosh, SAP Project Management, Tata McGraw Hill.
3. Hernandez, The SAPR\3 Hand Book, Tata McGraw Hill.

Suggested Reading

1. Hester, J.D Edwards Oneworld: A Developer‟s Guide writing 003 SAP ABAP\4Programs,Tata McGraw Hill
2. Hoffman, Writing003SAPABAP/4Programs, Tata McGraw Hill.

Web Resources

www.sap.com
www.alignbooks.com

Course Outcomes	Course Articulation Matrix												
	Programme Outcomes								Programme Specific Outcomes				Cognitive Level
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO2	PSO3	PSO4	PSO5	
CO 1	2	3	2	2	3	2	2	3	-	-	3	3	K1
CO 2	3	3	2	3	3	2	2	3	3	-	2	2	K2
CO 3	3	3	2	3	3	2	2	-	3	3	2	2	K3
CO 4	3	3	2	2	3	-	2	3	-	3	3	-	K4
CO 5	3	3	2	3	3	2	2	2	2	-	2	2	K5
Wt. Avg.	2.8	3	2	2.6	3	2	2	2.7	2.7	3	2.4	2.2	
Overall Weighted average of PSO							2.48	Overall Weighted average of PSO				2.6	

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	50 Marks
	Assignments / Open Book Test / Quiz	
	Seminars / Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	50 Marks
	Total	100 Marks

Weightage for Correlation		
0 ≦C ≦ 5%	No correlation	-
5% <C ≦ 40%	Low / Slight	1
40% <C < 60%	Moderate	2
60% ≦C < 100%	Substantial / High	3

Python Programming

Course Code			
Credits	**4**		
Hours / Cycle	**5**		
Category	**Part - II**	**Core – VII**	**Practical**
Semester	**II**		
Year of Implementation	**From the academic year 2025-26 onwards**		
Course Objective	• To understand the programming concepts of Python programming language. • To understand the important packages and functions in Python programming language. • To visualise the given data through Python visualisation packages		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K6)**
On completing the course successfully, the student will be able to			
CO 1	Learn the syntax and semantics of Python Programming Language	PSO1, PSO2, PSO3, PSO4, PSO5	**K1**
CO 2	Understand the various programming concepts of Python	PSO1, PSO2, PSO3, PSO4, PSO5	**K2**
CO 3	Apply the functions and packages to develop efficient and error-free code	PSO1, PSO2, PSO3, PSO4, PSO5	**K3**
CO 4	Analyze the given problem and choose the best method to solve the problem.	PSO1, PSO2, PSO3, PSO4, PSO5	**K4**
CO 5	Evaluate thereal-time problems and adapt the methodology to visualize the solution.	PSO1, PSO2, PSO3, PSO4, PSO5	**K5,K6**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Python Introduction: Introduction to Python - Features of Python - Python Application Examples - Python Environment Setup with IDE - Python interpreter and interactive mode – debugging - Comments - Operators - Variables and Assignment - Data types - Key words - Python Indentation Rules	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
II	Python Programming Concepts and Data Structures: Programming basics - if Statement - Looping statements - while Loop - for Loop – Data Structures – String - Lists – Tuples – Sets - Dictionaries.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
III	Functions and Collections & Modules: Functions Defining - Invoking functions – Scope - Parameter types - Recursive functions, Built in Functions – User defined Functions – Modules – creating custom modules – Lambda functions – Collections – Iterators – Generators	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
IV	Object Oriented Programming using Python: Object Oriented Programming using Python - Encapsulation and Abstraction - Getter, and Setter Methods – Inheritance - Kinds of Inheritance - Polymorphism Abstract methods - Overriding	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
V	Data Visualisation: Use of matplotlib package – Understanding different graphs: Histogram - Box plot chart - Pie chart - Scatter plot –plotly – dash package - Statistical package – scipy.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**

List of Programs:

1. Program to run basic python program in IDE.
2. Program to understand control structures.
3. Program for looping statements
4. Program for List and Tuples
5. Program for Sets and Dictionaries
6. Program for functions
7. Program for collections and iterator
8. Program for Lamda functions
9. Program for understanding OOP concept
10. Program to visualize data using matplotlib
11. Program to visualize data using plotly and dash packages.
12. Program for statistical analysis with scipy package.

Prescribed Books/Textbooks:

1. Gowri shanker and Veena, Introduction to Python Programming, CRC Press, 2019.
2. Mark Lutz, —Learning Python Powerful Object Oriented Programming, O'reilly Media 2018, 5th Edition.

Wes Mckinney, —Python for data Analysis, O'Reilly,2017

References

1. Allen Downey, Jeffrey Elkner, Chris Meyers, How to Think Like a Computer Scientist - Learning with

Python, Dreamtech Press, 2002
2.John Zelle,Python Programming: An Introduction to Computer Science, 3rd Edition, 2016
3.Eric Matthes,Python Crash Course, 3rd Edition, 2023

Suggested Reading

1. Joel Grus, Data Science from scratch, O'Reilly, 2015
2. Shai vaingast,Beginning Python on visualization, A Press 2014

Web Resources

1. https://www.programiz.com/python-programming
2. https://www.learnpython.org/
3. www.tutorialspoint.com/python_data_science/index.htm

		Course Articulation Matrix											
	Programme Outcomes							Programme Specific Outcomes					
Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	Cognitive Level
CO 1	3	2	3	3	3	3	3	2	3	2	3	2	K1
CO 2	3	2	3	3	3	3	3	2	3	3	3	2	K2
CO 3	3	2	3	2	2	3	3	3	2	2	2	3	K3
CO 4	3	2	2	2	2	2	3	3	2	3	3	3	K4
CO 5	3	2	2	3	2	2	3	3	2	3	3	3	K5,K6
Wt. Avg.	3	2	2.6	2.6	2.4	2.6	3	2.6	2.4	2.8	2.8	2.6	
Overall Weighted average of PO = 2.6								Overall Weighted average of PSO = 2.64					

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	50 Marks
	Assignments / Open Book Test / Quiz	
	Seminars/ Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	50 Marks
	Total	100 Marks

Income Tax Law & Practice

Course Code			
Credits	**4**		
Hours / Cycle	**6**		
Category	**Part - II**	**Core - VIII**	**Theory**
Semester	**II**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To calculate and apply measures of location and dispersion. • Perform Test of Hypothesis.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	**Define the various deductions to reduce the taxable income.**	**PSO2, PSO 3, PSO 5**	**K1**
CO 2	**Explain the different types of incomes and their taxability, expenses and their deductibility.**	**PSO 2,PSO 3, PSO 4, PSO 5**	**K2**
CO 3	**Apply the knowledge of basic concepts in real life situations.**	**PSO 1,PSO 2, PSO 3,PSO 5**	**K3**
CO 4	**Analyse the relevant provisions and compute total income of individuals, Companies and Firm.**	**PSO 1,PSO 3, PSO 4, PSO 5**	**K4**
CO 5	**Choose the tax administration and related provisions.**	**PSO 2, PSO4, PSO 5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**COs**	**BLOOM'S TAXONOMY LEVEL**
I	Introduction to Tax– Basic Concepts–Residential Status of Individuals – Agricultural Income.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
II	Salary: Meaning–Computation–Allowances–Perquisites–Profit–in–lieuofSalary–Deductionsu/s 16. Income from House Property: Computation – Annual Value – Let out House Property – Self Occupied House–Deductions.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
III	Income from Business or Profession: Computation of Profits and Gains – Deductions Expressly Allowed – Expenses Expressly Disallowed – Expenses Allowable under Certain Restrictions –Deemed Incomes.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
IV	Capital Gains: Computation – Capital Asset – Transfer – Cost of Accusation – Exemption. Income from other sources: Computation – Grossing Up – Deductions and Other provisions. Deductions: u/s 80, 80CCC, 80DD, 80DDB, 80E, 80G, 80GG, 80GGA (Deductions – Theory only).	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
V	Practical Exposure through Computer of different typesof forms, Income tax Challan, TDS Certificate, TDS Return, Form15G,26,27etc.– Returns–Manually &Electronically.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**

Prescribed Books/Textbooks:

1. V.P.Gaur and D.B. Narang, 2023 Income Tax, Kalyani Publishers.
2. Vinod K. Singhania, Monica Singhania, 2023, Income Tax, Taxmann Publishers.

References

1. V.K.Singhania,DirectTaxes&Practice,TaxmanPublications,NewDelhi
2. T.N.Manoharan, DirectTaxLaws, SnowwhitePublications(P)Ltd.

Suggested Reading

1. Hariharan N, 2023-2024, Income Tax and Practice, Vijay Nicole Imprints.
2. Dr.H.C., Mehrotra , S.P Goyal, 2021, Income tax law and practice, Sathiya bhavan publication.

Web Resources

1. www.incometaxindia.gov.in
2. www.taxsmile.com
3. www.law.incometaxindia.gov.in
4. www.taxmanagementindia.com
5. www.icsi.edu.media

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments / Open Book Test / Quiz	
	Seminars / Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**50 Marks**
	Total	**100 Marks**

Course Articulation Matrix

Course Outcomes	Programme Outcomes							Programme Specific Outcomes					Cognitive Level
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO1	PSO2	PSO3	PSO4	PSO5	
CO 1	3	3	3	2	3	-	3	-	3	2	-	2	K1
CO 2	2	3	2	2	3	-	2	-	3	2	3	3	K2
CO 3	3	3	3	2	3	3	2	3	3	2	-	2	K3
CO 4	2	3	2	3	3	2	2	2	-	3	2	3	K4
CO 5	1	3	3	2	2	1	2	-	2	-	3	2	K5
Wt. Avg.	2.2	3	2.6	2.2	2.8	2	2.2	2.5	2.2	2.75	2.67	2.4	

	Overall Weighted average (PO)	2.43	Overall Weighted Average (PSO)	2.504	

Weightage for Correlation		
0 ≦C ≦ 5%	No correlation	-
5% <C ≦ 40%	Low / Slight	1
40% <C < 60%	Moderate	2
60% ≦C < 100%	Substantial / High	3

RESEARCH METHODOLOGY AND DATA ANALYSIS USING SOFTWARE PACKAGE

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part - II**	**Core IX**	**Practical**
Semester	**III**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objective	• To understand the concept of Research • To understand the Hypothesis and Testing procedure. • To acquire the knowledge of Sampling and Data Collection. • To analyse the data collected through SPSS. • To acquire knowledge on drafting a research report.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	**Remember the concepts of research methodology and choosing appropriate statistical tools.**	**PSO1,PSO2,PSO3, PSO4,PSO5**	**K1**
CO 2	**Understand the sampling techniques and summarize the results of the research.**	**PSO1,PSO2,PSO3, PSO4,PSO5**	**K2**
CO 3	**Identify and test the study variables using SPSS.**	**PSO1,PSO2,PSO3, PSO4,PSO5**	**K3**
CO 4	**Analyse the test variables and draw inferences to conclude the research report**	**PSO1,PSO2,PSO3, PSO4,PSO5**	**K4**
CO 5	**Evaluate and justify the tools and techniques used in the research work.**	**PSO1,PSO2,PSO3, PSO4,PSO5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**COs**	**BLOOM'S TAXONOMY LEVEL**
I	Research in Management – Introduction – Nature, Scope, Objectives of Research – Types of Research – Process of Selection & Formation of Research Problem – Hypothesis – Research Design – Meaning, Types.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
II	Date Collection – Methods – Sampling Techniques – Types – Questionnaire – Observations – Interview.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
III	Data Handling: Data Entering – Variable View – Data View. Data Menu: Insert Variable – Insert Vase – Goto Case – Sort Cases – Split File – Select Cases. Chart: Bar – Pie – Histogram	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
IV	Transform Menu: Computer – Count – Recode – Automatic Recode – Categorize Variables Univariable: Frequency – Description Statistics – Explore.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
V	Compare Mean: Single Sample T Test – Independent Sample T Test – Paired Sample T Test – ANOVA. Crosstabs: Contingency Table – Chi–square. Correlation: Bivariable – Partial.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**

