M.COM.,
COMPUTER APPLICATIONS

SYLLABUS

FROM THE ACADEMIC YEAR
2023 – 2024

**TAMILNADU STATE COUNCIL FOR HIGHER EDUCATION,
CHENNAI – 600 005**

M.COM.,
COMPUTER APPLICATIONS

Programme Outcomes:

PO1: Problem Solving Skill:

Apply knowledge of Management Theories and Human Resource Practices to solve business problems through research in global context.

PO2: Decision Making Skill:

Foster analytical and critical thinking abilities to enable decision-making based on data.

PO3: Ethical Value:

Incorporate quality, ethical and value-based legal perspectives in all organisational activities.

PO4: Employability Skill:

Develop business acumen to enhance employability skills in the competitive environment.

PO5: Entrepreneurial Skill:

Equip with skills and competencies to become an entrepreneur.

PO6: Contribution to Society:

Succeed in career endeavours and contribute significantly to society.

PO7: Communication Skill:

Develop communication, managerial and interpersonal skills.

PO8: Individual and Team Leadership Skill:

Lead oneself and the team to achieve organizational goals.

PO 9: Multicultural competence:

Demonstrate knowledge of the values and beliefs of multiple cultures to address issues in the global scenario

PO 10: Moral and ethical awareness/reasoning:

Embrace moral and ethical values in one's life,

PO 11: Leadership readinessqualities:

Demonstrate to take up leadership mapping out the tasks and formulating an inspiring vision and mission

PO 12: Lifelong learning:

Acquire knowledge and skills, including "learning how to learn",

M.Com., Computer Applications

Programme Specific Outcomes:

PSO 1 - Entrepreneurship:

Exhibit entrepreneurial ability by enhancing critical thinking, problem solving, decision making and leadership skills that will facilitate startups and high potential organisations.

PSO2 – Research and Development:

Design and implement accounting, marketing, finance and HR systems and practices grounded in research that comply with mercantile laws, leading the organisation towards growth and development.

PSO 3 – Contribution to the Society:
Contribute to the development of the society by collaborating with stakeholders for mutual benefit.

PSO4 - Placement:
Demonstrate respectful engagement with others' ideas, behaviors, beliefs and apply in diverse frames of decisions and actions.

PSO5 - Contribution to Business World:

Facilitate production ofemployable, ethical and innovative professionals to sustain in the dynamic business world.

Mapping of Course outcomes (COs) with Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) can be carried out, assigning the appropriate level(1 – Low; 2 – Middle and 3 – High) in the grids:

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PS0 1	PSO 2	PSO 3
CO 1									
CO 2									
CO 3									
CO 4									
CO 5									

Strong - 3   **Medium – 2**   **Low – 1**

METHODS OF EVALUATION		
Internal Evaluation	Continuous Internal Assessment Test	**25 Marks**
	Assignments / Snap Test / Quiz	
	Seminars	
	Attendance and Class Participation	
External Evaluation	End Semester Examination	**75 Marks**
Total		**100 Marks**
METHODS OF ASSESSMENT		
Remembering (K1)	• Thelowestlevelofquestionsrequirestudentstorecallinformationfromthecoursecontent • Knowledgequestionsusuallyrequirestudentstoidentifyinformationinthetextbook.	
Understanding (K2)	• Understandingoffactsandideasbycomprehendingorganizing,comparing,translating, interpolatingandinterpretingintheirownwords. • Thequestionsgobeyondsimplerecallandrequirestudentstocombinedatatogether	
Application (K3)	• Studentshavetosolveproblemsbyusing/applyingaconceptlearnedintheclassroom. • Studentsmust usetheir knowledgetodetermineaexactresponse.	
Analyze (K4)	• Analyzingthequestionisonethatasksthestudentstobreakdownsomethingintoitscomponentparts. • Analyzingrequiresstudentstoidentifyreasonscausesormotivesandreachconclusionsorgeneralizations.	
Evaluate (K5)	• Evaluationrequiresanindividualtomakejudgmentonsomething. • Questionstobeaskedtojudgethevalueofanidea,acharacter,aworkofart, orasolutiontoaproblem. • Studentsareengagedindecision-makingandproblem–solving. • Evaluationquestionsdonothavesinglerightanswers.	
Create (K6)	• Thequestionsofthiscategorychallengestudentstogetengagedincreativeandoriginalthinking. • Developingoriginalideasandproblemsolvingskills	

Credit Distribution for PG Programme in Commerce
M.Com., Computer Applications

Course Code	Courses	List of Courses	T/P	Credit	Hours/ week	Int.	Ext.	Total
						Max. Marks		
Semester I								
23MCC1C1	Core– I	Business Finance	T	5	7	25	75	100
23MCC1C2	Core – II	Digital Marketing	T	5	7	25	75	100
23MCC1C3	Core – III	Banking and Insurance	T	4	6	25	75	100
23MCC1E1/ 23MCC1E2	DSE-I	Introduction to Industry 4.0/ Big Data Analytics	T	3	5	25	75	100
23MCC1E3/ 23MCC1E4	DSE-II	Enterprise Resource Planning/ Database Management System	T	3	5	25	75	100
		TOTAL	**-**	**20**	**30**	**125**	**375**	**500**
Semester II								
23MCC2C1	Core IV	Strategic Cost Management	T	4	6	25	75	100
23MCC2C2	Core V	Corporate Accounting	T	4	6	25	75	100
23MCC2C3	Core VI	Setting up of Business Entities	T	4	6	25	75	100
23MCC2E1/ 23MCC2E2	DSE - 3	Data Mining and Data Warehousing (or) Technology in Banking	T	3	4	25	75	100
23MCC2E3/ 23MCC2E4	DSE - 4	Financial Analytics (or) Management Information System	T	3	4	25	75	100
23MCC2S1	AEC	Credit Analyst	T	2	2	25	75	100
23MCC2S2	SEC - 1	Stock Market Operation	T	2	2	25	75	100
				22	**30**	**175**	**525**	**700**
Internship/industrial activity during the summer vacation after I year								
Semester III								
23MCC3C1	Core VII	Taxation	T	4	6	25	75	100
23MCC3C2	Core VIII	Research Methodology	T	4	6	25	75	100
23MCC3P1	Core IX	Computers in Business	P	4	5	25	75	100
23MCC3C3	Core X	International Business	T	4	5	25	75	100
23MCC3E1/ 23MCC3E2	DSE - 5	A)Applied Data Analytics and Machine Learning (or) B) Python and R for Data Analytics	T	3	4	25	75	100
23MCC3S1	AEC	Export – Import Documentation	T	2	2	25	75	100
23MCC3S2	SEC-2	Entrepreneurship Development Skills	T	2	2	25	75	100
23MCC3I		Internship/Industrial Activity		2	-	25	75	100
		Total		**25**	**30**	**200**	**600**	**800**
23MCC4C1	Core XI	Corporate and Economic Laws	T	4	6	25	75	100
23MCC4C2	Core XII	Human Resource Analytics	T	4	6	25	75	100
23MCC4PR	Core XIII	Project with Viva		6	10	25	75	100

23MCC4E1/ 23MCC4E2	DSE - 6	A) Cyber and Data Security (or) B) E-Commerce	T	3	4	25	75	100
23MCC4S1	AEC-4	Advanced Excel	T	2	2	25	75	100
23MCC4S2	SEC-3	Employability Skills	T	2	2	25	75	100
--		Extension Activity		1				
		Total		**22**	**30**	**150**	**450**	**600**
				91 +EC		**700**	**2100**	**2800**

CC-Core Courses

DSE – Discipline Specific Elective –Give more option to the student (Choice) and it may be conducted by parallel sessions.

SEC- Skill Enhancement Course; AEC-Ability Enhancement Course

Dissertation/Project -Marks -Vivo-voce (50) + thesis (100) + internal (50) = 200

Internship report Vivo-voce (25) + Report (50) + internal (25) = 100

Chairperson details: Dr.S.Ganapathy, Professor, Department of Commerce, Alagappa University, Karaikudi. Mobile No: 9442677764

Note: Latest edition of the books may be used

Mapping of Course Outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	3	3	1	3	3	3	2	2	2
CO2	3	3	2	3	3	3	3	3	3
CO3	2	2	1	2	2	2	3	2	2
CO4	2	2	1	2	2	2	2	2	2
CO5	3	3	2	3	3	3	3	3	3

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC1C1	BUSINESS FINANCE	CORE	7	-	-	-	5	7	25	75	100

Learning Objectives	
1	To outline the fundamental concepts in finance
2	To estimate and evaluate risk in investment proposals
3	To evaluate leasing as a source of finance and determine the sources of startup financing
4	To examine cash and inventory management techniques
5	To appraise capital budgeting techniques for MNCs

Course Units

UNIT I	**Introduction to Business Finance and Time vale of money:** Business Finance: Meaning, Objectives, Scope -Time Value of money: Meaning, Causes – Compounding – Discounting – Sinking Fund Deposit Factor – Capital Recovery Factor – Multiple Compounding– Effective rate of interest – Doubling period (Rule of 69 and Rule of 72) – Practical problems.
UNIT II	**Risk Management:** Risk and Uncertainty: Meaning – Sources of Risk – Measures of Risk – Measurement of Return – General pattern of Risk and Return – Criteria for evaluating proposals to minimise Risk (Single Asset and Portfolio) – Methods of Risk Management – Hedging currency risk.
UNIT III	**Startup Financing and Leasing:** Startup Financing: Meaning, Sources, Modes (Bootstrapping, Angel investors, Venture capital fund) - Leasing: Meaning – Types of Lease Agreements – Advantages and Disadvantages of Leasing – Financial evaluation from the perspective of Lessor and Lessee.
UNIT IV	**Cash, Receivable and Inventory Management**: Cash Management: Meaning, Objectives and Importance – Cash Cycle – Minimum Operating Cash – Safety level of cash – Optimum cash balance - Receivable Management: Meaning – Credit policy – Controlling receivables: Debt collection period, Ageing schedule, Factoring – Evaluating investment in accounts receivable - Inventory Management: Meaning and Objectives – EOQ with price breaks – ABC Analysis.
UNIT V	**Multi National Capital Budgeting** Multi National Capital Budgeting: Meaning, Steps involved, Complexities, Factors to be considered – International sources of finance – Techniques to evaluate multi-national capital expenditure proposals: Discounted Pay Back Period, NPV, Profitability Index, Net Profitability Index and Internal Rate of Return – Capital rationing -Techniques of Risk analysis in Capital Budgeting.

Course Outcomes:

Students will be able to

CO 1	Explain important finance concepts
CO 2	Estimate risk and determine its impact on return
CO 3	Explore leasing and other sources of finance for startups
CO 4	Summarise cash receivable and inventory management techniques

CO 5	Evaluate techniques of long term investment decision incorporating risk factor

Books for study:
1. Maheshwari S.N., (2019), "Financial Management Principles and Practices", 15th Edition, Sultan Chand &Sons, New Delhi.
2. Khan M.Y &Jain P.K, (2011), "Financial Management: Text, Problems and Cases", 8th Edition, McGraw Hill Education, New Delhi.
3. Prasanna Chandra, (2019), "Financial Management, Theory and Practice", 10th Edition, McGraw Hill Education, New Delhi.

Apte P.G, (2020), "International Financial Management" 8th Edition, Tata McGraw Hill, New Delhi.

Books for reference:
1. Pandey I. M., (2021), "Financial Management", 12th Edition, Pearson India Education Services Pvt. Ltd, Noida.
2. KulkarniP. V. &Satyaprasad B. G., (2015), "Financial Management", 14thEdition, Himalaya Publishing House Pvt Ltd, Mumbai.
3. Rustagi R. P., (2022), "Financial Management, Theory, Concept, Problems", 6th Edition, Taxmann Publications Pvt. Ltd, New Delhi.
4. ArokiamaryGeetha Rufus, Ramani N. & Others, (2017), "Financial Management", 1st Edition, Himalaya Publishing House Pvt Ltd, Mumbai.

Web references:
1. https://resource.cdn.icai.org/66674bos53808-cp8.pdf
2. https://resource.cdn.icai.org/66677bos53808-cp10u2.pdf
3. https://resource.cdn.icai.org/66592bos53773-cp4u5.pdf
4. https://resource.cdn.icai.org/65599bos52876parta-cp16.pdf

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks CIA	Marks External	Marks Total
23MCC1C2	**DIGITAL MARKETING**		7	-	-	-	5	7	25	75	100

Learning Objectives	
1	To assess the evolution of digital marketing
2	To appraise the dimensions of online marketing mix
3	To infer the techniques of digital marketing
4	To analyse online consumer behaviour
5	To interpret data from social media and to evaluate game based marketing

Course Units

UNIT I	**Introduction to Digital Marketing** Digital Marketing – Transition from traditional to digital marketing – Rise of internet – Growth of e-concepts – Growth of e-business to advanced e-commerce – Emergence of digital marketing as a tool – Digital marketing channels – Digital marketing applications, benefits and limitations – Factors for success of digital marketing – Emerging opportunities for digital marketing professionals.
UNIT II	**Online marketing mix** Online marketing mix – E-product – E-promotion – E-price – E-place – Consumer segmentation – Targeting – Positioning – Consumers and online shopping issues – Website characteristics affecting online purchase decisions – Distribution and implication on online marketing mix decisions
UNIT III	**Digital media channels** Digital media channels – Search engine marketing – ePR – Affiliate marketing – Interactive display advertising – Opt-in-email marketing and mobile text messaging, Invasive marketing – Campaign management using – Facebook, Twitter, Corporate Blogs – Advantages and disadvantages of digital media channels – Metaverse marketing.
UNIT IV	**Online consumer behavior** Online consumer behavior – Cultural implications of key website characteristics – Dynamics of online consumer visit – Models of website visits – Web and consumer decision making process – Data base marketing – Electronic consumer relationship management – Goals – Process – Benefits – Role – Next generation CRM.
UNIT V	**Analytics and Gamification** Digital Analytics – Concept – Measurement framework – Demystifying web data - Owned social metrics – Measurement metrics for Facebook, Twitter, YouTube, Slide Share, Pinterest, Instagram, Snapchat and LinkedIn – Earned social media metrics - Digital brand analysis – Meaning – Benefits – Components – Brand share dimensions – Brand audience dimensions – Market influence analytics – Consumer generated media and opinion leaders – Peer review – Word of mouth – Influence analytics – Mining consumer generated media – Gamification and game based marketing – Benefits – Consumer motivation for playing online games.

Course Outcomes:

Students will be able to

CO 1	Explain the dynamics of digital marketing

CO 2	Examine online marketing mix
CO 3	Compare digital media channels
CO 4	Interpret online consumer behavior
CO 5	Analyse social media data

Books for study:

1. Puneet Singh Bhatia, (2019) "Fundamentals of Digital Marketing", 2nd Edition, Pearson Education Pvt Ltd, Noida.
2. Dave Chaffey, Fiona Ellis-Chadwick, (2019) "Digital Marketing", Pearson Education Pvt Ltd, Noida.
3. Chuck Hemann& Ken Burbary, (2019) "Digital Marketing Analytics", Pearson Education Pvt Ltd, Noida.
4. Seema Gupta, (2022) "Digital Marketing" 3rd Edition, McGraw Hill Publications Noida.
5. Kailash Chandra Upadhyay, (2021) "Digital Marketing: Complete Digital Marketing Tutorial", Notion Press, Chennai.
6. Michael Branding, (2021) "Digital Marketing", Empire Publications India Private Ltd, New Delhi.