Prescribed Books/Textbooks:

1. C.R. Kothari, Gaurav Garg, Research Methodology Methods & Techniques, New Age international publishers,2023.
2. P. Sundara Pandian, S. Muthulakshi, T. Vijayakumar, Research Methodology& Applications of SPSS in social science research, 2022
3. K. Kalyanaraman, Hareesh N. Ramanathan, P.N. Harikumar, Statistical methods for research: A step - by- step approach using IBM SPSS, 2021
4. John W. Best & James V. Khan, Research in Education, Prentice Hall of India, 2000

References

1. LokeshKoul, Methodology of Educational Research, Vikas Publishing House Pvt. Ltd.2006
2. O.R.Krishna Swami, Methodology of Research in Social Sciences, Mumbai, Himalaya Publications, 2016
3. Alistall, Doing Statistics with SPSS, Saga Publication, New Delhi, 2002

Suggested Reading

1. Ken Stehlik-Barry, Anthony Babinec, Data Analysis with IBM SPSS Statistics : Implementing data modeling, descriptive statistics and ANOVA, 2017
2. A. Rajathi, P. Chandran, SPSS for you, MJP publishers, 2011

Web Resources

1 .https://www.uvm.edu/~statdhtx/fundamentals8/SPSSManual/SPSSLongerManual/SPSSChapter1.pdf
2. https://students.shu.ac.uk/lits/it/documents/pdf/analysing_data_using_spss.pdf

		Course Articulation Matrix											
Course Outcomes	**Programme Outcomes**							**Programme Specific Outcomes**					**Cognitive Level**
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	
CO 1	3	3	3	3	3	3	3	3	3	3	3	3	K1
CO 2	3	3	3	3	3	3	3	2	3	2	3	3	K2
CO 3	3	3	3	2	3	3	3	2	3	2	2	3	K3
CO 4	3	3	2	3	2	2	3	3	2	2	3	3	K4
CO 5	3	3	2	3	3	2	3	2	2	2	3	3	K5, K6
Wt. Avg.	3	3	2.6	2.8	2.8	2.6	3	2.4	2.6	2.2	2.8	3	
Overall Weighted average of PO = 2.83								**Overall Weighted average of PSO = 2.6**					

FINANCIAL MANAGEMENT

Course Code			
Credits	**4**		
Hours / Cycle	**5**		
Category	**Part**	**Core X**	**Theory**
Semester	**III**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To understand the objective and scope of Financial Management. • To acquire the methods of calculating the cost of capital and analyse the capital structure of organization. • Learn to take investment decisions. • Learn the various theories of dividend and know the importance of working capital.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	Define the basics of financial management for better decision making	**PSO1, PSO 2, PSO 5**	**K1**
CO 2	Understand the fundamentals of financial principles for strategic decision making	**PSO 1, PSO 2, PSO 4, PSO 5**	**K2**
CO 3	Apply financial techniques for effective financial planning	**PSO 1, PSO 2, PSO 3, PSO 4, PSO5**	**K3**
CO 4	Analyse financial statements, assess investment opportunities for betterment of organisation	**PSO 2, PSO 3, PSO 4, PSO5**	**K4**
CO 5	Evaluate strategies to identify assess and manage financial risks faced by organisations	**PSO 2, PSO 3, PSO4 PSO5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Introduction – Financial Management an Overview – Evolution of Financial Managements –Financial Decision in a Firm – Goal of Financial Management – Organization of the Finance Function– EmergingRoleofthe Financial Manager in India.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1, K2,K3,K4,K5**
II	Techniques of Financial Analysis –Break–Even Analysis and Leverages. Long–Term Investments Decision–Capital Budgeting– Nature– Process– Techniques– NPV Benefit Cost Ratio– IRR–Pay–Back Period –ARR.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1, K2,K3,K4,K5**
III	Cost of Capital: Capital Structure and Dividend Decision: Capital Structure–NetIncomeApproach– NetOperatingIncomeApproach–Modigiliani&Miller Poseter Dividends: Introduction–Dividend Theories.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1, K2,K3,K4,K5**
IV	Working Capital Management: Introduction –Need for Working Capital –Computation of Working Capital – The Concept of Zero Working Capital – Cash Management – Receivables Management– Inventory Management.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1, K2,K3,K4,K5**
V	Multinational Financial Management: What is Multinational Corporation – Multinational vs.Domestic Financial Management – Inflation, Interest Rates and Exchange Rates – Purchasing Power Parity– International Capital Structure– Multinational Working Capital Management.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1, K2,K3,K4,K5**

Prescribed Books/Textbooks

1. S.N.Maheshwari, Management Accounting & Financial Analysis, Sultan Chand &Sons 2022
2. M.Y Khan & P.K Jain , Financial Management Text & Problems, Tata McGraw Hill Publishing Co.Ltd. 2018.

References

1. VanHorne &C. James, Financial Management, Prentice Hall of India Pvt. Ltd 2008
2. I.M. Pandey, Financial Management, Vikas Publishing House Pvt. Ltd.2016
3. Prasanna Chandra, Financial Management–Theory & Practice, Tata McGraw Hill Book Co. 2019

Suggested Reading

1. S.C. Kuchhal, Financial Management–An Analytical & Conceptual Approach, Chaitanya Publishing House 1993
2. T.S. Reddy &Y.Hari Prasad Reddy, Financial Management& Accounting, Margham Publishing 2016

Web Resources

www.cpdwise.comwww
www.simplilearn.comww
ww.findtutorials.comww
w.studyfinance.com

Course Articulation Matrix

Course Outcomes	Programme Outcomes								Programme Specific Outcomes					Cognitive Level
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7		PS O1	PSO 2	PSO 3	PS O4	PSO 5	
CO 1	3	3	2	2	3	2	3		3	3	-	-	3	K1
CO 2	3	3	3	2	3	3	2		2	3	-	3	3	K2
CO 3	3	3	3	3	3	3	3		3	3	3	3	3	K3
CO 4	2	2	2	3	2	3	3		-	3	2	3	2	K4
CO 5	3	3	2	3	3	2	2		-	3	3	3	3	K5
Wt. Avg.	2.8	2.8	2.4	2.6	2.8	2.6	2.6		2.6	3	2.6	3	2.8	
	Weighted Average PO = 2.66								Weighted Average PSO = 2.8					

E-COMMERCE

Course Code			
Credits	**4**		
Hours / Cycle	**5**		
Category	**Part - III**	**Core – XI**	**Theory**
Semester	**III**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	To provide a detailed understanding of business activity on web or via any other electronic means.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	Show the increasing significance of E- commerce and its applications in Business and Various Sectors.	**PSO1,PSO2,PSO3,PSO4, PSO5**	**K1**
CO 2	Demonstrate the application of E commerce in Business.	**PSO1,PSO2,PSO3,PSO4, PSO5**	**K2**
CO 3	Apply the latest Trends and practices in E-commerce sector.	**PSO1,PSO2,PSO4,PSO5**	**K3**
CO 4	Analyze different E commerce application in day to day life.	**PSO1,PSO2,PSO4,PSO5**	**K4**
CO 5	Evaluate and overcome the issues in E commerce. Business.	**PSO1,PSO2,PSO4,PSO5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Basic in E-Commerce – Introduction to E Commerce Modules – Client – Server – Emerging Client Server – World Wide Web as Web. Purchase Procedure – Supply Chain Management – Sales Procedure – Web as an Advertising and Marketing Channel – Payment Security – Authentication of Payment – Modes of Payment – Electronic Cash – Electronic Wallets – Smart Cards – Credit and Change Cards – Digital Signature.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1, K2,K3,K4,K5**
II	Risk Associated with Internet Transaction – Risk Management – Web Based Marketing: Four PS Applied in Internet Marketing – Intelligent Agents and their impact on Marketing Techniques.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1, K2,K3,K4,K5**
III	Basic in E-Commerce – Introduction to E Commerce Modules – Client – Server – Emerging Client Server – World Wide Web as Web. Purchase Procedure – Supply Chain Management – Sales Wallets – Smart Cards – Credit and Change Cards – Digital Signature.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1, K2,K3,K4,K5**
IV	Risk Associated with Internet Transaction – Risk Management – Web Based Marketing: Four PS Applied in Internet Marketing – Intelligent Agents and their impact on Marketing Techniques.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1, K2,K3,K4,K5**
V	Basic in E-Commerce – Introduction to E Commerce Modules – Client – Server – Emerging Client Server – World Wide Web as Web. Purchase Procedure – Supply Chain Management – Sales Wallets – Smart Cards – Credit and Change Cards – Digital Signature.	**15**	**CO1, CO2, CO3, CO4, CO5**	**K1, K2,K3,K4,K5**

Prescribed Books/Textbooks

1. Marilyn Greenstein & Todd M. Feinman, Electronic Commerce, Tata McGraw Hill, 2000
2. Gary P. Schneider & James T. Perry, Electronic Commerce, 9th edition 2010.

References

1. Pete Loshin& Paul A. Murphy, Electronic Commerce, 3rd edition 2001.
2. Ananthi Sheshasaayee &Sheshasaayee, Computer Application in Business and Management, 2013.
3. Awad, Electronic Commerce, Prentice hall of India, 4th edition 2013.

Suggested Reading

13. David Kosiur, Understanding E-Commerce 1997.
14. Kosiur, Understanding Electronic Commerce, PHI / Microsoft Press, 1997.

P. T Joseph, Electronic Commerce, Prentice Hall of India 3rd edition 2008.

Web Resources (3-5)

1. **www.phindia.com**
2. **www.erkashif.files.wordpress.com**
3. **www.mheducation.co.in/e-commerce**

Course Articulation Matrix														
Course Outcomes	**Programme Outcomes**								**Programme Specific Outcomes**					**Cognitive Level**
	PO1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO5**	
CO 1	3	3	3	3	3	2	2	2	3	3	2	2	3	**K1**
CO 2	3	3	3	3	3	2	2	2	3	3	3	3	3	**K2**
CO 3	3	3	3	2	3	2	2	2	3	3	-	3	3	**K3**
CO 4	3	3	3	2	3	2	2	2	3	3	-	3	3	**K4**
CO 5	3	3	3	2	3	2	2	2	3	3	-	3	3	**K5**
Wt. Avg.	3	3	3	2.4	3	2	2	2	3	3	2.5	2.8	3	
	Overall Weighted average (PO) 2.55								Overall Weighted average (PSO) 2.86					

Security Analysis and Portfolio Management

Course Code			
Credits	**4**		
Hours / Cycle	**6**		
Category	**Part**	**Major XII**	**Theory**
Semester	**III**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	To understand the concept of Security Analysis and develop knowledge in the theories of Portfolio management.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	Recall the various investment avenues and Portfolio management in real world.	**PSO1,PSO2, PSO5**	**K1**
CO 2	Classify the securities and Portfolios available for the investors.	**PSO1,PSO2, PSO3,PSO5**	**K2**
CO 3	Apply the securities valuation and portfolio management in real world scenario.	**PSO1,PSO2, PSO3,PSO4, PSO5**	**K3**
CO 4	Analyze the valuation of securities and portfolio construction.	**PSO1,PSO2, PSO3,PSO4, PSO5**	**K4**
CO 5	Estimate the importance of securities markets and portfolio scenario.	**PSO1,PSO2, PSO4,PSO5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Investment setting: Securities - Securities Market - Sources of investment information - Securitymarket indicators - Security Contract regulation Act.	**18**	**CO1, CO2, CO3, CO4& CO5**	**K1,K2,K3,K4, K5**
II	Valuation of Securities: Equity - Preference shares - Debt instruments - Hybrid securities -derivatives - Asset pricing theories - CAPM - APT - Portfolio theory - Option pricing theory.	**18**	**CO1, CO2, CO3, CO4& CO5**	**K1,K2,K3,K4, K5**
III	Economic Analysis: Economic forecasting and stock Investment Decisions - Forecasting techniques. Industry Analysis - Industry classifications. Economy and Industry analysis.Industry life cycle - Evaluating Industry relevant factors - External industry information sources.	**18**	**CO1, CO2, CO3, CO4& CO5**	**K1,K2,K3,K4, K5**
IV	Company Analysis: Measuring Earnings - Forecasting Earnings - Applied valuation techniques - Graham and Dodds investor rations value investing. Technical Analysis : Fundamental Analysis Vs Technical Analysis - Charting methods - Market Indicators - Trend - Trend reversals - Patterns - Moving Average - Exponential moving Average - Oscillators - ROC - Momentum - MACD - RSI - Stoastics.	**18**	**CO1, CO2, CO3, CO4& CO5**	**K1,K2,K3,K4, K5**
V	Portfolio: Portfolio Construction - Diagnotics Management - Performance Evaluation - Portfolio revision.	**18**	**CO1, CO2, CO3, CO4& CO5**	**K1,K2,K3,K4, K5**

Prescribed Books/Textbooks :

1.Investment Management and Portfolio Analysis – Frank k. Reily and Keith C. Brown, Asia-Pacific Edition.2010

References

1. Investment Analysis and Portfolio Management – Prasanna Chandra, McGraw Hill Education Pvt. Ltd.2006
2. Security Analysis – Benjamin Graham and David Dodd, McGraw Hill Education, 2008
3. Management of Investments - Clark Francis, McGraw Hill Education, 2011.

Suggested Reading:

1 Modern Investment and Security Analysis - Fuller and Farvell, McGraw Hill Education, 2011

2 Investment Management - Balla and Tuteja, New Age International Pvt. Ltd., 2010.

Web Resources

1.www.caluniv.ac.in
2.www.gurukpo.com
3.www.studocu.com

Course Outcomes	**Course Articulation Matrix**													
	Programme Outcomes								**Programme Specific Outcomes**					**Cognitive Level**
	PO 1	**PO 2**	**PO 3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PO 8**	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**	
CO 1	3	3	2	3	3	3	2	-	3	3	-	-	2	**K1**
CO 2	3	3	3	3	3	2	3	-	3	3	3	-	3	**K2**
CO 3	3	3	3	3	3	3	3	-	3	3	3	3	3	**K3**
CO 4	3	2	3	3	2	3	3	-	3	2	2	2	3	**K4**
CO 5	3	3	2	3	3	3	3	-	2	2	-	3	3	**K5**
Wt. Avg.	3	2.8	2.6	3	2.8	2.8	2.4	-	2.8	2.6	2.8	2.8	2.8	
Overall Weighted average (PO) 2.7									**Overall Weighted average (PSO)2.7**					

INSURANCE AND RISK MANAGEMENT

Course Code			
Credits	**4**		
Hours / Cycle	**6**		
Category	**Part - II**	**Core - XIII**	**Theory**
Semester	**IV**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To acquaint the student with the basic knowledge of the principles of risk and insurance and the methods of risk management found in strategic planning.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	Define the insurance and risk management involved in organization.	**PSO1,PSO2, PSO3, PSO5**	**K1**
CO 2	Demonstrate the importance of insurance, essential features and the development of insurance industry.	**PSO2, PSO3, PSO4, PSO5**	**K2**
CO 3	Identify the various types of risk and the techniques involved in risk financing, methods of handling risk and control management system.	**PSO1, PSO2, PSO3, PSO5**	**K3**
CO 4	Analyse and compare the various insurance policies, premium and claim settlement.	**PSO1, PSO3, PSO4, PSO5**	**K4**
CO 5	Compare the risk management by individuals and corporations with various insurance policies.	**PSO2, PSO4, PSO5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**COs**	**BLOOM'S TAXONOMY LEVEL**
I	Insurance Industry: Growth & Development of Indian Insurance Industry – Regulations of Insurance Business and The Emerging Scenario – Introduction to Life & General Insurance – Life Insurance: Features of Life Insurance – Essentials of Life Insurance Contract – Kinds of Insurance Policies – Premium determination – Life Policy Conditions.	**18**	**CO 1, CO 2, CO 3, CO 4, CO 5**	**K1,K2,K3,K4,K5**
II	Fire Insurance: Fire Insurance Contracts – Fire Insurance Coverage – Policies for stocks – Rate Fixation in Fire Insurance – Settlement of Claims. Marine Insurance: Marine Insurance Contract Types of Marine Insurance – Marine Cargo Losses and Frauds – Settlement of claims.	**18**	**CO 1, CO 2, CO 3, CO 4, CO 5**	**K1,K2,K3,K4,K5**
III	Miscellaneous Insurance: Motor Insurance – Employers Liability Insurance – Personal Accident and sickness Insurance – Aviation Insurance – Burglary Insurance – Fidelity Guarantee Insurance – Engineering Insurance – Cattle Insurance – Crop Insurance.	**18**	**CO 1, CO 2, CO 3, CO 4, CO 5**	**K1,K2,K3,K4,K5**
IV	Introduction to risk management: The Concept of Risk – Risk Vs. Uncertainty – types of Risks: Market Risk, Credit Risk, Operational Risk, interest risk, business risk, systematic risk - Classifying pure risks – methods of handling pure risks – risk management process – Risk financing techniques – Risk management objectives – Risk Management Information System (RMIS) – Risk Control.	**18**	**CO 1, CO 2, CO 3, CO 4, CO 5**	**K1,K2,K3,K4,K5**
V	Risk Management by Individuals: Factors effecting individual demands for insurance – Risk Management by Corporations: Corporate Risk Management Process – Types of Risk Managing firms.	**18**	**CO 1, CO 2, CO 3, CO 4, CO 5**	**K1,K2,K3,K4,K5**

Prescribed Books/Textbooks:

1. Dr. P.K. Gupta: Insurance and Risk Management, 1st edition, Himalaya Publishing House, 2016.
2. Dr.P.K. Gupta: Fundamental of Insurance, 1st edition, Himalaya Publishing House, 2017.

References

1. C. Gopala Krishnan: Insurance Principles & Practice, Sterling Publishers Pvt. Ltd., New Delhi, 2016.
2. Alka Mittal & S. L.Gupta: Principles of Insurance and Risk Management, Sultan Chand & Sons, 2013.
3. Prof. K.S. N. Murthy and K.V.S. Sarma: Modern Law of Insurance in India, N.M.Tripathi Pvt. Ltd., Bombay, 2019

Suggested Reading

1. P.S. Palande, R.S. Shah, M.L. Lunawat: Insurance in India, Sage Publications, New Delhi, 2017.

Web Resources

1. www.sultanchandandsons.com/
2. www.himpub.com/documents/Chapter1906.pdf
3. www.vijaynicole.co.in
4. www.pearsonhighered.com

Course Articulation Matrix													
Course Outcomes	**Programme Outcomes**							**Programme Specific Outcomes**					**Cognitive Level**
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO5**	
CO 1	3	3	3	2	3	2	2	3	3	2	-	2	K1
CO 2	2	3	2	3	3	3	2	-	3	2	3	3	K2
CO 3	3	3	3	2	3	3	3	3	3	2	-	2	K3
CO 4	2	3	2	3	3	2	2	2	-	3	2	3	K4
CO 5	2	3	3	2	2	3	2	-	2	-	3	2	K5
Wt. Avg.	2.4	3	2.6	2.4	2.8	2	2.2	2.67	2.2	2.75	2.67	2.4	
	Overall Weighted average (PO)						**2.486**	**Overall Weighted Average (PSO)**				**2.538**	

Banking and Financial Services

Course Code			
Credits	**4**		
Hours / Cycle	**6**		
Category	**Part**	**Core XIV**	**Theory**
Semester	**IV**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	Enrich and enable the students to acquire skills necessary to successfully carve a career in Banking and Financial services		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	Recall the various banking and financial services	**PSO1,PSO2, PSO4,PSO5**	**K1**
CO 2	Demonstrate diverse Banking and Financial services	**PSO1,PSO2, PSO4,PSO5**	**K2**
CO 3	Apply diverse banking and financial services in real time	**PSO1,PSO2, PSO3 PSO4,PSO5**	**K3**
CO 4	Examine varied banking and financial services	**PSO1,PSO2, PSO4,PSO5**	**K4**
CO 5	Evaluate various banking and financial services	**PSO1,PSO2, PSO4,PSO5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Commercial banking- Functions of commercial banks- Investment policy of a commercial bank- Techniques of credit creation – private banks- Regional Rural banks- Co-operative banks – Scheduled Banks – RBI – Constitution – Functions – Central Banking functions – Regulatory and supervisory functions- promotional and developmental functions.	**18**	**CO 1 CO2 CO3 CO4 CO5**	**K1**
II	Advisory Financial Services: Merchant Banking – Registration – Obligation and Responsibilitiesof Merchant Bankers – code of conduct for Merchant bankers- Restriction on Business – Disclosure to SEBI – Suspension and Cancellation of Registration – Default by merchant bankers.	**18**	**CO 1 CO2 CO3 CO4 CO5**	**K2**
III	Mutual Fund-Concept and origin of mutual fund – Mutual Fund Schemes – Institutions involvedin mutual fund business.	**18**	**CO 1 CO2 CO3 CO4 CO5**	**K3**
IV	Asset/Fund based financial services : Leasing-Concept and classification-significance- Advantages and Limitations- RBI NBFCs Directions toward Leasing- Financial evolution of leasing-Tax aspects of leasing- Factoring: Concept- Mechanism- Functions of a Factor – Forms of Factoring- Legal Aspects of factoring – Forfeiting: Advantages- Evaluation- RBI Guidelines.	**18**	**CO 1 CO2 CO3 CO4 CO5**	**K4**
V	Venture Capital financing : Features – Selection of investment – Financial analysis- Financial instruments – Investment Nurturing – Techniques – Credit Rating – objectives – institutions engaged in credit rating – purpose and procedure of rating – Role of CRISIL and ICRA.	**18**	**CO 1 CO2 CO3 CO4 CO5**	**K5**

Prescribed Books/Textbooks :

1. 1.Sundaram, Varshney, Banking and Financial System, Sultan Chand & Sons, New Delhi, 2004.
2. S.N.Maheshwari, theory and Practice of banking, Kalyani Publishers, 2005.