Books for reference:

1. VandanaAhuja, (2016) "Digital Marketing", Oxford University Press. London.
2. Ryan Deiss& Russ Henneberry, (2017) "Digital Marketing", John Wiley and Sons Inc. Hoboken.
3. Alan Charlesworth,(2014), "Digital Marketing - A Practical Approach", Routledge, London.
4. Simon Kingsnorth, Digital Marketing Strategy,(2022) "An Integrated approach to Online Marketing", Kogan Page Ltd. United Kingdom.
5. MaityMoutusy, (2022) "Digital Marketing" 2nd Edition, Oxford University Press, London.

Web references:

1. https://www.digitalmarketer.com/digital-marketing/assets/pdf/ultimate-guide-to-digital-marketing.pdf
2. https://uwaterloo.ca/centre-for-teaching-excellence/teaching-resources/teaching-tips/educational-technologies/all/gamification-and-game-based-learning
3. https://journals.ala.org/index.php/ltr/article/download/6143/7938

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	3	3	2	3	3	3	3	3	3
CO2	3	3	2	3	3	3	3	3	3
CO3	3	3	2	2	3	2	3	3	2
CO4	3	3	2	2	3	3	3	3	3
CO5	3	3	1	3	3	2	3	3	2

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks CIA	Marks External	Marks Total
23MCC1C3	**BANKING AND INSURANCE**		6	-	-	-	4	6	25	75	100

<table>
<tr><td colspan="2" align="center">Learning Objectives</td></tr>
<tr><td>1</td><td>To understand the evolution of new era banking</td></tr>
<tr><td>2</td><td>To explore the digital banking techniques</td></tr>
<tr><td>3</td><td>To analyse the role of insurance sector</td></tr>
<tr><td>4</td><td>To evaluate the mechanism of customer service in insurance and the relevant regulations</td></tr>
<tr><td>5</td><td>To analsye risk and its impact in banking and insurance industry</td></tr>
</table>

	Course Units
UNIT I	**Introduction to Banking:** Banking: Brief History of Banking - Rapid Transformation in Banking: Customer Shift - Fintech Overview - Fintech Outlook - The Financial Disruptors - Digital Financial Revolution - New Era of Banking. Digital Banking – Electronic Payment Systems–Electronic Fund Transfer System – Electronic Credit and Debit Clearing – NEFT – RTGS –VSAT–SFMS–SWIFT.
UNIT II	**Contemporary Developments in Banking:** Distributed Ledger Technology – Blockchain: Meaning - Structure of BlockChain - Types of Block Chain - Differences between DLT and Blockchain - Benefits of Blockchain and DLT - Unlocking the potential of Blockchain – Crypto currencies, Central Bank Digital Currency (CBDC) - Role of DLT in financial services - AI in Banking: Future of AI in Banking - Applications of AI in Banking - Importance of AI in banking - Banking reimagined with AI. Cloud banking - Meaning - Benefits in switching to Cloud Banking.
UNIT III	**Indian Insurance Market:** History of Insurance in India – Definition and Functions of Insurance – Insurance Contract – Indian Insurance Market – Reforms in Insurance Sector – Insurance Organisation – Insurance organisation structure. Insurance Intermediaries: Insurance Broker – Insurance Agent - Surveyors and Loss Assessors - Third Party Administrators (Health Services) – Procedures - Code of Conduct.
UNIT IV	**Customer Services in Insurance:** Customer Service in Insurance – Quality of Service - Role of Insurance Agents in Customer Service-Agent's Communication and Customer Service – Ethical Behaviour in Insurance – Grievance Redressal System in Insurance Sector –Integrated Grievance Management System- Insurance Ombudsman - Insurance Regulatory and Development Authority of India Act (IRDA) – Regulations and Guidelines.
UNIT V	**Risk Management:** Risk Management and Control in banking and insurance industries – Methods of Risk Management – Risk Management by Individuals and Corporations – Tools for Controlling Risk

Course Outcomes:
Students will be able to

CO 1	Relate the transformation in banking from traditional to new age
CO 2	Apply modern techniques of digital banking
CO 3	Evaluate the role of insurance sector
CO 4	Examine the regulatory mechanism
CO 5	Assess risk mitigation strategies

| **Books for study:** |
| 1. Indian Institute of Banking and Finance (2021), "Principles & Practices of Banking", 5th Edition, Macmillan Education India Pvt. Ltd, Noida, Uttar Pradesh. |
| 2. Mishra M N & Mishra S B, (2016), "Insurance Principles and Practice", 22nd Edition, S. Chand and Company Ltd, Noida, Uttar Pradesh. |
| 3. Emmett, Vaughan, Therese Vaughan M., (2013), "Fundamentals of Risk and Insurance", 11th Edition, Wiley & Sons, New Jersey, USA. |

Theo Lynn , John G. Mooney, PierangeloRosati, Mark Cummins (2018), Disrupting Finance: FinTech and Strategy in the 21st Century (Palgrave Studies in Digital Business & Enabling Technologies), Macmillan Publishers, NewYork (US)

Books for reference:
1. SundharamKPM &Varshney P. N., (2020), "Banking Theory, Law and Practice", 20th Edition, Sultan Chand & Sons, New Delhi.
2. Gordon &Natarajan, (2022), "Banking Theory, Law and Practice", 9th Edition, Himalaya Publishing House Pvt Ltd, Mumbai.
3. Gupta P. K. (2021), "Insurance and Risk Management" 6th Edition, Himalaya Publishing House Pvt Ltd, Mumbai.
   Susanne Chishti.,& Janos Barberis(2016), The Fintech book: The financial technology handbook for investors, entrepreneurs and visionaries. John Wiley & Sons.

Web references:
1. https://corporatefinanceinstitute.com/resources/knowledge/finance/fintech-financial-technology
2. https://mrcet.com/downloads/digital_notes/CSE/IV%20Year/CSE%20B.TECH% 20IV%20YEAR%20II%20SEM%20BCT%20(R18A0534)%20NOTES%20Final%20 PDF.pdf
3. https://www.irdai.gov.in/ADMINCMS/cms/frmGeneral_Layout.aspx?page=Page No108&flag=1

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	2	2	1	3	3	3	3	3	3
CO2	3	3	3	3	3	3	3	3	3
CO3	2	2	1	2	2	2	2	3	2
CO4	3	2	2	1	2	2	2	3	2
CO5	3	3	1	3	3	3	3	3	3

Strong - 3   Medium – 2   Low - 1

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC1E1	**INTRODUCTION TO INDUSTRY 4.0**	DSE-1	5	-	-	-	3	5	25	75	100

	Learning Objectives
1	To enable the students to comprehend the change from industry 1.0 to 4.0
2	To gain knowledge on the challenges and future prospects of applying artificial intelligence
3	To learn the applications of big data for industrial growth and development
4	To understand the applications of IoT in various sectors
5	To understand why education has to be aligned with industry 4.0

Course Units	
UNIT I	**Introduction:** Industry: Meaning, Types - Industrial Revolution: Industrial Revolution 1.0 to 4.0: Meaning, Goals and Design Principles - Technologies of Industry 4.0 - Big Data – Artificial Intelligence (AI) – Industrial Internet of Things - Cyber Security – Cloud – Augmented Reality.
UNIT II	**Artificial Intelligence:** Artificial Intelligence (AI): Need, History and Foundations -The AI - environment - Societal Influences of AI – Application Domains and Tools - Associated Technologies of AI - Future prospects of AI – Challenges of AI.
UNIT III	**Big Data:** Evolution - Data Evolution - Data : Terminologies - Essential of Big Data in Industry 4.0 - Big Data Merits and Limitations - Big Data Components : Big Data Characteristics - Big Data Processing Frameworks - Big Data Tools - Big Data Applications - Big Data Domain Stack : Big Data in Data Science – Big Data in IoT - Big Data in Machine Learning - Big Data in Databases - Big Data Usecases: Big Data in Social Causes - Big Data for Industry -Big Data Roles - Learning Platforms; Internet of Things (IoT) : Introduction to IoT – Architecture of IoT Technologies for IoT - Developing IoT Applications - Applications of IoT - Security in IoT.
UNIT IV	**Applications of IoT:** IoT in Manufacturing – Healthcare – Education – Aerospace and Defence – Agriculture – Transportation and Logistics – Impact of Industry 4.0 on Society: Impact on Business, Government, People - Tools for Artificial Intelligence - Big Data and Data Analytics - Virtual Reality - Augmented Reality –IoT - Robotics.
UNIT V	**Industry 4.0:** Education 4.0 – Curriculum 4.0 – Faculty 4.0 – Skills required for Future - Tools for Education – Artificial Intelligence Jobs in 2030 – Jobs 2030 - Framework for aligning Education with Industry 4.0.

Course Outcomes:

Students will be able to

CO 1	Discuss on the change from industry 1.0 to 4.0

CO 2	Discover the challenges and future prospects of applying artificial intelligence
CO 3	Apply big data for industrial growth and development
CO 4	Apply IoT in various sectors like Manufacturing, Healthcare, Education, Aerospace and Défense
CO 5	Appraise why education has to be aligned with industry 4.0

Books for study:

1. SeemaAcharya J, SubhashiniChellappan, (2019) "Big Data and Analytics", 2nd Edition, Wiley Publication, New Delhi.
2. Russel S, Norvig P (2010), "Artificial Intelligence: A Modern approach", 3rdEdition, Prentice Hall, New York.

Pethuru Raj and Anupama C. Raman, (2017),"The Internet of Things: Enabling Technologies, Platforms, and Use Cases",Auerbach Publications

Books for reference:

1. Judith Hurwitz, Alan Nugent, Fern Halper, Marcia Kaufman, "Big Data for Dummies", John Wiley & Sons, Inc.

Nilsson (2000), Artificial Intelligence: A new synthesis, Nils J Harcourt Asia PTE Ltd.

Web references:

1. https://sist.sathyabama.ac.in/sist_coursematerial/uploads/SEEA1403.pdf
2. https://library.oapen.org/bitstream/handle/20.500.12657/43836/external_content.pdf? sequence=1

https://www.vssut.ac.in/lecture_notes/lecture1428643004.pdf

Note: Latest edition of the books may be used.

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	2	2	2	3	3	3	3	3	3
CO2	2	3	2	3	3	3	3	3	3
CO3	2	3	2	3	3	3	3	3	3
CO4	2	3	2	3	3	3	3	3	3
CO5	2	3	2	3	3	3	3	3	3

Strong - 3   Medium – 2   Low – 1

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC1E2	**BIG DATA ANALYTICS**	DSE-1	5	-	-	-	3	5	25	75	100

Learning Objectives

1	To understand the various aspects of data science and applying them in health care
2	To learn the applications of big data for industrial growth and development
3	To understand the characteristics of 5 V's
4	To know the big data problems
5	To understand the Hadoop

Course Units

UNIT I	**Introduction to Data Science:** Introduction to data science – Case Studies – Data Science in Biomedicine and Healthcare – Sequence Processing – Medical Image Analysis – Natural Language Processing – Network Modelling and Probabilistic Modelling.
UNIT II	**Big Data:** Big data: Meaning – Importance of Big Data – Example of Big Data – Source of Big Data - Machine -Generated Data - Advantages – Big Data generated by people – Organization of Generated Data - Integrating the data.
UNIT III	**Characteristics of Big Data :** Characteristics of big data volume – Variety –Velocity – Characteristics of Big Data – Veracity – Valence and Value – Getting value out of Big Data using 5-step process to structure your analysis.
UNIT IV	**Data Science: Getting value out of Big Data:** Building a Big Data Strategy – Happening of Big Data science – Five Components of Data Science. Steps in Data Science: Acquiring Data, Preprocessing and Exploring Data – Analysing Data – Communicating results – Turning insights into action.
UNIT V	**Big Data Systems and Hadoop:** Meaning of Distributed File System – Scalable Computing over the Internet – Programming Models for Big Data – Introduction to Hadoop systems – The Hadoop Distributed File System: A Storage System for Big Data – YARN: A Resource Manager for Hadoop – Map Reduce: Simple Programming for Big Results – When to Reconsider Hadoop? – Cloud Computing: An important Big Data enabler.

Course Outcomes:
Students will be able to

CO 1	Describe the Big Data landscape including examples of realworld big data problems
CO 2	Explain the advantages of Big Data.
CO 3	Explain the Vs of Big Data and its impacts of data collection, monitoring, storage, analysis and reporting
CO 4	Identify what are and what are not big data problems and be able to recast big data problems as data science questions
CO 5	Explain Hadoop technology

Books for study:
1. Peter Guerra and Kirk Borne (2016), "Ten Signs of Data Science Maturity", O'Reily Media Pvt Ltd,

USA
2. Tom White (2012), "Hadoop: The Definitive Guide" Third Edition, O'Reily Media, USA.
3. SeemaAcharya (2015), Subhasini Chellappan, "Big Data Analytics", Wiley, USA

Books for reference:
1. Howard Wen, Big Ethics for Big Data, O'Reilly Media, USA.
2. Michael Mineli, Michele Chambers, AmbigaDhiraj (2013), Big Data, Big Analytics: Emerging Business Intelligence and Analytic Trends for Today's Businesses, Wiley Publications, USA .
3. Judith S.Hurwitz, Alan Nugent, Fern Halper, Marcia Kaufman (2015), "Big Data for Dummies", John Wiley & Sons, Inc., USA.

Web references:
1. https://www.coursera.org/learn/big-data-introduction/home/welcome
2. https://www.coursera.org/learn/bioconductor?action=enroll&authMode=login

Note: Latest edition of the books may be used.

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	2	2	2	2	1	2	1	1	2
CO2	2	2	2	3	1	3	1	2	3
CO3	3	3	3	3	2	3	2	3	3
CO4	2	2	2	2	1	2	1	2	2
CO5	3	3	3	3	3	3	3	3	3

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC1E3	**ENTERPRISE RESOURCE PLANNING**	DSE-2	5	-	-	-	3	5	25	75	100

	Learning Objectives
1	To learn the history and growth of ERP
2	To understand the risks involved while using ERP
3	To gain knowledge on the various ERP technologies
4	To learn the dynamics of ERP marketplace
5	To choose appropriate ERP solutions or packages

	Course Units
UNIT I	**Enterprise an Overview:** Business Functions and Business Processes - Integrated Management Information - Business Modelling - Integrated Data Model. Business Processes: Major Business Processes. Introduction to ERP: Common ERP Myths - A Brief History of ERP - Reasons for the Growth of ERP Market - Advantages of ERP.
UNIT II	**Risk of ERP:** People Issues - Process Risks - Technological Risks - Implementation Issues- Operation and Maintenance Issues - Unique Risks of ERP Projects - Managing Risks on ERP Projects. Benefits of ERP: Information Integration - Reduction of Lead Time - On-Time Shipment - Reduction in Cycle Time - Improved Resource Utilization - Better Customer Satisfaction - Improved Supplier Performance - Increased Flexibility - Reduced Quality Costs - Better Analysis and Planning Capabilities - Improved Information Accuracy and Decision Making Capability - Use of Latest Technology.
UNIT III	**ERP and Related Technologies:** Business Process Reengineering (BPR) - Business Intelligence (BI) - Business Analytics (BA) - Data Warehousing- Data Mining - On - Line Analytical Processing (OLAP) - Product Life Cycle Management (PLM) - Supply Chain Management (SCM) - Customer Relationship Management (CRM) - Geographic Information Systems (GIS) - Intranets and Extranets. Advanced Technology and ERP Security: Technological Advancements - Computer Crimes - ERP and Security - Computer Security - Crime and Security.
UNIT IV	**ERP Market Place and Market Place Dynamics:** Market Overview - ERP Market Tiers. Market Place Dynamics - Industry - Wise ERP Market Share - ERP: The Indian Scenario. Business Modules of an ERP Package: Functional Modules of ERP Software: Integration of ERP, Supply Chain, and Customer Relationship Applications.
UNIT V	**ERP Implementation:** Benefits of Implementing ERP - Implementation Challenges. ERP Implementation Life Cycle: Objectives of ERP Implementation - Different Phases of ERP Implementation- Reasons for ERP Implementation Failure. ERP Package Selection: ERP Package Evaluation and Selection - The Selection Process - ERP Packages: Make or Buy.