References

1.M.L.Tannon, Banking Law and Practice in India, Tracker Co.Ltd, Mumbai, 2004
2.HoomanEstelami, Marketing Financial Services, Dog ear publishing,2012
3.Evelyn enrich &DukFanelli, the financial services handbook, boomerg press

Suggested Reading

1. Radhaswamy, Vasudeven.S.V., A text book of Banking, S.Chand& Co. Ltd., new Delhi, 2004.

2. .M.Y.Khan, Financial Services, TataMcGraw Hill, 10th Edition 2019

Web Resources
1https://testbook.com/ugc-net-commerce/commercial-bank
2.https://www.resurgentindia.com/financial-advisory-services
3.https://groww.in/p/venture-capital

Course Articulation Matrix													
Course Outcomes	**Programme Outcomes**							**Programme Specific Outcomes**					**Cognitive Level**
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	
CO 1	3	3	1	3	3	2	2	3	3	-	2	2	K1
CO 2	3	3	1	3	3	2	2	3	3	-	2	2	K2
CO 3	3	3	2	3	3	3	3	3	3	2	3	3	K3
CO 4	3	3	1	3	3	3	3	3	3	-	3	3	K4
CO 5	3	3	1	3	3	3	3	3	3	-	3	3	K5
Wt. Avg.	3	3	1.2	3	3	2.6	2.6	3	3	2	2.6	2.6	
	Overall Weighted average (PO)						**2.62**	**Overall Weighted Average (PSO)**				**2.64**	

INDUSTRY 5.0

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part - II**	**Elective I**	**Theory**
Semester	**I**		
Year of Implementation	**From the academic year 2025-26 onwards**		
Course Objectives	• Align the theory and concepts with Industrial application of computers • Introduce the basic concepts of Industry 5.0 • Learn the applications and tools of Industry 5.0		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K6)**
On completing the course successfully, the student will be able to			
CO 1	Recall the basic concepts of Computer Applications	PSO1, PSO2,PSO4, PSO5	**K1**
CO 2	Outline the technologies behind Industry 5.0	PSO1, PSO2,PSO4, PSO5	**K2**
CO 3	Identify the applications and Tools of Industry 5.0	PSO1, PSO2,PSO4, PSO5	**K3**
CO 4	Analyse the skills required for future	PSO1, PSO2,PSO4, PSO5	**K4**
CO 5	Recommend and Propose the tools essential for real-time applications	PSO1, PSO2,PSO4, PSO5	**K5,K6**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Introduction to Industry 5.0: Definition - Evolution from Industry 1.0 to 5.0 – Need for Industry 5.0 – Key Technologies – Goals and Design Principles - Applications and case studies .	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
II	Internet of Things (IoT): Understanding IoT fundamentals - IoT Architecture and protocols - Various Platforms for IoT - Real time Examples of IoT - Overview of IoT components - IoT Communication models - Challenges in IoT	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
III	Artificial Intelligence and Machine Learning: Introduction to Artificial Intelligence (AI) – Technologies of AI - Use Cases of Artificial Intelligence – Challenges of AI - Future of AI - Introduction to Machine Learning - Supervised learning - Unsupervised learning	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
IV	Cloud Computing: Cloud components - Layered Cloud Architecture Design - Essential characteristics - Cloud Deployment models – Types of Cloud Services – Advantages of Cloud computing – Cloud Security.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
V	Blockchain Technology: Distributed ledgers - Characteristics of Blockchain – Types of Blockchain – Components of Blockchain – Working Principle of Blockchain – Consensus mechanisms – Cryptocurrency - Bitcoin - Applications of Blockchain	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**

Prescribed Books/Textbooks :

1. UthayanElangovan, Industry 5.0: The Future of the Industrial Economy, 2021

2.Saurabh Jain, The Fundamentals of Blockchain Technology, Notion Press; 1st edition, 2021

3.Sudip Misra, Anandarup Mukherjee , Arijit Roy, Introduction to IoT, 2022

References

1. Rohit Bansal, FazlaRabby, Meenakshi Gandhi, NishitaPruthi, Shweta Sain, Powering Industry 5.0 and Sustainable Development Through Innovation, 2024

2.Stuart Russell and Peter Norvig, Artificial Intelligence: A Modern Approach, 4th Edition, 2020

Suggested Reading

1. A.Srinivasan and J.Suresh, Cloud Computing – A Practical Approach for Learning and Implementation, Pearson India Publications 2014.

2. Arshdeep Bahga and Vijay Madisetti ,Cloud Computing – A Hands on Approach,Universities Press (India) Pvt Ltd. 2014.

Web Resources

1. https://www.momenta.one/industry5.0
2. https://www.sap.com/india/insights/industry-5-0.html
3. https://www.sap.com/india/products/scm/industry-4-0/what-is-augmented-reality.html
4. https://www.innopharmaeducation.com/blog/what-is-industry-5-0

								Course Articulation Matrix					
	Programme Outcomes							Programme Specific Outcomes					
Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	Cognitive Level
CO 1	3	2	3	3	3	3	3	3	2	-	3	3	K1
CO 2	3	3	3	3	3	3	3	3	2	-	3	3	K2
CO 3	3	3	3	2	2	2	2	3	2	-	3	3	K3
CO 4	3	2	2	2	2	2	3	3	2	-	3	3	K4
CO 5	3	3	2	2	3	3	3	3	2	-	3	3	K5,K6
Wt. Avg.	3	2.6	2.6	2.4	2.6	2.4	3	3	2	-	3	3	
	Overall Weighted average (PO) =2.65							**Overall Weighted average (PSO) = 2.75**					

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments / Open Book Test / Quiz	
	Seminars/ Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**50 Marks**
	Total	**100 Marks**

Weightage for Correlation		
0 ≦C ≦ 5%	**No correlation**	**-**
5% <C ≦ 40%	**Low / Slight**	**1**
40% <C < 60%	**Moderate**	**2**
60% ≦C < 100%	**Substantial / High**	**3**

RDBMS

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part**	**Elective**	**Theory**
Semester	**I**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To understand the concepts of data models, database languages and the architecture of database system. • To depict a database system using ER diagram. • To study SQL and relational database design.		

CO #	Course Outcome(s)	PSO Addressed	Bloom's Taxonomy Levels (K1 to K5)
On completing the course successfully, the student will be able to			
CO 1	**Study the basic principles of database management systems**	**PSO2,PSO4**	**K1**
CO 2	**Understand and identify the data models for relevant problems.**	**PSO2,PSO4**	**K2**
CO 3	**Apply normalization techniques for real-time applications**	**PSO2,PSO4, PSO5**	**K3**
CO 4	**Analyze the transaction processing and concurrency control models**	**PSO2,PSO4, PSO5**	**K4**
CO 5	**Recommend the SQL queries and constraints for tables and corresponding attributes in databases.**	**PSO2,PSO4, PSO5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**COs**	**BLOOM'S TAXONOMY LEVEL**
I	Database concepts:– Database Management Systems (DBMS), Purpose of Database Systems, Viewsofdata,DataModels,Databaselanguage,TransactionManagement,Storagemanagement, Database Administrator, Data base Users, Overall System Structure, Different types of Database Systems:-E-R Model: Basic Concepts, E-R Diagram, Weak Entity set, Extended E-R features, Design Of an E-R Database Schema, Reduction of an E-R schema to Tables.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
II	Relational Database Design- Pitfalls in Relational-Database Design, Decomposition, Normalization Using Functional Dependencies, and Normalization Using Multi valued Dependencies, Normalization Using Join Dependencies, Domain-Key Normal Form and Alternative Approaches to Database Design Relational Database Design:	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
III	Relational Algebra: -Database management and security Data organization and storage, Transaction Processing.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
IV	Concurrency Management: Introduction – Serializability – Concurrency Control – Locking Schemes – Timestamp Based Order – Optimistic Scheduling – Multi version Techniques – Deadlock and its Resolutions – Atomicity, Concurrency and Recovery.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**
V	SQL: An overview - Personal Databases – Client / Server Databases Table Creation & Modification: Data types – Constraints – Creating a Table - Working with tables: Data Management and retrieval.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5**

Prescribed Books/Textbooks :

1. Abraham silberschatz Henry F. KorthS. Sudarshan, "Database System Concepts", McGraw – Hill Companies., Fifth edition.
2. RaghuRamakrishnan& Johannes Gehrke, "Database Management Systems", McGraw Hill International Editions.

References

1. C.J. Date:- An Introduction to Database Systems Addison Wesley; 8th edition
2. Alexis leon, Mathes Leon, "Essentials of Database management, Systems", Vijay Nicole Imprints Pvt Ltd.

Suggested Reading

1. Database systems, 6th edition, Ramez Elmasri, Shamkant B.Navathe, Pearson Education.
2. Database Systems Design, Implementation, and Management, Peter Rob & Carlos Coronel, 7th Ed.

Web Resources

1. https://db-book.com/
2. https://onlinecourses.nptel.ac.in/noc18_cs15/preview
3. http://nptel.ac.in/courses/106106093/
4. http://nptel.ac.in/courses/106106095/

								Course Articulation Matrix					
Course Outcomes	Programme Outcomes							Programme Specific Outcomes					Cognitive Level
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	
CO 1	3	2	3	3	3	3	-	-	2	-	3	-	K1
CO 2	3	2	2	3	2	2	-	-	2	-	3	-	K2
CO 3	3	2	3	2	2	2	2	-	2	-	3	3	K3
CO 4	3	2	2	2	2	2	3	-	2	-	3	3	K4
CO 5	3	2	2	2	2	2	3	-	2	-	3	3	K5
Wt. Avg.	3	2	2.4	2.4	2.2	2.2	2.6	-	2	-	3	3	
	Overall Weighted average (PO) =2.4							Overall Weighted average (PSO) =			2.67		

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments / Open Book Test / Quiz	
	Seminars / Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**50 Marks**
	Total	**100 Marks**

Weightage for Correlation		
0 ≦C ≦ 5%	**No correlation**	**-**
5% <C ≦ 40%	**Low / Slight**	**1**
40% <C < 60%	**Moderate**	**2**
60% ≦C < 100%	**Substantial / High**	**3**