	Course Outcomes: Students will be able to
CO 1	Recall the history and growth of ERP

CO 2	Appraise the risks involved while using ERP	
CO 3	Select from among various ERP technologies	
CO 4	Analyse the dynamics of ERP marketplace	
CO 5	Distinguish and choose appropriate ERP solutions or packages	

Books for study:
1. Alexis Leon (2008), "Enterprise Resource Planning", 2nd edition, Tata McGraw-Hill, Noida.
2. Jagan Nathan Vaman (2008), "ERP in Practice", Tata McGraw-Hill, Noida.
3. MahadeoJaiswal and Ganesh Vanapalli (2009), "ERP", Macmillan India, Noida.

Books for reference:
1. Sinha P. Magal and Jeffery Word (2012), "Essentials of Business Process and Information System", Wiley India, USA.
2. Summer (2008), "ERP", Pearson Education, Noida.
3. Vinod Kumar Grag and N.K. Venkitakrishnan (2006), "ERP- Concepts and Practice", Prentice Hall of India, New Delhi.

Web references:
1. https://mrcet.com/downloads/digital_notes/CSE/III%20Year/ERP%20Digital% 20notes.pdf
2. https://mrcet.com/downloads/digital_notes/ME/III%20 year/ERP%20Complete%20Digital%20notes.pdf
3. https://www.vssut.ac.in/lecture_notes/lecture1428643004.pdf

Note: Latest edition of the books may be used.

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	2	1	2	2	3	3	3	3	3
CO2	3	3	2	3	3	3	3	3	3
CO3	3	3	2	3	3	3	3	3	3
CO4	3	3	2	3	3	3	3	3	3
CO5	3	3	2	3	3	3	3	3	3

Strong - 3   Medium – 2   Low - 1

Note: Latest edition of the books may be used

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC1E4	**DATABASE MANAGEMENT SYSTEM**	DSE-2	5	-	-	-	3	5	25	75	100

	Learning Objectives
1	To introduce the basic concepts of Relational Database Management System and the working knowledge of Linux environment
2	To understand designing databases and queries in SQL
3	To learn RDBMS
4	To upskill the functions and operators
5	To understand the constraints, locks and MySQL

	Course Units
UNIT I	**Introduction to Database Systems and Linux**: Introduction to File and Database systems Database System Structure - Data Models Introduction to Network Models: ER Model, Relational Model - Introduction to Linux Operating System - Properties of Linux - Desktop Environment - Linux basics commands - Working with Files - Text Editors - I/O Redirections - Pipes, Filters, and Wildcards - Changing Access Rights.
UNIT II	**SQL Definition and Normalization:** SQL – Data Definition - Queries in SQL - Updates - Views - Integrity and Security. Relational Database design – Functional dependences and Normalization for relational databases (up to BCNF) - Query Forms.
UNIT III	**Files and RDBMs:** Record Storage and Primary File Organization - Secondary Storage Devices - Operations on Files - Heap File - Sorted Files - Hashing Techniques - Index Structure for Files - Different Types of Indexes - B-Tree - B+Tree - Query Processing - Multimedia Databases - Basic Concepts and Applications - Indexing and Hashing - Text Databases - Overview of RDBMs - Advantages of RDBMs over DBMs – Introduction to Data Mining.
UNIT IV	**Data Definition and Manipulation Language:** Data Definition Language - Data Manipulation Language - Transaction Control - Data Control Language Grant - Revoke Privilege Command - Set Operators - Joins- Kinds of Joins - Table Aliases - Sub queries - Multiple and Correlated Sub Queries - Functions - Single Row - Date, Character, Numeric, Conversion and Group Functions
UNIT V	**Constraints and MYSQL:** Constraints - Domain, Equity, Referential Integrity Constraints - Locks - Types of Locks, Table Partitions - Synonym - Introduction to PL/SQL - Introduction - MySQL as an RDBMS Tool - Data types and Commands.

Course Outcomes:
Students will be able to

CO 1	Identify models and schemas in DBMS and LINUX
CO 2	Demonstrate Queries in SQL
CO 3	Discuss handling files and databases
CO 4	Apply skills on functions and operators in RDBMS

CO 5	Apply constraints and locks in SQL

Books for study:
1. Ramakrishnan Raghu and Gehrke Johannes, "Database Management Systems", McGraw–Hill, USA.
2. Rajendra Prasad Mahapatra and GovindVerma, "Database Management System", Khanna Publications, New Delhi.

Books for reference:
1. Ramon A Mata-Toledo and Pauline K Cushman, "Database Management System", Schaun's Outlines, New York.
2. Abraham Silberschatz, Henry F Korth and S. Sudarshan, "Database System Concepts" McGraw–Hill, USA.

Web references:
1. http://education-portal.com/academy/lesson/what-is-a-database-management-systempurpose-and-function.html.
2. http://www.comptechdoc.org/os/linux/usersguide/linux_ugbasics.html.
3. http://www.dummies.com/how-to/content/common-linux-commands.html.

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	2	3	3	3	2	2	2	3	2
CO2	3	3	2	3	3	3	2	2	3
CO3	1	2	2	2	1	2	1	2	2
CO4	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	1	2	1	3	2

Strong - 3 **Medium – 2** **Low - 1**

First Year   **Core – IV**   **Semester II**

STRATEGIC COST MANAGEMENT

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC2C1	**STRATEGIC COST MANAGEMENT**	**Core**	6	-	-	-	4	6	25	75	100

Learning Objectives	➢ To analyse the aspects of strategic and quality control management ➢ To analyse and select cost control techniques ➢ To apply activity based costing for decision making ➢ To utilise transfer pricing methods in cost determination ➢ To apply cost management techniques in various sectors

Course Units

UNIT 1	**Introduction to Strategic Cost Management** Introduction to Strategic Cost Management (SCM) – Need for SCM – Differences between SCM and Traditional Cost Management - Value Chain Analysis: Meaning and steps - Quality Cost Management: Meaning of Quality and Quality Management – Cost of Quality –Indian Cost Accounting Standard 21 on Quality Control - Introduction to Lean System – Benefits of Lean System – Just in Time (JIT) – Kaizen Costing.
UNIT 1I	**Cost Control and Reduction** Cost Management Techniques: Cost Control: Meaning and Prerequisites - Cost Reduction: Meaning and Scope – Differences between Cost control and cost reduction - Pareto Analysis: Meaning, importance and applications - Target Costing: Meaning, steps and Principles – Life Cycle Costing: Meaning, Strategies for each stage of product life cycle, Benefits – Learning Curve: Meaning, Learning curve ratio and applications.
UNIT 1II	**Activity Based Cost Management** Activity Based Cost Management: Concept, Purpose, Stages, Benefits, Relevance in Decision making and its Application in Budgeting – Practical problems.
UNIT 1V	**Transfer Pricing** Transfer Pricing: Meaning, Benefits, Methods: Pricing based on cost, Market price on transfer price, Negotiated pricing and Pricing based on opportunity costs – Practical Problems.
UNIT V	**Cost Management in Agriculture and IT sector** Agriculture Sector: Features, Cost Structure, Cost Management, Tools to measure the performance, Minimum Support Price and International Perspective – Information Technology Sector: Features, Cost Structure, Cost Management and International Perspective.

Course Outcomes
Students will be able to

1	Discuss strategic cost management and QC
2	Choose the appropriate technique for cost control

3	Utilise activity based costing in practice
4	Adopt transfer pricing methods
5	Build cost structure for Agriculture and IT sector

Books for study:
1. Ravi M Kishore (2018), "Strategic Cost Management", 5thEdition, TaxmannPublications Pvt. Ltd, New Delhi.
2. Bandgar P. K., (2017), "Strategic Cost Management", 1stEdition, Himalaya Publishing House Pvt Ltd, Mumbai.
3. Sexena V. K., (2020), "Strategic Cost Management and Performance Evaluation", 1st Edition, Sultan Chand & Sons, New Delhi.

Books for reference:
1. John K Shank and Vijay Govindarajan(2008), Strategic Cost Management, Simon & Schuster; Latest edition, UK
2. JawaharLal, (2015), "Strategic Cost Management", 1st Edition, Himalaya Publishing House Pvt Ltd, Mumbai.)
3. Arora M. N., (2021), "A Text Book of Cost and Management Accounting", 11th Edition, Vikas Publishing House Pvt. Ltd., New Delhi.

Web references:
1. https://www.accountingtools.com/articles/strategic-cost-management.html#:~:text= Strategic%20cost%20management%20is%20the,it%20or%20have%20no%20impact.
2. https://ca-final.in/wp-content/uploads/2018/09/Chapter-4-Cost-Management-Techniques.pdf
3. https://resource.cdn.icai.org/66530bos53753-cp5.pdf

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	3	3	3	3	3	3	3	3	3
CO2	3	3	2	3	3	3	3	3	3
CO3	3	3	2	3	3	3	3	3	3
CO4	3	3	2	3	3	3	3	2	3
CO5	3	3	1	3	3	3	3	3	3

Strong - 3   Medium – 2   Low - 1

M.Com., Computer Applications

First Year   Core – IV   Semester II

CORPORATE ACCOUNTING

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC2C2	**CORPORATE ACCOUNTING**	Core	6	-	-	-	4	6	25	75	100

Learning Objectives	➤ To understand the accounting treatment for issue of shares ➤ To determine profits for fire and marine insurance ➤ To prepare consolidated financial statements ➤ To account for price level changes ➤ To adopt financial reporting standards

Course Units

UNIT 1	**Issue of Shares and Final Accounts of Companies** Issue of Shares: ESOPs - ESPS - Sweat Equity Shares - Book Building- Buy-back of Shares - Conversion of debentures into shares - Final accounts of Companies as per Schedule III of the Companies Act, 2013 – Managerial remuneration.
UNIT II	**Insurance Company Accounts** Insurance Company Accounts: Types of Insurance - Final accounts of life assurance Companies- Ascertainment of profit- Valuation Balance Sheet-Final accounts of Fire, Marine and miscellaneous Insurance Companies.
Unit III	**Consolidated financial statements** Consolidated financial statements as per AS 21: Consolidated Profit and Loss Account – Minority interest – Cost of control – Capital reserve – Inter-company holdings – Preparation of consolidated Balance Sheet.
UNIT IV	**Contemporary Accounting Methods** Accounting for price level changes – Social responsibility accounting – Human resource accounting - Forensic Accounting.
UNIT V	**Financial reporting** Financial reporting: Meaning, Objectives, Characteristics – Indian Accounting Standards (AS 5, AS 10, AS 19, AS 20) – Corporate Social Responsibility: Meaning, Key provisions of Companies Act, 2013, Accounting for CSR expenditure, Reporting of CSR, Presentation and disclosure in the financial statements.

Question pattern: Theory: 20%; Problems: 80%

Course Outcomes
Students will be able to

CO1	PrepareFinancialStatementsofcompaniesasperscheduleIIIofCompaniesAct,2013
CO2	Apply the provisions of IRDA Regulations, 2002 in the preparation of final accounts of Life Insurance and General Insurance Companies.
CO3	PrepareConsolidatedFinancialStatementsofHoldingCompaniesinaccordancewithAS21.

CO4	Assess contemporary accounting methods
CO5	ExamineFinancialReporting based on appropriate AccountingStandardsandprovisionsofCompaniesAct2013withrespecttoCorporateSocialResponsibility

Books for study:

1. Gupta R. L. &Radhaswamy M. (2021), "Corporate Accounting – Volume I & II", 14thEdition, Sultan Chand &Sons, New Delhi.
2. Maheshwari S. N., Sharad K. Maheshwari&Suneel K. Maheshwari, (2022),"Advanced Accountancy - Volume I &II", 11thEdition, Vikas PublishingHouse Pvt. Ltd., New Delhi.
3. Jain S. P., Narang K. L., SimmiAgrawal and Monika Sehgal (2019), "AdvancedAccountancy - Corporate Accounting – Volume - II", 22ndEdition, KalyaniPublishers, New Delhi.
4. Reddy T. S. &Murthy A., (2022), "Corporate Accounting – Volume I &II", 17th Edition, Margham Publications, Chennai.

Books for reference:

1. ArulanandamM.A &Raman K.S., (2021), "Advanced Accounting (Corporate Accounting – II)", 8thEdition, Himalaya Publishing House Pvt Ltd, Mumbai.
2. Shukla M C, Grewal T S and Gupta S C, (2022), "Advanced Accounts Volume II",19thEdition, Sultan Chand &Sons, New Delhi.
3. Gupta R. L., (2022), "Problems and Solutions in Company Accounts", 2ndEdition,Sultan Chand &Sons, New Delhi.

Web references:

1. https://resource.cdn.icai.org/66550bos53754-p1-cp9.pdf
2. https://resource.cdn.icai.org/66545bos53754-p1-cp4.pdf
3. https://resource.cdn.icai.org/66638bos53803-cp1.pdf
4. http://ppup.ac.in/download/econtent/pdf/MBA%201st%20sem%20Lecture%20note%20on%20forensic%20accounting%20by%20Anjali.pdf

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO 1	3	3	2	3	3	3	3	3	3
CO 2	3	3	3	3	2	3	2	3	3
CO 3	3	3	2	3	3	3	3	3	3
CO 4	3	3	3	3	3	3	3	3	3
CO 5	3	3	3	3	3	3	3	3	3

Strong - 3   Medium – 2   Low - 1

SETTING UP OF BUSINESS ENTITIES

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC2C3	SETTING UP OF BUSINESS ENTITIES		6	-	-	-	4	6	25	75	100
Learning Objectives	➢ To understand the startup landscape and its financing ➢ To analyse the formation and registration of Section 8 company ➢ To outline the concept of LLP and business collaboration ➢ To understand the procedure for obtaining registration and license ➢ To create awareness about the legal compliances governing business entities										
Course Units											
UNIT I	**Startups in India** Types of business organisations – Factors governing selection of an organisation - Startups – Evolution – Definition of a Startup – Startup landscape in India – Startup India policy – Funding support and incentives – Indian states with Startup policies – Exemptions for startups – Life cycle of a Startup – Important points for Startups – Financing options available for Startups – Equity financing – Debt financing – IPO – Crowd funding – Incubators - Mudra banks – Successful Startups in India.										
UNIT II	**Not-for-Profit Organisations** Formation and registration of NGOs – Section 8 Company – Definition – Features – Exemptions – Requirements of Section 8 Company – Application for incorporation – Trust: Objectives of a trust – Persons who can create a trust – Differences between a public and private trust – Exemptions available to trusts – Formation of a trust - Trust deed –Society – Advantages – Disadvantages – Formation of a society – Tax exemption to NGOs.										
UNIT III	**Limited Liability Partnership and Joint Venture** Limited Liability Partnership: Definition – Nature and characteristics – Advantages and disadvantages – Procedure for incorporation – LLP agreement – Annual compliances of LLP-Business collaboration: Definition – Types –Joint venture: Advantages and disadvantages – Types – Joint venture agreement - Successful joint ventures in India – Special Purpose Vehicle – Meaning – Benefits – Formation.										
UNIT IV	**Registration and Licenses** Registration and Licenses: Introduction – Business entity registration – Mandatory registration – PAN – Significance – Application and registration of PAN – Linking of PAN with Aadhar –TAN – Persons liable to apply for TAN – Relevance of TAN – Procedure to apply for TAN –GST: Procedure for registration – Registration under										

		Shops and Establishment Act –MSME registration – Clearance from Pollution Control Board – FSSAI registration and license – Trade mark, Patent and Design registration.
UNIT V		**Environmental Legislations in India**
		Geographical Indication of Goods (Registration and Protection) Act, 1999: Objectives, Salient Features - The Environmental Protection Act, 1986: Prevention, control and abatement of environmental pollution - The Water (Prevention And Control of Pollution) Act, 1974: The Central and State Boards for Prevention and Control of Water Pollution - Powers and Functions of Boards - Prevention and Control of Water Pollution - Penalties and Procedure- The Air (Prevention and Control of Pollution) Act, 1981: Central and State Boards for The Prevention and Control of Air Pollution - Powers And Functions - Prevention and Control of Air Pollution - Penalties and Procedure.

	Course Outcomes
	Students will be able to:
CO 1	Build a startup and acquire finance
CO 2	Comply with the legal requirements for Section 8 Company
CO 3	Initiate the proceedings for LLP
CO 4	Illustrate the registration and licensing procedure
CO 5	Examine the compliance of regulatory framework

Books for study:

1. Kailash Thakur, (2007) "Environment Protection Law and Policy in India", 2nd Edition, Deep & Deep Publication Pvt. Ltd., New Delhi.
2. Avtar Singh, (2015), "Intellectual Property Law", Eastern Book Company, Bangalore
3. Zad N.S and DivyaBajpai, (2022) "Setting up of Business Entities and Closure" (SUBEC), Taxmann, Chennai
4. AmitVohra&RachitDhingra (2022) "Setting Up Of Business Entities & Closure", 6th Edition, Bharath Law House, New Delhi

Books for reference:

1. Setting up of Business Entities and Closure (2021), Module 1, Paper 3, The Institute of Company Secretaries of India, MP Printers, Noida
2. The Air (Prevention and Control of Pollution) Act, 1981, Bare Act, 2022 Edition, Universal/LexisNexis, Noida
3. The Water (Prevention and Control of Pollution) Act, 1974, Bare Act, 2022 Edition, Universal/LexisNexis, Noida
4. Cliff Ennico, (2005) "Small Business Survival Guide Starting Protecting and Securing your Business for Long-Term Success", Adams Media, USA
5. Daniel Sitarz, (2011) "Sole Proprietorship: Small Business Start-up Kit", 3rd Edition, Nova Publishing, USA

Web references:

1. https://www.icsi.edu/media/webmodules/FINAL_FULL_BOOK_of_EP_ SBEC_2018.pdf
2. https://www.mca.gov.in/MinistryV2/incorporation_company.html 3)
3. https://legislative.gov.in/sites/default/files/The%20Limited%20Liability%20 Partnership%20 Act,%202008.pdf
4. https://legislative.gov.in/sites/default/files/A1999-48.pdf
5. https://www.indiacode.nic.in/bitstream/123456789/6196/1/the_environment_protection_ act%2C1986.pdf

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	3	3	3	3	3	3	3	1	3
CO2	3	2	2	3	2	3	2	3	3
CO3	3	3	2	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3

Strong - 3   **Medium – 2**   **Low - 1**

M.Com., Computer Applications

First Year	Elective – III A	Semester II

DATA MINING AND DATA WAREHOUSING

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC2 E1	**DATA MINING AND DATA WAREHOUSING**	DSE-3	4	-	-	-	3	4	25	75	100

LEARNING OBJECTIVES

> ➤ To understand the basic concepts, principles and need of data warehousing
> ➤ To gain knowledge on the data warehouse architecture, modelling and its implementation.
> ➤ To understand steps in implementing data mart and its various dimensions
> ➤ To learn the features, types and challenges of data mining
> ➤ To aid the students to understand the various data mining tools and techniques

Course Units

UNIT I	**Data Warehouse** Definition - history of data warehouse - features of data warehouses - characteristics of data warehouse - goals of data warehousing- principles of data warehousing - need for data warehouse - benefits of data warehouse - need for separate data warehouse - difference between database and data warehouse - applications of data warehouses - components of data warehouse- data staging component.
UNIT II	**Data Warehouse Architecture** Data warehouse architecture - properties of data warehouse architectures - types of data warehouse architectures- three-tier data warehouse architecture - ETL (extract, transform, and load) process - selecting an ELT tool- Difference between ETL and ELT types of data warehouses - data warehouse modelling - data modelling life cycle - types of data warehouse models- data warehouse design - data warehouse implementation- implementation guidelines - meta data - necessary of metadata in data warehouses - types of metadata- metadata repository - benefits of metadata repository.
UNIT III	**Data Mart** Data Mart- Reasons for creating a data mart- Types of Data Marts- Steps in Implementing a Data Mart- Difference between Data Warehouse and Data Mart. - Dimensional Modeling-Objectives of Dimensional Modeling- Advantages of Dimensional Modeling - Elements of Dimensional Modeling - Dimension Table- Multidimensional Data Model-Data Cube.
UNIT IV	**Data Mining** Definition - History of Data Mining- Features of Data Mining - Types of Data

	Mining - Data Mining Vs Data Warehousing- Advantages and Disadvantages of Data Mining - Data Mining Applications - Challenges of Implementation in Data mining - Steps involved in Data Mining - Classification of Data Mining Systems.
UNIT V	**Data Mining Tools & Techniques** Data Mining Implementation Process - Data Mining Architecture - Clustering in Data Mining - Different types of Clustering - Text Data Mining - Bitcoin Data Mining - Data Mining Vs Big Data - Data Mining Models - Trends in Data Mining.

Course Outcomes

Students will be able to:

CO 1	Explain the basic concepts, principles and need of data warehousing
CO 2	Appraise data warehouse architecture, modelling and its implementation.
CO 3	Choose various steps in implementing data mart and its dimensions
CO 4	Recall the features and types of data mining
CO 5	Apply various data mining tools and techniques

Books for study:

1. Jiawei Han, MichelineKamber (2011), Data Mining, Concepts and Techniques, Morgan Kauffman Publishers, California.

2. Pang Ning Tan, Michael Steinbach, Vipin Kumar (2005), Introduction to Data Mining, Addison Wesley, USA.

3. K. P. Soman, ShyamDiwakar, V. Ajay (2006), Insight into Data Mining: Theory & Practice, Prentice Hall of India, New Delhi.

Books for reference:

1. BPB Editorial Board (2004), "Data Mining", BPB publications, Noida.

2. Ian H. Witten &Eibe Frank (2011), "Data Mining, Practical Machine Learning Tools and Techniques", Morgan Kaufmann series.

3. Ramesh Sharda, DursunDelen, Efraim Turban (2018), "Business Intelligence", Pearson Education Services Pvt Ltd, Noida.

Web references:

1. https://mrcet.com/downloads/digital_notes/ME/III%20 year/ERP%20 Complete%20Digital%20notes.pdf

2. https://mrcet.com/pdf/Lab%20Manuals/IT/DATA%20WAREHOUSING%20AND%020DATA%20MINING%20(R18A0524).pdf00

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	1	1	1	1	2	3	2	2	3
CO2	2	3	2	2	2	3	2	2	3
CO3	3	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3

Strong - 3   **Medium – 2**   **Low - 1**

TECHNOLOGY IN BANKING

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC 2E2	**TECHNOLOGY IN BANKING**	DSE-3	4	-	-	-	3	4	25	75	100

Learning Objectives	➢ To understand the network essentials for an operational core banking system ➢ To provide an overview of customer centric electronic banking. ➢ To understand the evolution of electronic fund transfer systems in the banking sector ➢ To analyse the digital technologies offered in banking services. ➢ To understand the information security system
UNIT I	**Introduction to Core Banking Computerization** EssentialsofBankComputerization–StandAloneandMulti-UserSystem–LocalAreaNetwork and Wide Area Network: Features, Advantages and Limitations – Core Banking:EssentialRequirementsandBenefits.
UNIT II	**Electronic Payment System and Banking Facilities** ElectronicPaymentSystems–ATM:Features–Advantages–Disadvantages–BrownLabe land White Label ATM, PIN, Electro Magnetic Cards, Credit Cards, Debit Cards and SmartCards:Features,BenefitsandLimitations–MultiplePininSmartCard – ElectronicPurse –ElectronicCheque –ElectronicCash – ElectronicBanking – HomeBanking(CorporateandPersonal) – Update Facilities – Internet Banking – Mobile Banking: Features, Advantages andLimitations – Signature Storage and Retrieval System – Cheque Truncation – MICR and OCR:Characteristics–AdvantagesandLimitations.
UNIT III	**Electronic Fund Transfer and Its Transitions** Electronic Fund Transfer System – Electronic Credit and Debit Clearing – NEFT, RTGS,VSAT, SFMS,SWIFT:Features,AdvantagesandLimitations–DigitalSignature -UnifiedPayments Interface(UPI):Concept,MechanismandServicesCovered – DigitalWallets(E-Wallets):Features,BenefitsandTypes.
UNIT IV	**Trends in Banking Technology** Recent Developments in Banking Technology: Digital Account Opening – Application Programming Interface – Video Collaboration – Person-to-Person Payments – Cloud Computing – NUUP (National Unified USSD Platform), AePS (Aadhaar enabled Payment System) –APBS (Aadhaar Payments Bridge System) - Role of IDBRT (Institute of Development and Research in Banking) in banking technology development - Status of E-banking in India - Process of E-Banking - Benefits of E-banking - Emerging challenges in banking industry - Scope of IT to tackle the key challenges.
UNIT V	**Information Security System** Information security - Software based security systems - Hardware based security systems (smart card, M chip) – Hackers: Techniques used by the hackers, Phishing, Pharming, Key loggers, Screen loggers, Phishing - Trojans

	transaction poisoning - Card related fraud - Site cloning – False merchant site - Authentication methodologies and security measures (Password protection - Smart cards - Biometric characteristics) - Encryption and security - Customer confidentiality - Regulatory environment of internet banking - Legal Framework for Electronic Transactions – Cyber security as per InformationTechnologyAct, 2000 – RBIGuidelinesonInternetBanking.

Course Outcomes
Students will be able to

CO 1	Discuss the utility of stand-alone and multi-user systems access in Core banking.
CO 2	Assess the multi-faceted electronic payment options available to customer and host transactions in banking.
CO 3	Evaluate the dynamic transitions in Electronic Fund transfer systems.
CO 4	Evaluate the enhanced utility and user interface and other recent developments in banking technologies.
CO5	Assess the information security system

Books for study:

1. SangeethaR,(2013) "Technology in Banking", 1st Edition, Charulatha Publications, Chennai.
2. Sohani, A K, (2012) "Technology in Banking Sector", SBS Publishers and Distributors Pvt Ltd, New Delhi.
3. Uppal R K and Dhiraj Sharma, (2017) "Banking with Technology: A New Vision -2020", Bharti Publication, New Delhi
4. Indian Institute of Banking and Finance, (2017) "Information Technology, Data Communications and Electronic Banking", 3rd Edition, Macmillan Publishers India Private Limited, Noida.

Books for reference:

1. Vadlamani Ravi, (2007) "Advances in Banking Technology and Management: Impacts of ICT and CRM", 1st Edition, Information Science Reference, Hershey, (USA).
2. Lucian Morrisand Tim Walker, (2021) " The Handbook of Banking Technology" , John Wiley & Sons, New York.
3. Indian Institute of Banking and Finance, (2017), "Security in Electronic Banking", 3rd Edition, Macmillan Publishers India Private Limited, Noida.
4. Uppal R.K., AgrimUppal(2008) "Banking Services and Information Technology: The Indian Experience", New Century Publications, New Delhi.

Web references:

1. https://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/64767.pdf
2. https://www.researchgate.net/profile/Ravi-Vadlamani/publication/237383828_Chapter_I_Introduction_to_Banking_Technology_and_Management/links/572a89bc08aef7c7e2c4fbc3/Chapter-I-Introduction-to-Banking-Technology-and-Management.pdf
3. https://eprocure.gov.in/cppp/rulesandprocs/kbadqkdlcswfjdelrquehwuxcfmijmuixngudufgbuub gubfugbububjxcgfvsbdihbgfGhdfgFHytyhRtMjk4NzY=#:~:text=%5B9th%20June%2C%202020 00%5D%20An,communication%20and%20storage%20of%20information%2C

Note: Latest edition of the book may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	2	3	2	3	3	2	3	2	2
CO2	2	3	2	3	3	3	3	3	3
CO3	1	2	3	3	3	3	3	3	3
CO4	2	2	2	3	3	3	3	3	3
CO5	1	2	3	2	2	3	2	3	3

Strong - 3   Medium – 2   Low - 1

M.Com., Computer Applications

First Year　　　　　　　**Elective – IV A**　　　　　**Semester II**

FINANCIAL ANALYTICS

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC 2E3	**FINANCIAL ANALYTICS**	DS E-4	4	-	-	-	3	4	25	75	100
Learning Objectives	➢ To understand the statistical concepts relating to Probability, decision making under uncertainty and analysis of exploratory data ➢ To learn the use of regression, time series analysis and building of models using accounting data ➢ To gain knowledge on R and python programming ➢ To prepare, analyse and forecast financial statements using cash flow statements ➢ To gain knowledge on concept, application, and issues in capital budgeting										

Course Units

UNIT I	**Statistical Concepts** Probability, Normal, Lognormal distribution properties, Decision making under uncertainty - Cleaning and pre-processing financial data, Exploratory Data Analysis in Finance.
UNIT II	**Simple Linear Models** Use of Regression in Finance, Building Models using Accounting Data, Understanding stock price behaviour, time series analysis in finance.
UNIT III	**Using R for Analysis of Data** Quick introduction to R and Python, understanding data in finance, sources of data, Using R for analysis of data.
UNIT IV	**Cash Flow Concepts** Cash flow statement – Prepare and Analyse, Modelling and forecasting of financial statements.
UNIT V	**Capital Budgeting** NPV, IRR – Concept, application, and issues, Use of real options for better financial outcomes.

Course Outcomes

Students will be able to

CO 1	Analyse decisions under uncertainty and also analyse exploratory	
CO 2	Build models using accounting data and analyse using regression and time series tools	
CO 3	Apply R and python programming	
CO 4	Estimate and analyse financial statements using cash flow statements	
CO 5	Select appropriate capital budgeting techniques for decision making	

Books for study:

1. Gary Koop, "Analysis of Economic Data", 4th Edition, Wiley, USA.
2. David Ruppert, David S. Matteson, "Statistics and Data Analysis for Financial Engineering: with R examples", Springers, USA.

Books for reference:

1. Ang Clifford, "Analyzing Financial Data and Implementing Financial Models Using 'R'", Springers, USA.
2. Wayne L. Winston, "Microsoft Excel 2013: Data Analysis and Business Modeling", Microsoft Publishing, USA.