LEGAL ASPECTS OF BUSNIESS

Course Code			
Credits	**4**		
Hours / Cycle	**5**		
Category	**Part II**	**Elective VI**	**Theory**
Semester	**II**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To provide an overview of important laws that has a bearing on the conduct of business in India. • To explain the nature and structure of legal aspects of business.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	**Describe the Indian Legal System and Legal Environment of business.**	**PSO1, PSO4 PSO,5**	**K1**
CO 2	**Describe the Legal relationship of ethics and law in business.**	**PSO 1, PSO2, PSO 4, PSO 5**	**K2**
CO 3	**Define relevant legal terms in business.**	**PSO 2, PSO3, PSO 4, PSO 5**	**K3**
CO 4	**Describe the importance of the Consumer Protection Act, 1986**	**PSO 1, PSO3, PSO 4**	**K4**
CO 5	**Explain the Cyber Law and the information Technology Act, 2000.**	**PSO 1, PSO2, PSO 4, PSO 5**	**K5**

SYLLABUS				
UNI T	**CONTENT**	**HOURS**	**COs**	**BLOOM'S TAXONOMY LEVEL**
I	Sale of Goods Act, 1930 – Sale and Agreement to Sell – Conditions and Warranties – Passing of Property – Performance – Remedies for breach – Rights of unpaid seller – Auction Sale.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
II	Companies Act, 1956 – Definition – Formation – Memorandum of Association – Articles of Association – Prospectus – Share Capital – Shares.	**18**	**CO1,CO 2, CO3,CO 4, CO5**	**K1,K2,K3,K4, K5**
III	Foreign Exchange Maintenance Act, 1999 – Introduction – Objectives of the Act – Definition: Person of Indian Origin, Residential Status of a Person, Current, Capital and Current Account Transaction, Export, Imports, Foreign Exchange and foreign currency – Authorised dealer: his responsibilities.	**18**	**CO1,CO 2, CO3,CO 4, CO5**	**K1,K2,K3,K4, K5**
IV	The consumer Protection Act, 1986 – Definition – Consumer Protection Council (State and Central) – Consumer Disputes Redressal Agencies – Consumer Disputes Redressal Forum – State Consumer Disputes Redressal Commission – National Consumer Disputes Redressal Commission.	**18**	**CO1,CO 2, CO3,CO 4, CO5**	**K1,K2,K3,K4, K5**
V	Cyber Law and the Information Technology Act, 2000 – Objectives of the Act – Definitions – Digital Signatures (Sec 3) – Electronic Governance (Sec 4 – 10) – Attribution, Receipt and Despatch of Electronic Records – Regulations Regarding Certifying Authorities – Digital Signature Certification – Duties of Subscribers – Penalties – Cyber Regulations Appellate Tribunal – Cyber Regulations – Advisory Committee.	**18**	**CO1,CO 2, CO3,CO 4, CO5**	**K1,K2,K3,K4, K5**

Prescribed Books/Textbooks

3. N.D. Kapoor, Mercantile Law, Sultan Chand & Sons
4. N.D. Kapoor, Company Law, Sultan Chand & Sons

References

4. K.K Jindal, Letter of Credit & EXIM Finance, Skylark Publishing
5. P. Saravanavel& S. Sumathi, Legal Aspects of Business, Himalaya Publishers 2004
6. Krishnakumar, Cyber Laws: Intellectual Property & E – Commerce Security, Dominant Publishers & Distributors

Suggested Reading

3. Kamlesh. N Agarwala&Murli D Tiwari, IT and the Indian Legal System, MacMillan Publishers
4. N.A. Vajaya Shankar, Cyber Law for every Netizen in India.

Web Resources

www.findlaw.com
www.growlawfirm.com

Course Outcomes	Course Articulation Matrix												
	Programme Outcomes								Programme Specific Outcomes				Cognitive Level
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO2	PSO3	PSO4	PSO5	
CO 1	2	3	2	2	3	2	2	3	-	-	3	3	K1
CO 2	3	3	2	3	3	2	2	3	3	-	2	2	K2
CO 3	3	3	2	3	3	2	2	-	3	3	2	2	K3
CO 4	3	3	2	2	3	-	2	3	-	3	3	-	K4
CO 5	3	3	2	3	3	2	2	2	2	-	2	2	K5
Wt. Avg.	2.8	3	2	2.6	3	2	2	2.7	2.7	3	2.4	2.2	
Overall Weighted average of PSO							2.48	Overall Weighted average of PSO				2.6	

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	50 Marks
	Assignments / Open Book Test / Quiz	
	Seminars / Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	50 Marks
	Total	100 Marks

Weightage for Correlation		
0 ≦C ≦ 5%	No correlation	-
5% <C ≦ 40%	Low / Slight	1
40% <C < 60%	Moderate	2
60% ≦C < 100%	Substantial / High	3

Web Technologies

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part II**	**Elective II**	**Practical**
Semester	**II**		
Year of Implementation	**From the academic year 2025-26 onwards**		
Course Objectives	• To understand the concept of web technology. • To understand the front end design and create web sites		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K6)**
On completing the course successfully, the student will be able to			
CO 1	Learn and remember the terms and structure of HTML	PSO1, PSO2,PSO4, PSO5	**K1**
CO 2	Understand how to design a web page	PSO1, PSO2,PSO4, PSO5	**K2**
CO 3	Apply the concepts of web technologies	PSO1, PSO2,PSO4, PSO5	**K3**
CO 4	Analyze and compare the web development techniques	PSO1, PSO2,PSO4, PSO5	**K4**
CO 5	Explain and Design the real-time web applications	PSO1, PSO2,PSO4, PSO5	**K5,K6**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Basics of Web Design: Brief History of Internet -World Wide Web – URL - Domain - Web Page – Website - Internet Browser – Introduction to HTML – HTML Tags – Structure of HTML document	**18**	**CO1,CO2,CO3,CO4, CO5**	**K1,K2,K3,K4, K5,K6**
II	Elements of HTML: Heading – Paragraphs – Attributes - Line Breaks –Working with Text – Font – Comment – Formatting Tags – Hyperlinks – Images – Lists - Tables	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
III	Frames and Form: Frames – Iframes - Working with Web Forms – Body - Controls – Text Fields – Password – Submit – Checkboxes – Radio – Select – Style - Div – Layouts	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
IV	Introduction to Cascading Style Sheets: Concept of CSS - Creating Style Sheet - CSS Properties - CSS Styling - Working with Box Model – Border – Outline – Margin - CSS Color	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
V	Introduction to JavaScript: Introduction to JavaScript - Variables – Operators – Functions – Conditional statements – Looping – Boolean – Date - Math – String - Event Handling – Window object – Document object – Browser Object – Form Object.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**

List of Programs:

1. Program to display a webpage with header, paragraph tags.
2. Program to text in different font styles.
3. Program to display images and hyperlinks
4. Program to display table
5. Program to display ordered and unordered list
6. Program to design a form with various controls such as textbox, radiobutton etc.
7. Program to design a webpage with CSS.
8. Program to work with form validation with javascript
9. Program for event handling
10. Program to design a website with HTML,CSS and Javascript

Prescribed Books/Textbooks:

1.Thomas Powell, HTML & CSS: The Complete Reference, Fifth Edition Paperback – 1 July 2017
2.Julie C. Meloni and Jennifer Kyrnin, HTML, CSS, and JavaScript All in One, Sams Teach Yourself, 3/e, May 2020
3.Pawel Kozlowski and Peter Bacon Darwin, Mastering Web Application Development with AngularJS, Packt Publishing, 2013.

References

1. Thomas A.Powell and Fritz Schneider, JavaScript: The Complete Reference, Tata McGraw Hill, 2002.
2. Jennifer Robbins,Learning Web Design: A Beginner's Guide to HTML, CSS, JavaScript, and Web Graphics, 5th Edition, 2018

Suggested Reading

2. C. Xavier, —World Wide Web Design with HTML, TMH Publishers 2017.
3. "HTML and CSS: Design and Build Websites" – Jon Duckett (1st Edition, 2011)

Web Resources

1. https://www.w3schools.com/html/
2. https://www.geeksforgeeks.org/html/
3. https://www.tutorialspoint.com/html/index.htm
4. https://www.w3schools.com/css/
5. https://www.w3schools.com/js/

		Course Articulation Matrix											
	Programme Outcomes							Programme Specific Outcomes					
Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	Cognitive Level
CO 1	3	2	3	3	3	3	3	2	3	-	3	2	K1
CO 2	3	2	3	3	3	3	3	2	3	-	3	2	K2
CO 3	3	2	3	2	2	3	3	3	2	-	2	3	K3
CO 4	3	2	2	2	2	2	3	3	2	-	3	3	K4
CO 5	3	2	2	3	2	2	3	3	2	-	3	3	K5,K6
Wt. Avg.	3	2	2.6	2.6	2.4	2.6	3	2.6	2.4	-	2.8	2.6	
Overall Weighted average (PO) = 2.6								**Overall Weighted average (PSO) = 2.6**					

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments / Open Book Test / Quiz	
	Seminars/ Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**50 Marks**
	Total	**100 Marks**

Weightage for Correlation		
0 ≦C ≦ 5%	**No correlation**	**-**
5% <C ≦ 40%	**Low / Slight**	**1**
40% <C < 60%	**Moderate**	**2**
60% ≦C < 100%	**Substantial / High**	**3**

ORGANISATIONAL BEHAVIOUR

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part II**	**Elective**	**Theory**
Semester	**II**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To list and define basic organizational behaviour principles and analyse how these influence behaviour in work place. • To learn to analyse individual human behaviour in the work place as influenced by personality, values, perceptions and motivations.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	Analyse individual and group behaviour and understand the implication of Organisational Behaviour.	PSO1, PSO4 PSO5	**K1**
CO 2	Identify different motivational strategies used in a variety of organisational settings	PSO1, PSO2, PSO4, PSO5	**K2**
CO 3	Explain how organisational change and culture affect working relationship within organisation.	PSO2, PSO3, PSO4, PSO5	**K3**
CO 4	Describe the importance of the Leadership Theories	PSO1, PSO3, PSO 4	**K4**
CO 5	Explain the Organisational structure and design	PSO1, PSO2, PSO4, PSO5	**K5**

SYLLABUS				
UNI T	**CONTENT**	**HOU RS**	**COs**	**BLOOM'S TAXONOMY LEVEL**
I	Introduction to Organisational Behaviour – Concept of Organisational Behaviour – Foundation of Individual Behaviour – Organisational Behaviour Mod – Values and attitudes.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
II	Motivation – Early Theories – Contemporary Theories – Motivation at work – Designing motivation jobs.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
III	Interpersonal Behaviour – Transactional Analysis – Self Awareness – Ego States – Life Scripts – Life Positions – Stroking – Uses of Transactional Analysis Groups Dynamics & Behaviour – Concept of group dynamics – Types of Groups – Group Behaviour – Groups Decision Making – Inter group Relations.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
IV	Leadership – Trait – Behavioural – Contingency – Theories – Power Authority & Politics – Power Relationship – Bases of Power – Organisational Politics – Corneous – Reasons of Organisational Policies.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**
V	Organisational Structure & design – Organisational change & Development – Organisational Culture & climate – Organisational Conflict & career – types – conflict management.	**18**	**CO1,CO2, CO3,CO4, CO5**	**K1,K2,K3,K4, K5**

Prescribed Books/Textbooks

1. Stephen P. Robbins, Organisational Behaviour – 3rd Edition, Prentice Hall
2. Fred Luthans, Organisational Behaviour – 2nd Edition, McGraw Hill