Web references:
1. https://personal.ntu.edu.sg/nprivault/MH8331/financial_risk_analytics.pdf
2. https://dynamics.microsoft.com/en-us/finance/what-is-financial-analytics/

Note: Latest edition of the books may be used

Note: 60% Problem, 40% Theory

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	3	3	1	3	3	2	3	2	2
CO2	3	3	1	3	3	2	3	2	2
CO3	3	3	1	3	3	2	3	2	2
CO4	3	3	1	3	3	2	3	2	2
CO5	3	3	1	3	3	2	3	2	2

Strong - 3   **Medium – 2**   **Low - 1**

M.Com., Computer Applications

First Year   **Elective – IV B**   **Semester II**

MANAGEMENT INFORMATION SYSTEM

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC 2E4	**MANAGEMENT INFORMATION SYSTEM**	DS E-4	4	-	-	-	3	4	25	75	100
Learning Objectives	➢ To understand the basic concept of Information system ➢ To identify the importance of MIS ➢ To understand the Functional Management Information System ➢ To learn the role of system analyst ➢ To apply the concept of Enterprise Resource Planning										
UNIT I	**Information System** Introduction to information system - Management - Structure and Activities - Information needs and sources - Types of management decisions and information need - System classification - Elements of system, input, output, process and feedback.										
UNIT II	**Types of Management Information Systems** Transaction Processing Information System - Information system for managers - Intelligence information system – Decision support system - Executive information systems.										
UNIT III	**Functional Management Information Systems** Functional Management Information System: Production Information system - Marketing Information Systems - Accounting Information System - Financial Information System - Human Resource Information System.										
UNIT IV	**System design and Database** System Analysis and Design: The work of a system analyst - SDLC- System design – Requirement analysis - Data flow diagram - Relationship diagram - Design -Implementation - Evaluation and maintenance of MIS - Database System: Overview of Database - Components - Advantages and disadvantages of database.										
UNIT V	**Enterprise Resource Planning** Enterprise Resource Planning (ERP) System - Benefits of the ERP - How ERP is different from conventional packages - Need for ERP - ERP components - Selection of ERP Package - ERP implementation - Customer Relationship management - Organisation & Types - Decision Making - Data & information - Characteristics & Classification of information - Cost & value of information - Various channels of information and MIS										

Course Outcomes

Students will be able to

CO 1	Identify the basic concept of Information system

CO 2	Discuss the importance of MIS
CO 3	Explain the functional MIS
CO 4	Describe the role of system analyst
CO 5	Apply the concept of Enterprise resource planning

Books for study:
1. Azam, M (2012), "Management Information System", McGrawHill Education, Noida.
2. Laudon, K., Laudon, J. and Dass, R. (2010), "Management Information Systems – Managing the Digital Firm", 11th Edition, Pearson, Noida.
3. Murdick, R.G., Ross, J.E. and Claggett, J.R. (2011), "Information Systems for Modern Management", 3rd Edition, PHI, New Delhi.

Books for reference:
1. O'Brien, J.A., Morakas, G.M. and Behl, R. (2009), "Management Information Systems", 9th Edition, Tata McGraw-Hill Education, Noida.
2. Saunders, C.S. and Pearson, K.E. (2009), "Managing and Using Information Systems", 3rd Edition, Wiley India Pvt. Ltd., New Delhi.
3. Stair, R. and Reynolds, G. (2012), "Information Systems", 10th Edition, Cengage Learning, Noida.

Web references:
1. https://cleartax.in/g/terms/mis-meaning-mis-full-form-marketing-information-system/amp
2. https://www.techtarget.com/searchitoperations/definition/MIS-management-information-systems

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	1	1	2	2	1	2	1	2	2
CO2	2	2	2	2	1	2	1	2	2
CO3	3	3	3	3	1	2	1	2	3
CO4	3	3	3	3	2	3	2	3	3
CO5	3	3	3	3	2	3	2	3	3

Strong - 3   Medium – 2   Low - 1

CREDIT ANALYST

First Year　　　　　　**AEC I**　　　　　　**Semester II**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC2S1	**CREDIT ANALYST**	AEC	2	-	-	-	2	2	25	75	100

Learning Objectives:	➢ To acquire the practical skill of data analysis ➢ Train them with critical thinking and communication skill to become a Financial Analysts ➢ Learn the role of credit manager ➢ Learn the investment opportunities ➢ Acquire an understanding of credit rating

Course Content

Unit - I	A Brief Introduction- Banking Credit Analysis Process - Fundamental Financial Math- Commercial Credit Analysis	8 Hours
Unit -II	Finance Training - Excel Crash Course: Master Excel for Financial Analysis	8 Hours
Unit - III	Risk Management - Risk Management Process - Analysis	8 Hours
Unit - IV	Financial Management A Complete Study for CA/CMA/CS/CFA/ACCA - Career Hacking- Resume, LinkedIn, Interviewing	8 Hours
Unit - V	Essential of Soft Skills - Assignment	8 Hours

Course Outcomes

Students will able to

CO1 – Know the Credit Facilities and its Proceeding
CO2 – Understand the Finance Analysis
CO3 – Know the Risk Management
CO4 – Discuss the CA, CMA, CS
CO5 – Apply the Soft Skills

Books for Study

1. Blokdyk. Gerardus "Credit Analyst", Create Space Independent Publishing Platform, 2018.

Books for Reference

1. Arnold Ziegel, Ronna Ziegel, Fundamentals of Credit and Credit Analysis: Corporate Credit Analysis, Create Space Independent Publishing Platform, 2015

Mapping of Course Outcomes with POs and PSOs

CO	POs						PSOs		
CO1	2	1	2	2	2	2	3	3	2
CO2	1	2	2	1	1	1	3	2	1
CO3	3	3	3	3	3	3	2	1	3
CO4	2	2	1	2	1	1	1	3	1
CO5	3	3	3	3	3	3	3	2	2
(3) S-Strong,　(2) M-Medium,　(1) L-Low									

STOCK MARKET OPERATION

First Year   **SEC I**   **Semester II**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC2S2	**STOCK MARKET OPERATIONS**	SEC-I	2	-	-	-	2	2	25	75	100

Learning Objectives	➢ To understand the stock market operation ➢ To operate of primary market ➢ To know the operation of the secondary market ➢ To understand the regulatory Framework of SEBI ➢ To know about the demat trading
Unit - I	Introduction Concept and types of Securities; Concept of return; Concept, types and measurement of risk; Development of Securities market in India.
Unit - II	Primary Market Concept, Functions and Importance; Functions of New Issue Market (IPO, FPO & OFS); Methods of Floatationfix price method and book building method; Pricing of Issues; Offer Documents; Appointment and Role of Merchant Bankers, Underwriters, Lead Managers, Syndicate Members, Brokers, Registrars, Bankers, ASBA; SME IPOs and Listing of Securities
Unit - III	Secondary Market Concept; Functions and Importance; Mechanics of Stock Market Trading-Different Types of Orders, Screen Based Trading, Internet-Based Trading and Settlement Procedure; Types of Brokers.
Unit - IV	Regulatory Framework SEBI (Issue of Capital and Disclosure Requirements) Regulation 2018; Stock Exchanges and Intermediaries; SEBI and Investor Protection; Securities Contract Regulation Act and SEBI (Listing Obligations and Disclosure Requirements) Regulation 2015.
Unit - V	Demat Trading Concept and Significance; Role of Depositories and Custodian of Securities in Demat Trading; SEBI Guidelines and other Regulations Relating to Demat Trading; Procedure of Demat Trading.

Learning Outcomes
1. Explain the basic concept of the securities market.
2. Practice trading on the stock market
3. Analyze the legal framework of the securities market.
4. Explain different segments of the stock exchange.
5. Perform demat trading

Suggested Readings:

Gordon E. and Natarajan K. (2019). Financial Markets and Services. New Delhi: Himalaya Publishing House.

Benjamin, G. (1949). The Intelligent Investor. New York: Harper Publishing.

Dalton, J. M. (2001). How The Stock Market Works? New York: Prentice Hall Press.

Machiraju, H. R. (2019). Merchant Banking. New Delhi: New Age Publishers.

SEBI Regulations from SEBI Website.

Note: Learners are advised to use latest edition of text books.

Mapping of Course Outcomes with POs and PSOs

CO	POs						PSOs		
CO1	2	3	2	2	2	3	1	3	2
CO2	3	2	1	3	1	2	2	3	1
CO3	2	1	3	1	3	3	3	3	3
CO4	1	3	2	3	3	2	2	2	3
CO5	3	3	3	2	2	3	3	3	2
(3) S-Strong, (2) M-Medium, (1) L-Low									

SUMMER INTERNSHIP / INDUSTRIAL ACTIVATES

The Students undergone internship / industrial activates for 30 days during first year summer vacation period.

Second Year   **Core – VII**   **Semester III**

TAXATION

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC3C1	**TAXATION**	**Core**	6	-	-	-	4	6	25	75	100

	➢ To identify deductions from gross total income and computation of income for different classes of assessees ➢ To understand the procedure for filing of returns and tax planning ➢ To analyse the structure on international business taxation ➢ To assess Goods and Services Tax and filing GST returns ➢ To compute customs duty as per Customs Act

Course Units	
UNIT I	**Assessment of persons** Tax Exemptions for Agricultural Income - Deductions to be made in computing total income (80G, 80GGB & 80GGC, 80IA, 80IAB, 80IAC, 80IB, 80IBA, 80ID, 80IE, 80JJA, 80JJAA, 80LA, 80M, 80P, 80PA) – Assessment of Firms, AOP, BOI, Company and Co-operative society.
UNIT II	**Tax Returns and Tax planning** Return of income: Statutory obligation, Return Forms, Time for filing of return, Revised return, Modified return–Assessment -Tax Deducted at Source - Advance payment of Tax: Persons liable to pay, Due date, Computation - Payment in pursuance of order of Assessing Officer, Consequences on non-payment. – Tax planning, Tax avoidance and Tax evasion - Tax planning and specific management decisions: Make or buy, Own or lease, Retain or replace, Shut down or continue.
UNIT III	**International business taxation** International business taxation - Taxation of Non-resident - Double taxation relief - Transfer pricing and other anti-avoidance measure - Application and interpretation of tax treaties - (Double taxation avoidance agreement - DTAA) - Equalization levy.
UNIT IV	**Goods and Services Tax** Goods and Services Tax: GST Act, 2017 - Registration – Procedure for registration under Schedule III – Amendment of registration – Rates of Tax of IGST, CGST, SGST/UGTST- Assessment of GST- Self-assessment – Provisional assessment – Scrutiny of returns – Assessment of non filers of returns – Assessment of unregistered persons – Assessment in certain special cases – Tax Invoice – Credit and Debit Notes – Payment of Tax – Input Tax Credit - Anti profiteering –- Filing of Returns- Penalties – Prosecution – Appeal and Revision.
UNIT V	**Customs Act, 1962** Customs Act, 1962: Important Definitions – Basics – Importance of Customs Duty – Constitutional authority for levy of Customs Duty – Types of Customs Duty – Prohibition of Importation and Exportation of goods – Valuation of

	goods for Customs Duty – Transaction Value – Assessable Value – Computation of Assessable Value and Customs Duty.
Course Outcomes **Students will be able to:**	
CO 1	Estimate taxable income
CO 2	File returns and plan taxes
CO 3	Illustrate the nuances of international business taxation
CO 4	Apply the provisions of GST
CO 5	Assess the provisions of Customs Act

Books for study:

1. VinodSinghania and KapilSinghania, Direct Taxes Law & Practice Professional Edition, Taxmann Publications, New Delhi
2. Mehrotra H.C. and Goyal S.P, Income Tax including Tax Planning &Management, SahityaBhawan Publications, Agra
3. Sekar G, "Direct Taxes" - A Ready Refresher, Sitaraman C.& Co Pvt.Ltd., Chennai.
4. Balachandran V, (2021) Textbook of GST and Customs Law, Sultan Chand and Sons, New Delhi
5. VandanaBangar andYogendraBangar, "Comprehensive Guide to Taxation"(Vol.I and II),AadhyaPrakashan, Prayagraj(UP).

Books for reference:

1. Sha R. G. and Usha Devi N.,(2022) "Income Tax" (Direct and Indirect Tax), HimalayaPublishing House,Mumbai.
2. GirishAhuja and Ravi Gupta, "Practical Approach to Direct and Indirect Taxes: Containing Income Tax and GST", Wolters Kluwer India Private Limited
3. Swetha Jain, GST Law & Practice, Taxmann Publishers Pvt.Ltd, Chennai.
4. Daty V.S., "GST - Input Tax Credit",Taxmann Publishers, Chennai.
5. AnuragPandy,"Law & Practices of GST and Service Tax"- Sumedha Publication House, New Delhi.

Web references:

1. https://www.icsi.edu/media/webmodules/16112021_Advance_Tax_Laws.pdf
2. https://www.icsi.edu/media/webmodules/Final_Direct_Tax_Law_17_12_2020.pdf
3. https://www.icsi.edu/media/webmodules/TL_Final_pdf_25102021.pdf

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	3	3	3	3	3	3	3	2	3
CO2	3	3	3	3	3	3	2	2	3
CO3	3	3	3	3	3	3	3	2	3
CO4	3	3	3	3	3	3	3	2	3
CO5	3	3	3	3	3	3	3	3	3

Strong - 3   Medium – 2   Low - 1

M.Com., Computer Applications

Second Year   **Core – VIII**   **Semester III**

RESEARCH METHODOLOGY

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC 3C2	**RESEARCH METHODOLOGY**	**Core**	6	-	-	-	4	6	25	75	100

Learning Objectives	➢ To understand the fundamentals of research ➢ To construct theoretical design and formulate hypotheses ➢ To evaluate the data collection techniques ➢ To perform parametric and non-parametric tests ➢ To enhance report writing skills and develop ethical conduct in research

Course Units	
UNIT I	**Introduction to Research Methodology** Research: Definition – Objectives – Motivations for research – Types of research – Maintaining objectivity in research – Criteria of good research – Applications of research in business - Formulating a research problem – Literature Review – Reasons for review – Reference management tools - Identification of research gap – Framing of objectives.
UNIT II	**Hypothesis Testing and Research Design** Hypothesis – Formulation of hypothesis – Testing of hypothesis – Type I and Type II errors – Research design – Types of research design - Methods of data collection: Census, Sample survey, Case study – Sampling: Steps in sampling design, Methods of sampling – Testing of reliability and validity – Sampling errors.
UNIT III	**Data Collection** Variable: Meaning and types - Techniques of data collection – Primary data: Meaning, Advantages and limitations – Techniques: Interview, Schedule, Questionnaire, Observation – Secondary Data: Meaning and sources.
UNIT IV	**Data Analysis** Data Analysis – Uni-variate Analysis: Percentile, Mean, Median, Mode, Standard deviation, Range, Minimum, Maximum, Independent sample t-test – Bi-variate analysis: Simple correlation, Simple Regression, Chi-square, Paired samples t-test, ANOVA, Man-Whitney test – Wilcoxon signed rank test – Kruskal Wallis test (Simple problems) Multi Variate Analysis: Multiple Correlation, Multiple Regression, Factor Analysis, Friedman's test, Cluster analysis, Confirmatory Factor Analysis (CFA), Structural Equation Modelling (SEM), Multiple Discriminant Analysis.
UNIT V	**Preparation of Research Report** Report preparation – Guidelines and precautions for interpretation – Steps in Report writing - Style of research reports (APA, MLA, Anderson, Harvard) – Mechanics of report writing – Ethics in Research – Avoiding plagiarism –

	Plagiarism checker tools – Funding agencies for business research.