References

1. Shoeb Ahmad, Organizational Behaviour: An Effective Management, Mittal Publications, 2020
2. T.N. Chhabra, Essentials of Organisational behaviour, Sun India Publications, 2019
3. L.M. Prasad, Organizational Behaviour, Sultan Chand & Sons, 2024

Suggested Reading

1. J.R Schermerhom, James G. Hunt & Richard N. Oshom, Organisational Behaviour, John Wiley & Sons, 1997
2. Joseph E. Champoux, Organisational Behaviour: Integrating Individuals, Groups & Process, West Publishing Company, New York, 1996

Web Resources

1. www.siop.org
2. www.hbr.org
3. www.aom.org

Course Outcomes	Course Articulation Matrix												
	Programme Outcomes								Programme Specific Outcomes				Cognitive Level
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO2	PSO3	PSO4	PSO5	
CO 1	2	3	2	2	3	2	2	3	-	-	3	3	K1
CO 2	3	3	2	3	3	2	2	3	3	-	2	2	K2
CO 3	3	3	2	3	3	2	2	-	3	3	2	2	K3
CO 4	3	3	2	2	3	-	2	3	-	3	3	-	K4
CO 5	3	3	2	3	3	2	2	2	2	-	2	2	K5
Wt. Avg.	2.8	3	2	2.6	3	2	2	2.7	2.7	3	2.4	2.2	
Overall Weighted average of PSO							2.48	Overall Weighted average of PSO				2.6	

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	50 Marks
	Assignments / Open Book Test / Quiz	
	Seminars / Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	50 Marks
	Total	100 Marks

Weightage for Correlation		
0 ≦C ≦ 5%	No correlation	-
5% <C ≦ 40%	Low / Slight	1
40% <C < 60%	Moderate	2
60% ≦C < 100%	Substantial / High	3

MANAGERIAL ECONOMICS

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part - II**	**Elective**	**Theory**
Semester	**II**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To enable students to apply economic principles and analytical tools to make informed business decisions. • To equip students with the skills to analyse demand patterns and utilize various forecasting techniques to predict future demand effectively. • To analyse the impact of macroeconomic factors on business decisions, including understanding business cycles, economic policies, and the implications of national income and income distribution theories. • To instil an awareness of the ethical implications of economic decisions and practices, encouraging responsible decision-making in business environments.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K6)**
On completing the course successfully, the student will be able to			
CO 1	Demonstrate a comprehensive understanding of the nature and scope of managerial economics and its role in business decision-making.	PSO1, PSO2, PSO4, PSO5	**K1**
CO 2	Evaluate production functions and understand the concepts of economies and diseconomies of scale.	PSO1, PSO2, PSO4, PSO5	**K2**
CO 3	Assess the nature and measurement of profit, and develop profit policies, planning, and forecasting techniques to enhance business profitability.	PSO1, PSO2, PSO4, PSO5	**K3**
CO 4	Analyze the impact of macroeconomic factors on business decisions	PSO1, PSO2, PSO4, PSO5	**K4**
CO 5	Recognize and evaluate the ethical implications of economic decisions and practices in a business context.	PSO1, PSO2, PSO4, PSO5	**K5, K6**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Nature & Scope of Managerial Economics – Role of Managerial Economics – Demand Analysis – Demand Forecasting.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
II	Production Function – Economies & Diseconomies of Scale – Cost Concepts – Classification – Cost – Output Relationship.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
III	Price Policies – Pricing Under Perfect Competition – Oligopoly – Monopoly – Monopolistic Competition – Pricing Methods – Pricing Problems – Price Discounts and Differentials.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
IV	Profit Management – Nature & Measurement of Profit – Profit Policies – Profit Planning & Forecasting.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
V	Macro – Economics & Business Decision – Business Cycle – Business Polices – Economic Forecasting for business – National Income – Theory of Income Distribution.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**

Prescribed Books/Textbooks:

1.William F. Samuelson, Stephen G. Marks, Managerial Economics, Wiley; 8th edition, 2015.

2. Paul G. Keat, Philip K. Young, Managerial Economics, Pearson; 7th edition, 2016.

3. N. Gregory Mankiw, Principles of Economics, Cengage Learning; 8th edition, 2017.

References

1. David M. Kreps, Microeconomics for Managers, W. W. Norton & Company; 2nd edition, 2023.
2. N. Gregory Mankiw, Principles of Economics, Cengage Learning; 10th edition, 2023.
3. Edward P. Lazear, James R. Spletzer, The Economics of Managerial Decisions, Wiley; 2nd edition, 2023.

Suggested Reading

1. William F. Samuelson, Stephen G. Marks, Managerial Economics, Wiley; 10th edition, 2023.
2. Donald N. Stengel, Managerial Economics: Analysis, Problems, Cases, Cengage Learning; 3rd edition, 2023.
3. Paul G. Keat, Philip K. Young, Managerial Economics, Pearson; 8th edition, 2023.

Web Resources:

1. **https://www.tutorvista.com/content/business-economics/managerial-economics.php**
2. https://www.economicsdiscussion.net/managerial-economics
3. https://www.econlib.org/library/Topics/Details/Managerial-Economics.html
4. https://www.economicshelp.org/micro-economic-essays/managerial-economics/
5. https://www.coursera.org/specializations/managerial-economics-business-analysis

								Course Articulation Matrix					
	Programme Outcomes							Programme Specific Outcomes					
Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	Cognitive Level
CO 1	3	2	3	3	3	3	3	3	2	-	3	3	K1
CO 2	3	3	3	3	3	3	3	3	2	-	3	3	K2
CO 3	3	3	3	2	2	2	2	3	2	-	3	3	K3
CO 4	3	2	2	2	2	2	3	3	2	-	3	3	K4
CO 5	3	3	2	2	3	3	3	3	2	-	3	3	K5,K6
Wt. Avg.	3	2.6	2.6	2.4	2.6	2.4	3	3	2	-	3	3	
	Overall Weighted average (PO) =2.65							**Overall Weighted average (PSO) = 2.75**					

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments / Open Book Test / Quiz	
	Seminars/ Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**50 Marks**
	Total	**100 Marks**

Weightage for Correlation		
0 ≦C ≦ 5%	**No correlation**	**-**
5% <C ≦ 40%	**Low / Slight**	**1**
40% <C < 60%	**Moderate**	**2**
60% ≦C < 100%	**Substantial / High**	**3**

PHP and MySQL

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part - II**	**Elective III**	**Practical**
Semester	**III**		
Year of Implementation	**From the academic year 2025-26 onwards**		
Course Objective	• To write programs using PHP. •To understand the concept of MySQL database. •To develop a webpage with database connectivity with PHP & MySQL		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K6)**
On completing the course successfully, the student will be able to			
CO 1	List and recall the basics of PHP	PSO1, PSO2,PSO4, PSO5	**K1**
CO 2	Understand the various programming concepts of PHP	PSO1, PSO2,PSO4, PSO5	**K2**
CO 3	Apply the programming concepts using PHP	PSO1, PSO2,PSO4, PSO5	**K3**
CO 4	Analyze and establish database connectivity	PSO1, PSO2,PSO4, PSO5	**K4**
CO 5	Explain and Design the real-time web applications using PHP and MySQL	PSO1, PSO2,PSO4, PSO5	**K5,K6**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Basics of PHP: Introduction to PHP - Features of PHP – Introduction to XAMPP – Installation of XAMPP – Client Server Environment – PHP basics – Syntax – Variables – Constants – Comments – Data Types – Flow control statements – Looping structures – Arrays – Including HTML code in PHP – Embedding PHP in web pages.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
II	Functions and Strings in PHP: Defining a function - Calling a function - Variable scope – Function parameters - Return values – Built-in Functions - User Defined Functions – Strings - Creating and accessing String – String Functions - Searching and replacing strings - Comparing Strings - Regular expression	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
III	Working with Files and Directories: Understanding file and directory – Creating file - Opening and closing a file – Coping - renaming and deleting a file - working with directories - Creating and deleting folder - File Uploading and Downloading	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
IV	SQL: Introduction to SQL - SQL Data Types - Basic Structure of SQL Queries – creating / dropping a table - loading data into a table - Retrieving information from a table - selecting all data	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
V	Database Connectivity with MySql: Connection with MySql Database - Performing basic database operation (DML) - Setting query parameter - Executing query in Database - Retrieving and displaying the results	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**

List of Programs:

1. Program to run basic PHP script in XAMPP platform.
2. Program to understand embedding PHP in webpage
3. Program for control statements in PHP
4. Program for looping statements
5. Program for Array.
6. Program for built-in and user defined functions
7. Program to display strings
8. Program to work with files.
9. Program to connect to database using MySQL
10. Program to design website with PHP and MySQL

Prescribed Books/Textbooks:

1. Lynn Beighley& Michael Monison, Head First PHP & MySQL, O'Reilly 2009
2. Vikram Vaswani, PHP: A Beginner's Guide, McGraw-Hill 2008

3.Luke Welling, Laura Thomson,PHP and MySQL Web Development 5th Edition, 2016

References

1. Robin Nixon,Learning PHP, MySQL & JavaScript: With jQuery, CSS & HTML5, 6th Edition, 2021

2.Luke Welling & Laura Thomson, PHP and MySQL Web Development, 5th Edition, 2016

Suggested Reading

1. Murach, Joel and Harris, Ray, Murach's PHP and MySQL, 2011.
2. Tim Converse, Joyce Park and ClarkMorgan, PHP 5 and MySQL, Wiley India reprint, 2008.
3. Robert Sheldon, Geoff Moes, Beginning MySQL, Wrox, 2005.