Question pattern: Theory: 80%; Problems: 20%

Course Outcomes
Students will be able to:

CO 1	Recall the research concepts and recognise the research problem
CO 2	Formulate research hypothesis and determine the sample size
CO 3	Select appropriate method for data collection
CO 4	Make inferences based on statistical tests
CO 5	Draft a research report avoiding plagiarism

Books for study:
1. Tripathi, (2014) "Research Methodology in Management and Social Sciences". Sultan Chand & Sons, New Delhi.
2. Kothari C.R and GauravGarg, (2020) "Research Methodology" – Methods and Techniques. New Age International (P) Limited, New Delhi.
3. Krishnaswami and Ranganathan, (2011) "Methodology of Research in Social Sciences", Himalaya Publishing House, Mumbai.

Books for reference:
1. Donald R. Cooper, Pamela S. Schindler and J.K.Sharma, "Business Research Methodology", 12th Edition, Tata Mcgraw Hill, Noida (UP).
2. SashiK.Guptha and ParneetRangi,(2018) "Research Methodology" , Kalyani Publisher, Ludhiana.
3. Sharma R D and HardeepChahal, (2004) "Research Methodology In Commerce and Management", Anmol Publications, New Delhi

Web references:
1. https://www.cartercenter.org/resources/pdfs/health/ephti/library/lecture_notes/health_science_students/ln_research_method_final.pdf
2. https://ccsuniversity.ac.in/bridge-library/pdf/MPhil%20Stats%20Research%20Methodology-Part1.pdf
3. https://prog.lmu.edu.ng/colleges_CMS/document/books/EIE%20510%20LECTURE%20NOTES%20first.pdf
4. https://www.statisticssolutions.com/academic-research-consulting/data-analysis-plan/

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	3	3	3	2	2	3	2	3	3
CO2	3	3	3	2	2	3	2	3	3
CO3	3	3	3	2	2	3	2	3	3
CO4	3	3	3	2	2	3	2	3	3
CO5	3	3	3	2	2	3	2	3	3

Strong - 3   **Medium – 2**   **Low - 1**

M.Com., Computer Applications

Second Year **Core–IX** **Semester III**

COMPUTERS IN BUSINESS

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	CIA	External	Total
									Marks		
23MCC3P1	**COMPUTERS IN BUSINESS**	Core	-	-	5	-	4	5	25	75	100

Learning Objectives	- To understand the fundamentals of SPSS - To compare the values obtained in t-test and ANOVA - To perform regression and non-parametric tests - To create company, groups and ledgers and obtain financial statements using Tally Prime - To understand inventory management and account for goods and services tax

Course Units

UNIT I	**Introduction to SPSS** Opening a data file in SPSS – Variable view – Data view – Entering data into the data editor – Saving the data file– Table creation – Descriptive statistics: Percentile values, Measures of central tendency, Measures of dispersion, Distribution – Cronbach's Alpha test – Charts and graphs - Editing and copying SPSS output.
UNIT II	**Parametric Tests in SPSS** Compare means: One-sample t-test, Independent Samples t-test, Paired-samples t-test and One-way ANOVA, Two-way ANOVA - Correlation: Bi-variate, Partial and Multiple. Simple linear regression.
UNIT III	**Non-parametric Tests in SPSS** Chi-square test - Mann Whitney's test for independent samples – Wilcoxon matched pairs sample test– Friedman's test – Wilcoxon signed rank test – Kruskal Wallis test
UNIT IV	**Introduction to Tally Prime** Tally Prime: Introduction – Starting Tally Prime – Creation of a Company - Selecting company - Shutting a company - Altering company– Creating Accounting groups and ledgers – Vouchers – Practical problems for a new and existing business and not-for profit organisation. Accounting reports: Introduction – Displaying Trial balance, Profit and Loss Account, Balance sheet, Day book, Purchase register, Sales register, Cashflow/Funds flow and ratio analysis – Practical problems.
UNIT V	**Inventory and GST in Tally Prime** Inventory: Introduction to Inventory Masters – Creation of stock group – Creation of Godown – Creation of unit of measurement – Creation of stock item – Entering inventory details in Accounting vouchers – Practical problems. GST: Introduction – Enabling GST – Defining tax details – Entries in Accounting vouchers – View invoice report –

	Practical problems.

Question Pattern: 100% Practical

Course Outcomes

Students will be able to:

CO 1	Create data file in SPSS
CO 2	ExamineMeans of samples
CO 3	Conduct non-parametric tests
CO 4	Create a company, form groups and get automated financial statements
CO 5	Automate inventory management and GST filing

Books for study:

1. SundaraPandian.P, Muthulakshmi. S &Vijayakumar, T (2022), Research Methodology &Applications of SPSS in Social Science Research, Sultan Chand & Sons, New Delhi
2. Morgan George. A, Barrett C Karen, Leech L Nancy and Gloeckner Gene W (2019), IBM SPSS for Introductory Statistics, Routledge, 6th Edition, U.K
3. Official Guide to Financial Accounting using TallyPrime (2021), BPB Publication, Delhi
4. Chheda Rajesh, U (2020), Learn Tally Prime, Ane Books, 4th Edition, New Delhi

Books for reference:

1. Kulas John, Renata Garcia Prieto Palacios Roji, Smith Adams (2021), IBM SPSS Essentials: Managing and Analysing Social Sciences Data, 2nd Edition, John Wiley & Sons Inc., New York
2. Rajathi. A, Chandran. P (2011), SPSS for You, MJP Publishers, Chennai
3. SangwanRakesh (2022), Learn Tally Prime in English, Ascend Prime Publication, Pilani
4. LodhaRoshan (2022), Tally Prime with GST Accounting, Law Point Publication, Kolkata

Web references:

1. https://www.spss-tutorials.com/basics/
2. https://www.tallyclub.in/
3. https://tallysolutions.com/business-guides/inventory-management-in-tally-erp9/

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO 1	2	3	2	2	3	3	2	3	3
CO 2	3	3	2	2	3	3	2	3	3
CO 3	3	3	2	2	3	3	2	3	3
CO 4	3	3	2	3	3	3	3	3	3
CO 5	3	3	2	3	3	3	3	3	3

Strong - 3   Medium – 2   Low - 1

M.Com., Computer Applications

Second Year　　　　　　**Core – X**　　　　　　**Semester IV**

INTERNATIONAL BUSINESS

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks CIA	Marks External	Marks Total
23MCC3C3	**INTERNATIONAL BUSINESS**		6	-	-	-	4	5	25	75	100

Learning Objectives	➢ To understand the concepts of International Business and International Business Environment ➢ To analyse the different theories of International Business. ➢ To understand the legal procedures involved in International Business. ➢ To evaluate the different types of economic integrations. ➢ To analyse the operations of MNCs through real case assessment.
UNIT I	**Introduction to International business** International Business - Meaning, Nature, Scope and Importance- Stages of internationalization of Business-Methods of entry into foreign markets: Licensing- Franchising- Joint Ventures-Strategic Alliances- Subsidiaries and Acquisitions - Framework for analyzing international business environment- Domestic, Foreign and Global Environment-Recent Developments in International Business.
UNIT II	**Theoretical Foundations of International business** Theoretical Foundations of International Business: Theory of Mercantilism-Theory of Absolute and Comparative Cost Advantage - Haberler's Theory of Opportunity Cost- Heckscher- Ohlin Theory Market Imperfections Approach-Product Life Cycle Approach - Transaction Cost Approach- Dunning's Eclectic Theory of International Production.
UNIT III	**Legal framework of International Business** Legal framework of International Business: Nature and complexities: Code and common laws and their implications to Business-International Business contract - Legal provisions, Payment terms.
UNIT IV	**Multi-Lateral Agreements and Institutions** Multi-Lateral Agreements and Institutions: Economic Integration – Forms: Free Trade Area, Customs Union, Common Market and Economic Union-Regional Blocks: Developed and Developing Countries-NAFTA- EU-SAARC, ASEAN - BRICS - OPEC-Promotional role played by IMF-World Bank and its affiliates- IFC, MIGA and ICSID – ADB -Regulatory role played by WTO and UNCTAD.
UNIT V	**Multinational Companies (MNCs) and Host Countries** Multinational Companies (MNCs) and Host Countries: MNCs – Nature and characteristics. Decision Making-Intra Firm Trade and Transfer Pricing – Technology Transfer- Employment and labour relations- Management Practices- Host Country Government Policies-International Business and Developing countries: Motives of MNC operations in Developing Countries (Discuss case studies)-Challenges posed by MNCs.

Course Outcomes	
Students will be able to:	
CO 1	Recalltheconceptsof International Business and International Business Environment
CO 2	Analyzedifferent theories of International Business
CO 3	Evaluatethe legal procedures involved in International Business.
CO 4	Explain the different types of economic integrations.
CO 5	Identify the operations of MNCs through real case assessment

Books for study:
1. Charles W.L. Hill, International Business: Competing in the Global Market Place,McGraw Hill, NewYork
2. Charles W. L. Hill, Chow How Wee & Krishna Udayasankar, International Business: An Asian Perspective- McGraw Hill, New York
3. Rakesh Mohan Joshi (2009), International Business, Oxford University Press

Books for reference:
1. Donald Ball, Michael Geringer, Michael Minor & Jeanne McNett, International Business: The Challenge of Global Competition, McGraw Hill Education, NewYork
2. Alan M Rugman& Simon Collinson, International Business: Pearson Education, Singapore

Web references:
1. https://www.icsi.edu/media/webmodules/publications/9.5%20International%20Business.pdf
2. https://ebooks.lpude.in/commerce/mcom/term_3/DCOM501_ INTERNATIONAL_BUSINESS.pdf
3. https://www.shobhituniversity.ac.in/pdf/econtent/International-Business-Unit-1-Dr-Neha-Yajurvedi.pdf

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	1	3	1	2	2	2	3	1	2
CO2	3	2	3	1	3	3	2	2	1
CO3	2	1	2	3	2	2	3	3	3
CO4	1	3	1	2	1	1	2	2	2
CO5	3	2	2	2	2	2	1	1	1

Strong - 3   Medium – 2   Low – 1

M.Com., Computer Applications

Second Year   **Elective – V A**   **Semester III**

APPLIED DATA ANALYTICS AND MACHINE LEARNING

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC3E1	**APPLIED DATA ANALYTICS AND MACHINE LEARNING**	DS E-5	3	-	-	-	3	4	25	75	100

LEARNING OBJECTIVES	➢ To understand basics of data analysis in Python ➢ To interpret the data analysis pipeline via usage of NumPy and Pandas. ➢ To examine methods of working with textual and time series data ➢ To investigate machine learning techniques with Scikit-Learn ➢ To understand advanced machine learning techniques

Course Units	
UNIT I	**Introduction to Data Analysis with Python** Introduction to Data Analysis with Python: Data Analysis - Understanding Nature of Data -Data Analysis Process - Quantitative and Qualitative Data Analysis-Introduction to Python - PyPI, SciPy.Getting started with Python - Explore the first data set - The Jupyter notebook.
UNIT II	**Working across the entire data analysis pipeline** Working across the entire data analysis pipeline, - Getting, cleaning and manipulating the data - Numpy library – Ndarrray - Basic Operation-Shape Manipulation - Array Manipulation - General Concepts - Pandas Library- Introduction to Pandas Data Structures - Index functionalities - Operations between Data Structures - Interacting with Databases.
UNIT III	**Working with textual and time-series data** Working with textual data - Working with time-series data - Databases in Python - Statistical data analysis.
UNIT IV	**Basics of machine learning with Scikit-learn** Basics of machine learning with Scikit-learn - Introduction to machine learning -Fitting a first model - Cost functions and outliers - Linear regressions - Gradient descent - Feature engineering.
UNIT V	**Advanced machine learning techniques** Advanced machine learning techniques: K-nearest neighbours - Logistic regressions - Decision trees and SVMs - Clustering and Dimensionality reduction - Introduction to deep learning.

Course Outcomes
Students will be able to:

CO 1	Demonstrate data analysis with apt knowledge in foundational concepts of Python

CO 2	Demonstrate getting, cleaning and manipulation of data using NumPy and Pandas
CO 3	Use Python for Statistical Data analysis
CO 4	Use Scikit-Learn for advanced Data analysis
CO 5	Explain advanced machine learning techniques

Books for study:
1. Fabio Nelli (2018), "Python Data Analytics with Pandas,Numpy and Matplotlib", 2nd Edition, Apress, New York.
2. Paul Barry, Shroff (2011), "Head First Python", 1st Edition, O'Reilly Media, USA.
3. Mark Lutz, Shroff (2011), "Programming Python", 4th Edition, O'Reilly Media, USA.

Books for reference:
1. Wes McKinney, "Python for Data Analysis", 2nd Edition, O'Reilly publication, USA.
2. Martin C Brown (2001), "Python the Complete Reference", McGraw Hill, USA.
3. Mark Lutz, Shroff (2010), "Python Pocket Reference", 3rd Edition, O'Reilly Media, USA.
4. Ashok NamdevKamthane, Amit Ashok Kamthane (2018), "Problem Solving and Python Programming", McGraw Hill Education Pvt. Ltd. Noida.

Web references:
1. https://pandas.pydata.org/pandas-docs/version/1.4.4/pandas.pdf
2. https://mrcet.com/downloads/digital_notes/CSE/IV%20Year/MACHINE% 20LEARNING(R17A0534).pdf

Note: Latest edition of the books may be used.

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	1	2	1	3	3	1	3	2	1
CO2	1	2	1	3	3	1	3	2	1
CO3	1	2	1	3	3	1	3	2	1
CO4	1	2	1	3	3	1	3	2	1
CO5	1	2	1	3	3	1	3	2	1

Strong - 3   Medium – 2   Low - 1

M.Com., Computer Applications

Second Year **Elective–V B** **Semester III**

PYTHON AND R FOR DATA ANALYTICS

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	CIA	External	Total
									Marks		
23MCC 3E2	**PYTHON AND R FOR DATA ANALYTICS**	DSE-5	3	-	-	-	3	4	25	75	100

Learning Objectives	➢ To understand the basics of Python ➢ To learn Bio Python ➢ To understand the features of R ➢ To learn data handling ➢ To identify the use of bio conductor
UNIT I	**Introduction to Python** Installation of Python - Variables - Types - Strings - Jupiter notebooks - Objects - Functions - Control structures - Operators - User-Defined Functions - Data Structures - List,Tuple -Dictionary.
UNIT II	**Numpy and Scipy** Numpy library – Ndarrray - Basic Operations - Conditions and Boolean Arrays - Shape Manipulation - Array Manipulation - General Concepts - Structured Arrays - Reading and Writing Array on Files - SciPy Library for Statistics: linalg sub package - Normality- Correlation - t-Test- Chi-Test- ANOVA.
UNIT III	**R Programming** Introduction to R - Installing R - Features of R - Reserved words - Operators, -Strings - Data types and operations - Basic Data types – Vectors - List, Matrices – Arrays - Factors - Data frames - Flow control - Decision making - Loop Control Statements -Loops.
UNIT IV	**Visualisation using R** R as a Deluxe Calculator - Creating Objects and Assigning Values - Graphics: Simple Plotting - Advanced Plotting - Using Color in Plots - Using Subscripts and Superscripts in Graph Labels - Interactive Graphics - Saving Graphical Output - Loops.
UNIT V	**Data Handling** Feature selection models - Data Preprocessing - Normalization - Methods - Data reduction - Data sampling - Heat maps - Classification: Based on analogy - rules - probabilities - statistics and prediction with R.

Course Outcomes
Students will be able to:

CO 1	Describe the basics of Python
CO 2	Explain the necessity for programming in biology
CO 3	Apply R programming
CO 4	Discuss Data handling
CO 5	Apply R in Phylogenetics

Books for study:
1. Fabio Nelli (2018), "Python Data Analytics with Pandas,Numpy and Matplotlib", 2nd Edition, Apress, New York.
2. Wes McKinney, "Python for Data Analysis", 2nd Edition, O'Reilly publication, USA.
3. Jeeva Jose (2018),"Beginner's Guide for Data Analysis using R Programming", Khanna Book Publishing Co. Ltd., New Delhi.
4. Norman Matloff (2011), "The Art of R programming - A tour of statistical software design", 1st Edition, No Starch Press, USA.

Books for reference:
1. Mark Lutz (2009), "Learning Python", O'Reilly Media Publication, USA.
2. Martin C Brown (2001), "Python: The Complete Reference". McGraw-Hill Media, USA.
3. Gentleman R, Carey V.J, Huber W, Irizarry, RA, and Dudoit, S, "Bioinformatics and Computational Biology Solutions Using R and Bioconductor", Springer, New York.

Web references:
1. www.sthurlow.com/python/
2. www.learnpython.org
3. www.codecademy.com/en/tracks/python

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	2	2	2	2	1	2	1	2	3
CO2	2	2	2	2	1	2	1	2	2
CO3	3	3	3	3	2	3	2	3	3
CO4	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3

Strong - 3   **Medium – 2**   **Low - 1**

EXPORT-IMPORT DOCUMENTATION

Second Year   **AEC II**   **Semester III**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC3S1	**EXPORT – IMPORT DOCUMENTATION**	AEC	2	-	-	-	2	2	25	75	100
Learning Objectives	➢ Understand the Concepts and significance of export procedure, offer and receipts of export/import orders, shipment procedure, export documentation, letter of credit and types. ➢ Learn the special shipment of export cargo by sea, air, cargo, land customs station and by post, multimodal transport, procedure and documentation, specific policy, open policy. ➢ Through in General provisions regarding exports and imports, special focus initiatives for agriculture, handloom, handicrafts, leather goods and gems and jewellery authorization. ➢ Competent Foreign Trade Schemes Export Promotion Capital Goods Schemes, Export Oriented Units, Special Economic Zone, Bio Tech Park. ➢ Know about the Export oriented schemes.										
UNIT I	**Export Procedure:** Offer and receipt of Export/Import orders - Shipment procedure - Banking Procedure Export Documentation - Framework - Standardized pre-shipment Export Documents - Commercial and Regulatory Documents - Export credit instruments and procedures: Letters of credit and types - Documents required for export credit.										
UNIT II	**Shipment of Export cargo:** By Sea, Air, ICD (Internal Container Depot), Courier, Land Customs Station and by Post - Procedure and Documents required for shipment of cargo - Multimodal transport - Procedure and documentation - Central Excise and Customs clearance of export cargo - Procedure and documents										
UNIT III	**Foreign Trade Policy and Provisions:** General Provisions Regarding Exports and Imports- Special focus Initiatives for Agriculture, Handloom, Handicrafts, Leather goods and Gems and Jewellery (GJ)- Promotional Schemes – Duty Exemption/Remission Schemes: Advance License / Duty Free Import Authorization (DFIA), Duty Free Replenishment Certificate (DFRC)										
UNIT IV	**Foreign Trade Schemes:** Export Promotion Capital Goods (EPCG) Scheme – Export Oriented Units (EOUs)/ Electronic Hardware Technology Park (EHTP)/ Software Technology Park (STP) Scheme /Special Economic Zone (SEZ)/Bio-tech-park (BTP) Schemes- Duty Free Credit Entitlement Schemes.										
UNIT V	**Role and Functions of Special Institutions:** Export Promotion Councils, Commodity Boards, and Directorate of commercial Intelligence and Statistics, Indian Trade Promotion Organization, Indian Institute of Foreign Trade, Marine Products Export Development Authority.										

Outcomes

1. Understand the export procedure and shipment of export cargo.

2. Comprehend the letter of credit and types, export credit insurance.

3. Appreciate the foreign trade policy and provisions and foreign trade schemes.

4. Make role and functions of special institutions.

Reference and Textbooks:-

C Ramagopal, *Export Import Procedures- Documentation and Logistics,* New Age International, 2010

Govt. of India, Bare Acts/ Manuals/ Handouts Institute Cargo Clauses, Incoterms – 1990, Carriage of *ICC 1983 Rev*, Uniform Customs & Practice for Documentary Credits.

Goods by Sea/ Air, Marine Insurance Act, FEMA, GSP Rules of Origin, etc.

Govt. of India, *Foreign Trade Policy and Central Excise Rules & Duty Drawback Rules*

IIFT, Background Papers on Export Procedures & Documentation.

Mahajan M, *Foreign Trade Policy Procedures & Documentation Exports Imports Foreign Exchange Management W/cd*, Snow White Publications Pvt Ltd, 2010.

S. Ramakrishna, et al., *Quality Control and Pre-shipment Inspection for Exports*.

V.S. Datey, *ForeignTrade Policy,* CCH India, 2010

Mapping of Course Outcomes with POs and PSOs

CO	POs						PSOs		
CO1	3	2	3	3	1	1	3	2	2
CO2	2	3	2	2	3	3	2	3	1
CO3	3	2	2	2	2	2	1	3	3
CO4	2	1	1	3	3	3	3	1	3
CO5	3	3	3	1	2	3	3	3	3
(3) S-Strong, (2) M-Medium, (1) L-Low									

ENTREPRENEURSHIP DEVELOPMENT SKILLS

Second Year   **SEC II**   **Semester III**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	CIA	External	Total
									Marks		
23MCC3S2	**ENTREPRENEURSHIP DEVELOPMENT SKILLS**	SEC	2	-	-	-	2	2	25	75	100

Course Objectives	➢ To introduce students to entrepreneurship and growth in India. ➢ To impart knowledge on innovation, its types, role of technology in innovation, patents and licensing. ➢ To orient the students on new venture creation. ➢ To enable students to prepare a feasible business plan ➢ To give inputs on various types of financing available for new ventures.

UNIT I	**Introduction:** The Entrepreneur-Definition-Characteristics of Successful entrepreneur-Entrepreneurial scene in India; MSME; Analysis of entrepreneurial growth in different communities-Case histories of successful entrepreneurs.	5
UNIT II	**Innovation in Business:** Types of Innovation-Creating and Identifying Opportunities for Innovation-Design Thinking-The Technological Innovation Process-Creating New Technological Innovation.	5
UNIT III	**New Venture Creation:** Identifying Opportunities for New Venture Creation: Environment Scanning-Generation of New Ideas for Products and Services. Creating, Shaping, Recognition, Seizing and Screening of Opportunities. Feasibility Analysis: Technical Feasibility of Products and Services-Marketing.	5
UNIT IV	**Business Plan Preparation:** Benefits of a Business Plan-Elements of the Business Plan-Developing a Business Plan-Guidelines for preparing a Business Plan-Format and Presentation; Start-ups and e-commerce Start-ups. Business Model Canvas.	5
UNIT V	**Financing the New Venture:** Capital Structure and working capital Management: Financial appraisal of new project. Role of Banks-Credit appraisal by banks. Institutional Finance to Small Industries-Incentives-Institutional Arrangement and Encouragement of Entrepreneurship.	5

Course Outcomes

On Completion of this course, Students will;
Be able to know about growth of entrepreneurship in India
Gain knowledge on Innovation, its types, role of technology in innovation, patents and licensing
Obtain knowledge on new venture creation

| Be able to prepare a business plan |
| Gain knowledge on various types of financing available for new ventures. |

Reading List

1	http://www.jimssouthdelhi.com/smBBA6/ED.pdf
2	https://www.cengage.com/highered
3	https://roadmapresearch.com/entrepreneurship-beyond-curriculum
4	The International Journal of Entrepreneurship and Innovation

References Books

1. Reddy, N., Entrepreneurship: Text and Cases, Cengage Learning, 2010.
2. Roy, R., Entrepreneurship, 2nd Edition, Oxford University Press, 2011.
3. Barringer, B., Entrepreneurship: Successfully Launching New Ventures, 3rd Edition, Pearson, 2011.
4. Bassant, J., and Tidd, J., Innovation and Entrepreneurship, 2nd Edition, John Willy & amp: Sons, 2011.
5. Desai, V., Small Scale Industries and Entrepreneurship, Himalaya Publishing House, 2011.
6. Entrepreneurship: Successfully Launching New Ventures, Global Edition, 6th Edition Bruce R. Barringer, Texas A & amp: M University. R. Duane Ireland.@2018 Pearson.

Mapping of Course Outcomes with POs and PSOs

CO	PO$_S$						PSO$_S$		
CO1	3	2	3	3	3	2	3	2	2
CO2	2	1	2	2	2	1	2	1	1
CO3	1	3	1	1	1	3	1	3	3
CO4	3	3	3	3	3	2	3	2	2
CO5	2	2	2	2	1	2	1	1	
(3) S-Strong, (2) M-Medium, (1) L-Low									

INTERNSHIP / INDUSTRIAL ACTIVITIES III - Semester

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC3I	❖ **INTERNSHIP / INDUSTRIAL ACTIVITIES**		-	-	-	-	2	-	25	75	100

❖ The students are submitting the Internship / Industrial activities report about their internship training learned 30 days after completed the first year.

Second Year   **Core – XI**   **Semester IV**

CORPORATE AND ECONOMIC LAWS

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC 4C1	**CORPORATE AND ECONOMIC LAWS**	Core	6	-	-	-	4	6	25	75	100

Learning Objectives	➢ To analyse current and capital account transactions and deal with foreign currency under FEMA Act ➢ To understand unethical competitive practices and forums for redressal of consumer disputes under Competition Act and Consumer Protection Act ➢ To understand the procedure for obtaining patents and copyright under The Copyright and Patents Act ➢ To evaluate offences and punishment for money laundering under Prevention of Money Laundering Act ➢ To explain the registration and related procedures under Real Estate Act
UNIT I	**Introduction to Foreign Exchange Management Act, 1999** Foreign Exchange Management Act, 1999: Introduction – Definitions – Current Account transactions – Capital Account transactions – Realisation, repatriation and surrender of foreign currency – Remittance of assets – Possession and retention of foreign currency or foreign coins – Authorised person – Adjudication and Appeal.
UNIT II	**Competition Act, 2002 and Consumer Protection Act, 2019** Competition Act, 2002: Objective – Prohibition of Agreements, Prohibition of Abuse of Dominant Position - Regulation of combinations **-** Competition Commission of India: Duties, Powers and Functions of Commission - Appellate Tribunal. The Consumer Protection Act, 2019: Objects; Rights of consumers – Consumer Dispute Redressal Commissions - Consumer protection councils – Procedure for admission to complaints – Appeal against orders.
UNIT III	**Law relating to intellectual property rights** Law relating to intellectual property rights: Introduction - The Copyright Act, 1957: Works in which copyright subsist - Ownership of copyright and the rights of the owner - Assignment of copyright - Disputes with respect to assignment of copyright - Term of copyright - Registration of copyright - Infringement of copyright. The Patents Act, 1970: Inventions not patentable - Applications for patents - Publication and examination of applications - Grant of patents and rights conferred - Register of patents. Trademarks Act, 1999: Conditions for registration - Procedure for and duration of registration - Effect of registration - Collective marks.
UNIT IV	**Prevention of Money Laundering Act, 2002** Prevention of Money Laundering Act, 2002: Offence of money laundering – Punishment for money laundering –Attachment, adjudication and confiscation -

	Obligations of Banking Companies, Financial Institutions and Intermediaries – Summons, Search and Seizure – Appellate Tribunal.
UNIT V	**Real Estate (Regulation and Development) Act, 2016** Real Estate (Regulation and Development) Act, 2016: Introduction - Salient features of the Act - Registration of Real Estate Project – Registration of Real Estate agents – Functions and duties of promoter – Rights and duties of Allottees – Offences, penalties and adjudication – Specimen agreement for sale to be executed between the promoter and the allottee.

Course Outcomes
Students will be able to:

CO 1	Recall important provisions of FEMA
CO 2	Evaluate the provisions of the Competition Act, 2002 and Consumer Protection Act to govern commercial competition and protect a consumer
CO 3	Recall the process relating to obtaining copyrights and patents.
CO 4	Examine the provisions of Money Laundering Act
CO 5	Analyse the provisions relating to regulation of real estate.

Books for study:
1. MunishBandari (2022), A Textbook on Corporate and Economic Laws, 33rd Edition, Bestword Publications, New Delhi
2. AmitVohra and RachitDhingra (2022), Economic, Business and Commercial Laws, 18th Edition, Bharat Book House, Siliguri
3. PankajGarg (2021), Taxmann's Corporate and Economic Laws, 7th Edition, Taxmann Publications, New Delhi

Books for reference:
1. Sekar G and SaravanaPrasath B (2022), Students' Handbook on Corporate and Economic Law, Commercial Law Publishers (India) Pvt.Ltd.,, New Delhi
2. Taxmann (2021), FEMA & FDI Ready Reckoner, 15th Edition, Taxmann Publications, New Delhi
3. AhujaV.K. and ArchaVashishtha (2020), Intellectual Property Rights (contemporary Developments), Thomson Reuters, Toronto, (CAN)

Web references:
1. https://resource.cdn.icai.org/67333bos54154-m3cp1.pdf
2. https://resource.cdn.icai.org/67335bos54154-m3cp3.pdf
3. https://resource.cdn.icai.org/68523bos54855-cp1.pdf
4. https://resource.cdn.icai.org/68524bos54855-cp2.pdf

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	3	3	2	2	3	3	3	2	3
CO2	3	3	3	2	2	3	2	2	3
CO3	3	3	2	2	2	3	2	2	3
CO4	3	3	3	3	3	3	3	2	3
CO5	3	3	2	2	3	3	3	2	3

Strong - 3   Medium – 2   Low - 1

M.Com., Computer Applications

Second Year   **Core – XII**   **Semester IV**

HUMAN RESOURCE ANALYTICS

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC4C2	**HUMAN RESOURCE ANALYTICS**	Core	6	-	-	-	4	6	25	75	100

Learning Objectives	➢ To understand the concept and framework of human resource analytics ➢ To evaluate the process of human resource analytics and the relevant research tools ➢ To illustrate the evolution, types and design of HR metrics ➢ To deal with data collection and transformation ➢ To adopt tools and techniques for predictive modelling

Course Units

UNIT I	**Introduction to Human Resource Analytics** Human Resource Analytics: Introduction –Concept – Evolution - Importance – Benefits – Challenges - Types of HR Analytics – HR Analytics Framework and Models.
UNIT II	**Business Process and HR Analytics** Business Process and HR Analytics: Introduction – Data Driven Decision Making in HR - Data Issues – Data Validity – Data Reliability - HR Research tools and techniques –Statistics and Statistics Modelling for HR Research
UNIT III	**Introduction to HR Metrics** HR Metrics: Introduction - Historical Evolution of HR metrics- Importance – Types of HR Metrics – Types of data - HR Metrics Design Principles — HR Scorecard – HR Dashboards.
UNIT IV	**HR Analytics and Data** HR Analytics and Data:Introduction – HR Data Collection – Data quality – Big data for Human Resources – Process of data collection for HR Analytics – Transforming data into HR information – HR Reporting – Data Visualization – Root cause analysis.
UNIT V	**HR Analytics and Predictive Modelling** HR Analytics and Predictive Modelling: Introduction – HR Predictive Modelling – Different phases – Predictive analytic tools and techniques – Information for Predictive analysis - Software solutions - Predictive Analytic Models for Quantitative Data - Steps involved in predictive analytics.