Web Resources

1. https://www.udemy.com/course/php-mysql-course-for-absolute-beginners/
2. https://www.w3schools.com/php/
3. https://www.tutorialspoint.com/php/index.htm
4. https://www.phptutorial.net

		Course Articulation Matrix											
	Programme Outcomes							Programme Specific Outcomes					
Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	Cognitive Level
CO 1	3	3	3	3	3	3	3	2	3	-	3	2	K1
CO 2	3	3	3	3	3	3	3	2	3	-	3	2	K2
CO 3	3	3	3	2	3	3	3	3	2	-	2	3	K3
CO 4	3	3	2	2	2	2	3	3	2	-	3	3	K4
CO 5	3	3	2	3	2	2	3	3	2	-	3	3	K5,K6
Wt. Avg.	3	3	2.6	2.6	2.6	2.6	3	2.6	2.4	-	2.8	2.6	
Overall Weighted average of PO = 2.77								Overall Weighted average of PSO = 2.6					

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments / Open Book Test / Quiz	
	Seminars/ Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**50 Marks**
	Total	**100 Marks**

JAVA

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part - II**	**Elective**	**Practical**
Semester	**III**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objective	• To understand the fundamentals of programming such as variables, methods, looping and conditional statements. • To understand the fundamentals of Object Oriented Programming Concepts (OOPS Concepts) including class, objects, encapsulation, polymorphism, inheritance. • To understand about the importance of exception handling and packages.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K6)**
On completing the course successfully, the student will be able to			
CO 1	Recall the basic fundamentals of programming language	PSO1,PSO2,PSO4,PSO5	**K1**
CO 2	Understand the Object Oriented Programming (OOP) concepts	PSO1,PSO2,PSO4,PSO5	**K2**
CO 3	Apply the OOP concepts to develop efficient and error-free code.	PSO1,PSO2,PSO4,PSO5	**K3**
CO 4	Analyze different real-time problems	PSO2,PSO4,PSO5	**K4**
CO 5	Recommend and Design various interactive applications using OOP concepts	PSO2,PSO4,PSO5	**K5, K6**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Introduction to Java Applications:- Fundamental Programming Structures in Java, The History of Java. Java's Key Features. The Java Virtual Machine, Basic Identifiers, Comments, Keywords. Variables, assignment expressions, Using Operators.	**12**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
II	Java language constructs:- Branches –The If-Else Statements. Selecting with Switch statement. Loops -Using While, do-while, for loop. Arrays:- Creating an Array, Array Initialization, Working with Arrays, Using Multi-dimensional Arrays. , math, strings	**12**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
III	Object oriented programming:-Classes and objects, Classes & Packages, The import Statement, The Importance of Encapsulation, Java Constructors, Access Modifiers (private, default and public), Method Overloading.	**12**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
IV	Polymorphism and Inheritance:-.The Protected Modifier, Using this and super, The final keyword, Static Members & Methods., Interfaces & Abstract Classes, The Complete Construction Process, The Class, Object, Nested Classes, Enums in Java.	**12**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
V	Exceptions and Exception Handling in Java:-The try-catch-finally, Compile-time Exceptions, Describing Common Exceptions, Creating Custom Exceptions.	**12**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**

Prescribed Books/Textbooks:

1. Balagurusamy , Programming With Java 6th Edition, Tata Mc.Graw-Hill, publishing company Ltd, 2019 .
2. Java The complete reference, 8th editon, Herbert Schildt, TMH, 2017.
3. Deitel H.M. –java How to Program, Pubvlisher: Prentice Hall, Seventh Edition (2007)
4. Bruce Eckel – Thinking in Java, prentice hall , Fourth edition (2006)

References

1. An Introduction to programming and OO design using Java, J. Nino and F.A. Hosch, John Wiley & sons, 2008
2. Introduction to Java programming, Y. Daniel Liang, Pearson Education, Comprehensive Version, 2013.
3. Object Oriented Programming through Java, P. Radha Krishna, University Press, Jan 2007.

Suggested Reading

1. 1.Programming in Java, S. Malhotra, S. Chudhary, 2nd edition, Oxford Univ. Press, January 2018.

Java Programming and Object-oriented Application Development, R. A. Johnson, Cengage Learning, Feb 2006.

Web Resources

1.https://docs.oracle.com/javase/tutorial/
2.https://www.w3schools.com/java/
3.https://www.javatpoint.com/java-tutorial
4.https://www.geeksforgeeks.org/java/

		Course Articulation Matrix											
Course Outcomes	**Programme Outcomes**							**Programme Specific Outcomes**					**Cognitive Level**
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PO7**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	
CO 1	3	3	3	3	3	3	3	3	3	-	3	2	K1
CO 2	3	3	3	3	3	3	3	3	3	-	3	2	K2
CO 3	3	3	3	2	3	3	3	3	2	-	2	3	K3
CO 4	3	3	2	2	2	2	3	3	2	-	3	3	K4
CO 5	3	3	2	3	2	2	3	2	2	-	3	3	K5, K6
Wt. Avg.	3	3	2.6	2.6	2.6	2.6	3	2.6	2.4	-	2.8	2.6	
Overall Weighted average of PO = 2.77								**Overall Weighted average of PSO = 2.6**					

COMPUTERISED AUDITING

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part - III**	**Elective**	**Theory**
Semester	**II**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To provide students with a comprehensive understanding of the methods auditors use to assess and control risks in computerized accounting systems. • To familiarize students with the various types of audit procedures, steps in an audit, and the concepts of auditing around or through the computer. • To introduce students to various types of audit software, including generalized and specialized audit software, and to understand their control and application in auditing. • To discuss the importance of professionalism in the information system audit function and explore the future trends in information system auditing.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K6)**
On completing the course successfully, the student will be able to			
CO 1	Demonstrate the ability to assess and manage control risks in computerized accounting systems effectively.	PSO1, PSO2, PSO4, PSO5	**K1**
CO 2	Evaluate the planning, organizing, leading, and controlling functions in systems development and apply auditing approaches to assess these functions.	PSO1, PSO2, PSO4, PSO5	**K2**
CO 3	Execute various audit procedures and steps, including the ability to audit around and through the computer.	PSO1, PSO2, PSO4, PSO5	**K3**
CO 4	Analyze the impact of computerized systems on internal controls and apply appropriate auditing techniques to ensure compliance and effectiveness.	PSO1, PSO2, PSO4, PSO5	**K4**
CO 5	Utilize audit technology to assist in making informed global evaluation decisions regarding system effectiveness and efficiency.	PSO1, PSO2, PSO4, PSO5	**K5, K6**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Introduction – Need for Control – Effects of Computers on internal controls and auditing – Foundations of Information System auditing – Nature of Controls – Types of audit procedures – Steps in an audit – Auditing around or through the computer.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
II	Auditing Systems Development – Evaluating Planning, Organising, Leading & Controlling functions – Approaches to auditing systems development – The programming groups – Data Resource Management Controls – Operations Management Controls.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
III	Audit Software – Generalised and Specialised Audit Software – Utility Software – Control of Audit Software – Auditing Techniques – Performance Measurement Tools.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
IV	Nature of Global Evaluation Decision – Audit Technology to assist the evaluation decision – Evaluating System effectiveness & Efficiency.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**
V	Managing Information System Audit function – Towards Information System Audit Professionalism – Future of Information System Auditing.	**18**	**CO1, CO2, CO3, CO4, CO5**	**K1,K2,K3,K4, K5,K6**

Prescribed Books/Textbooks:

1. Robert A. McLeod, George P. McLeod, Computerized Auditing: The Audit Process in the Computer Age, Wiley; 1st edition, 2018.
2. K. H. (Kumar) Raghunathan, Information Systems Auditing: A Comprehensive Approach, Cengage Learning; 3rd edition, 2019.
3. Michael G. D. (Mickey) McCarthy, Auditing Information Systems, Wiley; 2nd edition, 2020.

References

1. G. Jack, Information Systems Auditing: A Practical Guide for Auditors, Wiley; 2nd edition, 2021.
2. Robert E. Davis, Auditing Information Systems: A Comprehensive Approach, Cengage Learning; 4th edition, 2020.
3. Michael E. Whitman, Herbert J. Mattord, Principles of Information Security, Cengage Learning; 6th edition, 2020.

Suggested Reading

1. James A. Hall, *Information Technology Auditing*, Cengage Learning; 5th edition, 2021.
2. David A. Zeller, Auditing Information Systems: A Practical Guide, Pearson; 2nd edition, 2022.
3. Ronald J. Baker, Information Technology Auditing: A Risk-Based Approach, Cengage Learning; 4th edition, 2021.

Web Resources:

1. https://www.isaca.org/credentialing/cisa
2. https://www.isaca.org/resources/cobit
3. https://www.auditnet.org

Course Articulation Matrix													
Course Outcomes	**Programme Outcomes**							**Programme Specific Outcomes**					**Cognitive Level**
	PO1	**PO 2**	**PO3**	**PO 4**	**PO 5**	**PO 6**	**PO 7**	**PSO 1**	**PSO 2**	**PSO 3**	**PSO 4**	**PSO 5**	
CO 1	3	3	2	2	3	-	2	3	3	3	-	-	**K1**
CO 2	3	3	-	2	3	-	-	3	3	-	2	-	**K2**
CO 3	3	3	3	3	3	3	3	3	3	3	2	2	**K3**
CO 4	3	3	3	2	2	3	2	-	3	3	3	2	**K4**
CO 5	3	3	3	2	2	3	3	-	3	3	2	2	**K5**
Wt. Avg.	3	3	2.75	2.2	2.6	3	2.5	3	3	3	2.25	2	
Overall Mapping PO = 2.72								**Overall Mapping PSO = 2.65**					

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments / Open Book Test / Quiz	
	Seminars/ Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**50 Marks**
	Total	**100 Marks**

Weightage for Correlation		
0 ≦C ≦ 5%	**No correlation**	**-**
5% <C ≦ 40%	**Low / Slight**	**1**
40% <C < 60%	**Moderate**	**2**
60% ≦C < 100%	**Substantial / High**	**3**

Statistical Analysis using R Programming

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part - II**	**Elective IV**	**Practical**
Semester	**IV**		
Year of Implementation	**From the academic year 2025-26 onwards**		
Course Objective	• To understand the basic concepts of R programming language. • To analyze the data with R programming packages. • To apply the statistical tools in R programming.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K6)**
On completing the course successfully, the student will be able to			
CO 1	Define the basics of R preliminaries, Data in Statistics and in R and Exploratory data Analysis	PSO1, PSO2, PSO3, PSO4, PSO5	**K1**
CO 2	Understand the basic concepts of R Programming	PSO1, PSO2, PSO3, PSO4, PSO5	**K2**
CO 3	Apply the statistical tools in R programming	PSO1, PSO2, PSO3, PSO4, PSO5	**K3**
CO 4	Analyze on how to use R programming for effective data analysis	PSO1, PSO2, PSO3, PSO4, PSO5	**K4**
CO 5	Adapt the various concepts learnt in statistics using R programming	PSO1, PSO2, PSO3, PSO4, PSO5	**K5,K6**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Introduction to R: Evolution of R – Applications of R - Integrated Development Environment for R – Installation of R – Basic Concepts of R: Variables & Constants – Reserved Words – Operators – Data types – Input and Output in R	**18**	CO1, CO2, CO3, CO4, CO5	K1,K2,K3,K4, K5,K6
II	Data Organisation: Data import, export and connections – Data Manipulation. Data structures in R: Vectors, Matrix, List, Data frames. Packages – Help	**18**	CO1, CO2, CO3, CO4, CO5	K1,K2,K3,K4, K5,K6
III	Presenting data: Tables - Bar plots – Histograms - Dot charts - Scatter plots - Lattice plots -Three dimensional plots. Strings: String construction rules, String Manipulation functions	**18**	CO1, CO2, CO3, CO4, CO5	K1,K2,K3,K4, K5,K6
IV	Descriptive statistics using R Programming: Mean (arithmetic, geometric and harmonic) median, mode for raw and grouped data – Single sample hypotheses testing: Null and alternative hypothesis – Large sample hypothesis testing – Small sample hypothesis testing.	**18**	CO1, CO2, CO3, CO4, CO5	K1,K2,K3,K4, K5,K6
V	Analysis of variance using R Programming: One way, fixed effects ANOVA – Non Parametric one way ANOVA, random effects ANOVA – Two way ANOVA – Simple linear models – The models goodness of fit – Hypothesis testing.	**18**	CO1, CO2, CO3, CO4, CO5	K1,K2,K3,K4, K5,K6

List of Programs:

1. R Installation and using workspace.
2. Program to work with basics of R programming.
3. Program to display the different types of datasets Vectors, Matrices, Arrays, Data frames and Lists.
4. Program to visualize the data as charts, plots and histograms.
5. Program to visualize the data using Scatter, Lattice and 3D plots.
6. Program to work with strings.
7. Program for Mean, Median & Mode.
8. Program for hypotheses testing.
9. Program for ANOVA.
10. Program for linear models.