Course Outcomes

Students will be able to:

CO 1	Examine the concept of human resource analytics
CO 2	Apply the HR tools and techniques in decision making

CO 3	Examine the different types of HR metrics and their relative merits
CO 4	Collect and transform data leading to HR reporting
CO 5	Build models for predictive analysis

Books for study:

1. NishantUppal (2020), Human Resource Analytics Strategic Decision Making, 1st Edition, Pearson EducationPvt. Ltd., Chennai
2. Sarojkumar and Vikrant Verma (2022), HR analytics, Thakur PublicationPvt. Ltd, Lucknow.
3. Dipak Kumar Bhattacharyya (2017), HR analytics: understanding theories and applications, 1st Edition, Sage Publications India Private Limited, New Delhi

Books for reference:

1. Ramesh Soundararajan and Kuldeep Singh (2019), Winning on HR analytics, Sage publishing, New Delhi
2. AnshulSaxena (2021), HR analytics: quantifying the intangible, 1st Edition, Blue Rose publishers, New Delhi
3. Michael J. Walsh (2021), "HR analytics essentials you always wanted to know", 7th Edition, Vibrant publishers, Mumbai.

Web references:

1. https://hbr.org/webinar/2017/06/leveraging-hr-analytics-in-strategic-decisions
2. https://www.mbaknol.com/human-resource-management/human-resource-metrics/
3. https://www.managementstudyguide.com/hr-metrics-and-workforce-analysis.htm

Note: Latest edition of the books may be used

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	3	2	2	3	3	3	3	3	3
CO2	3	3	2	3	3	3	3	3	3
CO3	3	3	2	3	3	3	3	3	3
CO4	3	3	2	3	3	3	3	3	3
CO5	3	3	2	3	3	3	3	3	3

Strong - 3   Medium – 2   Low – 1

Core 13 Dissertation / Project with viva-voce

Second Year   **Core–XIII**   **Semester IV**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC4PR	Dissertation / Project with Viva-voce	**Core**	10	-	-	-	6	10	50	150	200

M.Com., Computer Applications

Second Year   **Elective – VI A**   **Semester IV**

CYBER AND DATA SECURITY

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC4E1	**CYBER AND DATA SECURITY**	DSE-6	4	-	-	-	3	4	25	75	100
Learning Objectives	➢ To understand threats and risks in cybersecurity landscape ➢ To interpret cybersecurity framework and regulations ➢ To examine data security and integrity regulations ➢ To discuss network security management ➢ To recall cybersecurity disasters										
UNIT I	**Cybersecurity Landscape** Cybersecurity Landscape: Threats that are related to current and emerging trends, cyber security awareness, high profile cybercrime statistics and methods, the importance and functions of Governance, Risk Management, and Compliance in Cyber security program management, best practices in risk management including the domains of risk assessment and risk treatment, the structure and content of Cybersecurity-related strategy, plans, and planning. types of vulnerabilities and frauds in different domains eg. Financial and Banking, Ecommerce, Telecom, GDPR.										
UNIT II	**Cybersecurity Frameworks** Cybersecurity Frameworks: International and industry-specific cybersecurity regulations, challenges to organisation, multiple security regulations, Define key concepts and terminology in Cybersecurity, threats to cybersecurity, strategies to identify and remediate vulnerabilities in information assets, the systemic components (including personnel) necessary for an effective cybersecurity program, NIST Framework.										
UNIT III	**Data Security** Data Security: Data Integrity and Security, digital security, Data volume and velocity, Bigdata, multiple data sources, data diversity, Data (dis)organization, Unique data storage requirements, Security tools, Inflexible reporting and query systems.										
UNIT IV	**Managing Network Security** Managing Network Security: The threats to data from information communication technology (ICT), the issues and practices associated with managing network security, Identify the practices, tools, and methodologies associated with assessing network security, the components of an effective network security program. Phishing attacks on sites, digital advertising spoofing, Search indexing										
UNIT V	**Cybersecurity Incidents and Disasters** Cybersecurity Incidents and Disasters: Hacking attempts, web site defacement, denial of service attacks, information disclosures, natural and man-made cybersecurity disasters, the components of a cybersecurity contingency										

	planning program, contingency strategies including data backup and recovery and continuity of cybersecurity operations, the components and structure of an effective cybersecurity disaster recovery program, the components and structure of an effective cybersecurity incident response program. Digital ecosystem, Cloud computing.

Course Outcomes

Students will be able to:

CO 1	Develop plans to mitigate risks and threats to cybersecurity
CO 2	Solve vulnerabilities in cybersecurity frameworks
CO 3	Solve issues in integrity issues in cybersecurity
CO 4	Implement radical changes in cybersecurity management
CO 5	Formulate strategies to overcome cybersecurity disasters

Books for study:
1. Nina Godbole, SunitBelapure(2016), "Cyber Security", Wiley India, New Delhi.
2. AvantikaYadav (2017), "Cyber security", Narosa Publishing House Pvt Ltd. New Delhi.
3. Tim Mather, SubraKumaraswamy, ShahedLatif (2010), "Cloud Security and Privacy", OREILLY Media, USA.

Books for reference:
1. Nina Godbole, "Information Systems Security", Wiley India, New Delhi.
2. Kennetch J. Knapp, "Cyber Security & Global Information Assurance", Information Science Publishing.
3. Thomas J Mowbray (2016), "Cyber Security Managing Systems, Conducting Testing and Investigating Intrusions", Wiley India Pvt. Ltd, New Delhi.

Web references:
 1.https://mrcet.com/pdf/Lab%20Manuals/IT/CYBER%20SECURITY%20(R18A0521).pdf
 2. http://www.uptti.ac.in/classroom-content/data/cyber%20security%20unit-3.pdf

Note: Latest edition of the books may be used.

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	3	3	3	3	2	2	2	3	2
CO2	3	3	3	3	2	2	2	2	3
CO3	3	3	3	3	2	2	2	2	3
CO4	3	3	2	3	2	2	2	2	2
CO5	3	3	2	3	2	2	2	3	3

Strong - 3   Medium – 2   Low - 1

Second Year   **Elective – VI B**   **Semester IV**

E-COMMERCE

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC 4E2	**E-COMMERCE**	DS E-6	4	-	-	-	3	4	25	75	100

LEARNING OBJECTIVES	➢ To explain use of Information technology and e-commerce for entrepreneur ➢ To apply the functions of Windows operating system ➢ To apply the advance functions of MS word ➢ To apply the functions of MS excel ➢ To understand the concept of E-Commerce and Electronic payments

Course Units	
UNIT I	**E-Commerce and Electronic Payment Systems** What is Electronic Commerce - Brief history of Electronic Commerce - Advantages and Limitations of Electronic Commerce - Types of Electronic commerce - Integrating Electronic Commerce - Key questions for management - Overview of the Electronic payment technology- Requirements for Internet based payments - Electronic payment medium – Electronic Commerce and Banking.
UNIT II	**Electronic Data Interchange** Benefits of EDI, EDI technology, EDI standards, EDI communications, EDI Implementation, EDI Agreements, EDI Security. Electronic Payment Systems, Need of Electronic Payment System: Study and examine the use of Electronic Payment system and the protocols used, Study Electronic Fund Transfer and secure electronic transaction protocol for credit card payment. Digital economy: Identify the methods of payments on the net – Electronic Cash, cheques and credit cards on the Internet.
UNIT III	**Consumer Oriented E Commerce:** E-Retailing: Traditional retailing and e retailing, Benefits of e retailing, Key success factors, Models of e retailing, Features of e retailing. E services: Categories of e-services, Web-enabled services, matchmaking services, Information-selling on the web, e entertainment, Auctions and other specialized services. Business to Business Electronic Commerce
UNIT IV	**E-security and Web based business** Security in the cyberspace - Designing for security -Virus -Security Protection and Recovery - Encryption - Business-to-Business Electronic Commerce - Intranets and Extranets - Intranets and Supply Chain Management - Legal and Ethical issues - Case studies.
UNIT V	**Issues in E Commerce** Understanding Ethical, Social and Political issues in E-Commerce: A model for Organizing the issues, Basic Ethical Concepts, Analyzing Ethical Dilemmas, Candidate Ethical principles Privacy and Information Rights: Information collected at E-Commerce Websites, The Concept of Privacy, Legal protections Intellectual Property Rights: Types of Intellectual Property protection, Governance.

Course Outcomes
Students will be able to:

CO 1	Understand the hardware and software of a system
CO 2	Apply the functions of Windows operating system
CO 3	Apply the advance functions of MS word
CO 4	Apply the functions of MS excel
CO 5	Understand the concept of E-Commerce and Electronic payments

Books for study:

1. Ravi Kalkota and Andrew B Whinston, "Frontiers of Electronic Commerce", Pearson, Noida.
2. Henry Chan, Raymond Lee, Tharam Dillon, Elizabeth Chang, "E-Commerce Fundamentals and Applications, Wiley Publishers, New Delhi.
3. Senn, "Information Technology: Principles, Practices and Opportunities James", Prentice Hall, New Delhi.
4. Richard Hammer (1998), "Enterprise Resource Planning",

Books for reference:

1. Efraim Turban, Jae Lee, David King ,H. Michael Chung (2001), "Electronic Commerce - A Managerial Perspective", Addison-Wesley, USA.
2. Anita Agrawal, Rahul Kotian, TusharAgarwal and VijalakshmiKannan, (2016), "E Commerce and Digital Marketing", Himalaya Publishing House, Mumbai.

Web references:

1. https://www.slideshare.net/kamalgulati7/full-notes-on-ecommerce-study-material-for-ecommerce
2. https://www.techtarget.com/searchcio/definition/e-commerce?amp=1

Mapping of course outcomes with POs and PSOs

	POs						PSOs		
	1	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**
CO1	2	2	1	2	2	2	2	2	2
CO2	2	2	2	2	2	2	2	2	2
CO3	3	3	3	3	3	3	3	3	3
CO4	3	3	3	3	3	3	3	3	3
CO5	3	3	3	3	3	3	3	3	3

Strong - 3   Medium – 2   Low - 1

ADVANCED EXCEL

Second Year   **AEC III**   **Semester IV**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC4S1	**ADVANCED EXCEL**	AEC	2	-	-	-	2	2	25	75	100

Learning Objectives	➢ Know the basics of Advanced Excel and help the students to understand how this Advanced ➢ Excel is different from other versions of Excel. ➢ Understand how to format the cells and different types of pasting techniques which are available in Advanced Excel. ➢ Get the knowledge about creating charts and protecting the workbook from others. ➢ Perform the statistical, mathematical and finance functions of Advanced Excel.
UNIT I	Introduction to Advanced Excel - Formatting Cells and Proofing Tools
UNIT II	Paste and Paste Special Techniques in Excel - Customizing and Protecting Excel
UNIT III	Creating Charts and Templates - Text, Date and Time Functions
UNIT IV	Statistical Functions - Mathematical and Finance Functions
UNIT V	What if Analysis and logical functions in Excel - Sorting, Filtering and Printing Workbooks

Outcomes

Students will above to

CO1 – Details of advance excel

CO2 – Formatting cells and tools

CO3 – Creating charts and templates

CO4 – Analysis the mathematics and financial function

CO5 – Know about the logical function of excel

Books for Study
1. Michael Alexander, Richard Kusleika, John Walkenback,   Microsoft Excel 2019 Bible,
2. Kindle Edition, 2019.
3. McFedries, Microsoft Excel 2019 Formulas and Functions (Business Skills), Kindle Edition,
4. 2019.

Books for Reference
1. Wayne L.Winston, Microsoft Excel 2013: Data Analysis and Business Modeling, Prentice
2. Hall of India Learning, 2011.
3. Conrad Carlberg, Statistical Analysis: Microsoft Excel 2013, Pearson Education, 2014.
Related Online Contents
1. https://www.youtube.com/watch?v=zGm7oOsxvyM
2. https://www.youtube.com/watch?v=GTbd4y1CtrU
3. https://www.youtube.com/embed/WU4LHrf8yvg

Mapping of Course Outcomes with POs and PSOs

CO	POs						PSOs		
CO1	2	1	3	3	2	2	3	2	2
CO2	3	2	2	2	1	3	2	3	3
CO3	2	3	1	1	3	3	1	1	3
CO4	1	2	3	2	3	2	3	3	3
CO5	3	1	2	3	2	3	2	2	1
(3) S-Strong, (2) M-Medium, (1) L-Low									

EMPLOYABILITY SKILLS

Second Year   **SEC III**   **Semester IV**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC4S2	**EMPLOYABILITY SKILLS**		2	-	-	-	2	2	25	75	100
Course Objectives	➤ To Learn about the employability skills ➤ To understand dimensions of task oriented skills ➤ To study on critical problem-solving techniques ➤ To develop employability skills ➤ To understand the logical and reasoning skills										
UNIT I	**Introduction to employability skills:** Meaning-definition-Hard skills and soft skills-Employability skills and vocational skills-Employability and employment-Employability attributes.										
UNIT II	**Unpacking Employability Skills:** Embedded employability skills-Dimensions of competency-Task skills-Task Management skills-Contingency Management skills-Job/Role Environment skills.										
UNIT III	**Inter – Relationships of employability skills:** Communication-Team work-Problem solving-Initiative and Enterprise-Planning and Organizing-Self management-Learning-Technology.										
UNIT IV	**Resume writing:** Meaning-Features of good resume-Model (Exercise). Etiquettes-Dress, Cleanliness, Etiquettes to be followed inside the employment seeking process.										
UNIT V	Arithmetic and Logical Reasoning Skills-Exercise.										

Course Outcomes

Students will able to	
CO1	Acquire employability skills
CO2	Understand dimensions of task oriented skills
CO3	Study on critical problem-solving techniques
CO4	Develop employability skills
CO5	Understand the logical and reasoning skills
Reading List	

1. https://www.jobjumpstart.gov.au/article/what-are-employability-skills
2. https://www.simplilearn.com/why-are-emloyability-skills-important-article
3. https://blog.hubspot.com/marketing/employability-skills
4. https://www.indeed.com/career.advice/finding-a-job/employability-skills

References Books

1. Soft Skills, Dr.K.Alex
2. Winning Interview Skills, Complied & Edited by J.K. Chopra.
3 A Modern Approach to Verbal and Non-Verbal Reasoning. R.S. Aggarwal.
4. Fafinski, S., Finch, Employability Skills for Law Students. United Kingdom: OUP Oxford.
5. Trought, F. (2017). Brilliant Employability Skills: How to Stand Out from the Crowed in the Graduate Job Market. United Kingdom: Pearson Education Limited.
6. Chaita, M.V. (2016). Developing Graduate Employability Skills: Your Pathway to Employment United States: Universal Publishers.

Mapping of Course Outcomes with POs and PSOs

CO	POs						PSOs		
CO1	3	2	3	3	1	3	1	1	3
CO2	2	3	2	2	3	2	2	2	2
CO3	2	2	1	1	2	1	3	3	1
CO4	3	1	3	2	3	3	2	2	3
CO5	3	3	3	2	2	3	1	2	2
(3) S-Strong, (2) M-Medium, (1) L-Low									