Prescribed Books/Textbooks:

1. Dr. Mark Gardener, John Wiley &Sons, Inc,Beginning R: The statistical Programming Language, 2013
2.Norman Matloff,The art of R programming, no starch Press, San Francisco
3.Lumley, T. (2011). Complex surveys: a guide to analysis using R. John Wiley & Sons, 2011
4.Tilman M. Davies,The Book of R: A First Course in Programming and Statistics, 1st Edition, 2016

References

1. Schumacker, R. E., Learning statistics using R. Sage Publications, 2014
2. Hadley Wickham & Garrett Grolemund,R for Data Science,1st Edition, 2017

Suggested Reading

1. Yosef, C and Jeremiah, Y.C. Statistics and Data with R, An Applied approach through examples, A JohnWiley and Sons, 2008
2.Kerns, G. J., Introduction to probability and statistics using R. Lulu. com.,2010

Web Resources

1. https://www.math.csi.cuny.edu/~verzani/R/AMS-MAA-Jan-09.pdf
2. https://web.itu.edu.tr/~tokerem/The_Book_of_R.pdf
3. https://cran.r-project.org/doc/contrib/Paradis-rdebuts_en.pdf

		Course Articulation Matrix											
	Programme Outcomes							Programme Specific Outcomes					
Course Outcomes	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	Cognitive Level
CO 1	3	2	3	3	3	3	3	2	3	3	3	2	K1
CO 2	3	2	3	3	3	3	3	2	3	3	3	2	K2
CO 3	3	2	3	2	2	3	3	3	2	3	2	3	K3
CO 4	3	3	3	3	3	3	3	3	3	3	3	3	K4
CO 5	3	3	3	3	3	3	3	3	3	3	3	3	K5,K6
Wt. Avg.	3	2.4	3	2.8	2.8	3	3	2.6	3	3	2.8	2.6	
Overall Weighted average of PO = 2.86								**Overall Weighted average of PSO = 2.8**					

METHOD OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**50 Marks**
	Assignments / Open Book Test / Quiz	
	Seminars/ Scrap Books	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**50 Marks**
	Total	**100 Marks**

HUMAN RESOURCE MANAGEMENT

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part-I**	**Elective**	**Theory**
Semester	**III**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	• To introduce the fundamental concepts and framework of Human Resource Management (HRM) • To develop knowledge of human resource acquisition processes • To explore methods of human resource development and training • To examine performance appraisal and compensation management • To understand the maintenance and integration of human resources		

CO	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	Understand the meaning, functions, and strategic importance of HRM in organizational success and the structure and role of the Personnel (HR) Department.	**PSO1,PSO2, PSO5**	**K1**
CO 2	Explain the HR planning, job analysis, job description and specification, sources of recruitment, the selection process, testing, interviewing, and induction techniques.	**PSO1,PSO2, PSO5**	**K2**
CO 3	Identify the significance of training and development for operatives and executives, training needs, design effective training programs, and evaluate different training methods.	**PSO1,PSO2, PSO3, PSO5**	**K3**
CO 4	Analyze the various methods and objectives of performance appraisal and their limitations and gain insights into job evaluation, wage and salary administration, incentive schemes, and profit-sharing plans.	**PSO1,PSO2, PSO3,PSO5**	**K4**
CO 5	Explore employee health, safety, and welfare programs, maintaining discipline, handling grievances, boosting employee morale, and promoting worker participation in management.	**PSO1,PSO2, PSO4,PSO5**	**K5**

SYLLABUS				
UNIT	**CONTENT**	**HOURS**	**Cos**	**BLOOM'S TAXONOMY LEVEL**
I	Frame work for HRM: Concept – Functions – Importance - Organisation of Personnel Department.	**18**	**CO1,CO2, CO3, CO4, CO5**	**K1,K2,K3,K4,K5**
II	Acquiring Human Resources: HR planning – Job Analysis – Job Description & Specification – Sources of Recruitment – Selection Process – Test – Interview – Induction.	**18**	**CO1,CO2, CO3, CO4, CO5**	**K1,K2,K3,K4,K5**
III	HR Development : Concept and Importance – Training of Operatives – Identifying Training Needs – Methods of Training – Designing a Training Programme. Executive development: concept – methods of Executive Development – On the Job – Off the Job.	**18**	**CO1,CO2, CO3, CO4, CO5**	**K1,K2,K3,K4,K5**
IV	Performance Appraisal: Concept – Objectives – Methods – Limitations. Compensation: Job Evaluation – Wages and Salary Administration – Incentive Plans and Profit Sharing.	**18**	**CO1,CO2, CO3, CO4, CO5**	**K1,K2,K3,K4,K5**
V	Maintaining HR: Health and Safety – Employee Welfare. Integrating HR: Work Environment – Discipline and Grievance – Morale – Workers Participation in Management.	**18**	**CO1,CO2, CO3, CO4, CO5**	**K1,K2,K3,K4,K5**

Prescribed Books/Textbooks:

1. P.C.Tripathi, Personnel Management and Industrial Relations, Sultan Chand 2004

References:

1. L M Prasad, Human Resource Management, Sultan Chand, 2006
2. C B Gupta, Human Resource Management, Sultan Chand,2006
3. Rahul Kumar Das, Human Resource Management, Notion Press., 2006

Suggested Reading:

1. V S P Rao, Human Resource Management, Excel Books, 2nd Edition, 2010
2. Aswathappa, Human Resource and Personnel Management, Tata Mc Graw Hill, 3rd Edition, 2011

Web Resources:

1. www.nationalhrd.org
2. www.hr-guide.com
3. www.hrmguide.net

Course Articulation Matrix

Course Outcomes	Programme Outcomes								Programme Specific Outcomes					Cognitive Level
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	
CO 1	3	3	3	-	3	2	1	3	3	3	-	-	2	K1
CO 2	3	2	3	-	3	2	2	2	3	3	-	-	2	K2
CO 3	3	3	3	1	3	2	2	2	3	3	2	-	2	K3
CO 4	3	3	3	2	3	2	2	1	3	3	1	-	3	K4
CO 5	3	3	3	2	3	3	2	3	3	3	-	2	3	K5
Wt. Avg.	3	2.8	3	1.7	3	2.2	1.8	2.2	3	3	1.5	2	3	
Overall Mapping of (PO) 2.5									Overall Mapping of (PSO) 2.5					

Method of Evaluation		
Internal Evaluation	Continuous Internal Assessment Test	50 Marks
	Assignments / Quiz / Ad zap / Open Book test	
	Seminars / Video recording	
	Attendance and class Participation	
External Evaluation	End Semester Examination	50 Marks
Total		100 Marks

MARKETING MANAGEMENT

Course Code			
Credits	**5**		
Hours / Cycle	**6**		
Category	**Part - I**	**Elective**	**Theory**
Semester	**III**		
Year of Implementation	**From the academic year 2020-2021 – LOCF 2023-24 onwards**		
Course Objectives	To impart understanding of the conceptual framework, covering basic elements of the Marketing Mix. To Learn about various distribution channels, physical distribution, and logistics management. To Learn the role of marketing information systems and marketing research in decision-making and strategy formulation.		

CO #	**Course Outcome(s)**	**PSO Addressed**	**Bloom's Taxonomy Levels (K1 to K5)**
On completing the course successfully, the student will be able to			
CO 1	Understand the core principles of marketing including the marketing concept, the marketing mix, and strategic marketing planning.	**PSO1, PSO2,PSO5**	**K1**
CO 2	Examine the stages of the product life cycle and understand how to build and manage strong brands and brand equity.	**PSO1,PSO2, PSO5**	**K2**
CO 3	Identify the various distribution channels, physical distribution, and logistics management and Evaluate the role of retailing, direct marketing, and digital platforms in reaching consumers.	**PSO1,PSO2, PSO3,PSO5**	**K3**
CO 4	Analyse the marketing functions of an organisation and understand how it is integral to the success of that organisation.	**PSO1,PSO2, PSO3,PSO5**	**K4**
CO 5	Determine the role of marketing information systems and marketing research in decision-making and strategy formulation.	**PSO1,PSO2, PSO3,PSO4, PSO5**	**K5**

SYLLABUS

UNIT	CONTENT	HOURS	COs	BLOOM'S TAXONOMY LEVEL
I	Introduction – The Marketing Concept – Marketing Mix – Marketing Planning – Marketing Strategy – Buyer Behaviour – Market Segmentation.	**12**	**CO1,CO2, CO3, CO4, CO5**	**K1,K2,K3,K4,K5**
II	Managing the Product – Product Differentiation & Positioning – Managing Brands and Brand Equity – New Product Decision – Product Life Cycle.	**12**	**CO1,CO2, CO3, CO4, CO5**	**K1,K2,K3,K4,K5**
III	Managing Distribution – Physical Distribution and Marketing Logistics – Marketing Channels – Retailing – Distribution Strategy – Direct Marketing – Marketing on the Web.	**12**	**CO1,CO2, CO3, CO4, CO5**	**K1,K2,K3,K4,K5**
IV	Pricing & Promotion – Pricing – Market Communication – Advertising Management – Sales Promotion – Sales Management.	**12**	**CO1,CO2, CO3, CO4, CO5**	**K1,K2,K3,K4,K5**
V	Supporting & Controlling – Controlling the Marketing Effort – Marketing Information System – Marketing Research.	**12**	**CO1,CO2, CO3, CO4, CO5**	**K1,K2,K3,K4,K5**

Prescribed Books/Textbooks :

1. Rajan Nair.N, Marketing, Sultan Chand & Sons, 2018.
2. .V.S.Ramaswamy and S.Namakumari, Marketing Management, McGraw Hill Education, 2017.

References :

1. Memoria CB & Joshi RI, Principles and Practice of Marketing, Kitab Mahal Publication, 2014.
2. Walker, Marketing Strategy: A Decision - Focused Approach, McGraw Hill Education, 2017.

Suggested Reading :

1. Philip Kotler, Principles of Marketing, Pearson Education, 2018.
2. Philip Kotter, Marketing Management, Prentice Hall of India

Web Resources :

1. https://marketbusinessnws.co
2. https://en.wikiversity.org
3. https://www.studocu.c/

Course Articulation Matrix

Course Outcomes	Programme Outcomes								Programme Specific Outcomes					Cognitive Level
	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PSO 1	PSO 2	PSO 3	PSO 4	PSO 5	
CO 1	3	3	3	-	3	2	2	2	3	3	-	-	3	K1
CO 2	3	3	3	-	3	1	2	1	3	3	-	-	3	K2
CO 3	3	3	3	1	3	2	2	2	3	3	3	-	3	K3
CO 4	3	3	3	2	3	2	2	1	3	3	3	-	2	K4
CO 5	3	3	3	3	3	3	2	2	3	3	3	2	2	K5
Wt. Avg.	3	3	3	2	3	2	2	1.6	3	3	3	2	2.6	
Overall Weighted average (PO) 2.45									Overall Weighted average (PSO) 2.72					