

**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 of employable, 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	PSO 1	PSO 2	PSO 3
CO 1									
CO 2									
CO 3									
CO 4									
CO 5									
Strong - 3			Medium – 2			Low – 1			

METHODS OF EVALUATION		
<b>Internal Evaluation</b>	Continuous Internal Assessment Test	<b>25 Marks</b>
	Assignments / Snap Test / Quiz	
	Seminars	
	Attendance and Class Participation	
<b>External Evaluation</b>	End Semester Examination	<b>75 Marks</b>
<b>Total</b>		<b>100 Marks</b>
METHODS OF ASSESSMENT		
<b>Remembering (K1)</b>	<ul style="list-style-type: none"> <li>The lowest level of questions require students to recall information from the course content</li> <li>Knowledge questions usually require students to identify information in the textbook.</li> </ul>	
<b>Understanding (K2)</b>	<ul style="list-style-type: none"> <li>Understanding of facts and ideas by comprehending, organizing, comparing, translating, interpolating and interpreting in their own words.</li> <li>The questions go beyond simple recall and require students to combine data together</li> </ul>	
<b>Application (K3)</b>	<ul style="list-style-type: none"> <li>Students have to solve problems by using/applying a concept learned in the classroom.</li> <li>Students must use their knowledge to determine an exact response.</li> </ul>	
<b>Analyze (K4)</b>	<ul style="list-style-type: none"> <li>Analyzing the question is one that asks the students to break down something into its component parts.</li> <li>Analyzing requires students to identify reasons, causes or motives and reach conclusions or generalizations.</li> </ul>	
<b>Evaluate (K5)</b>	<ul style="list-style-type: none"> <li>Evaluation requires an individual to make judgment on something.</li> <li>Questions to be asked to judge the value of an idea, a character, a work of art, or a solution to a problem.</li> <li>Students are engaged in decision-making and problem-solving.</li> <li>Evaluation questions do not have single right answers.</li> </ul>	
<b>Create (K6)</b>	<ul style="list-style-type: none"> <li>The questions of this category challenge students to get engaged in creative and original thinking.</li> <li>Developing original ideas and problem-solving skills</li> </ul>	

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

Sem	Course Code	Courses	List of Courses	T/P	Credit	Hours/ week	Max. Marks		
							Int.	Ext.	Total
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
			<b>TOTAL</b>	-	<b>20</b>	<b>30</b>	<b>125</b>	<b>375</b>	<b>500</b>
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
	Internship/industrial activity during the summer vacation after I year								
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/ 23MCC3IA		Internship/ Industrial Activity	PR	2	-	25	75	100
			<b>Total</b>		<b>25</b>	<b>30</b>	<b>200</b>	<b>600</b>	<b>800</b>
	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	PR	6	10	50	150	200
	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
	23MEA4		Extension Activity	P	1	-	25	75	100
			<b>Total</b>		<b>22</b>	<b>30</b>	<b>200</b>	<b>600</b>	<b>800</b>
					<b>91+EC</b>		<b>750</b>	<b>2250</b>	<b>3000</b>

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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

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

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC1C1	<b>BUSINESS FINANCE</b>	CORE	7	-	-	-	5	7	25	75	100
<b>Learning Objectives</b>											
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										
<b>Course Units</b>											
<b>UNIT I</b>	<b>Introduction to Business Finance and Time vale of money:</b> 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.										
<b>UNIT II</b>	<b>Risk Management:</b> 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.										
<b>UNIT III</b>	<b>Startup Financing and Leasing:</b> 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.										
<b>UNIT IV</b>	<b>Cash, Receivable and Inventory Management:</b> 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.										
<b>UNIT V</b>	<b>Multi National Capital Budgeting</b> 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.										
<b>Course Outcomes:</b> Students will be able to											
<b>CO 1</b>	Explain important finance concepts										
<b>CO 2</b>	Estimate risk and determine its impact on return										
<b>CO 3</b>	Explore leasing and other sources of finance for startups										
<b>CO 4</b>	Summarise cash receivable and inventory management techniques										
<b>CO 5</b>	Evaluate techniques of long term investment decision incorporating risk factor										

**Books for study:**

1. Maheshwari S.N., (2019), “Financial Management Principles and Practices”, 15<sup>th</sup> Edition, Sultan Chand & Sons, New Delhi.
2. Khan M.Y. & Jain P.K., (2011), “Financial Management: Text, Problems and Cases”, 8<sup>th</sup> Edition, McGraw Hill Education, New Delhi.
3. Prasanna Chandra, (2019), “Financial Management, Theory and Practice”, 10<sup>th</sup> 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”, 12<sup>th</sup> Edition, Pearson India Education Services Pvt. Ltd, Noida.
2. Kulkarni P. V. & Satyaprasad B. G., (2015), “Financial Management”, 14<sup>th</sup> Edition, Himalaya Publishing House Pvt Ltd, Mumbai.
3. Rustagi R. P., (2022), “Financial Management, Theory, Concept, Problems”, 6<sup>th</sup> Edition, Taxmann Publications Pvt. Ltd, New Delhi.
4. Arokiamary Geetha Rufus, Ramani N. & Others, (2017), “Financial Management”, 1<sup>st</sup> 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>

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
23MCC1C2	DIGITAL MARKETING		7	-	-	-	5	7	25	75	100
<b>Learning Objectives</b>											
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										
<b>Course Units</b>											
UNIT I	<b>Introduction to Digital Marketing</b>										
	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	<b>Online marketing mix</b>										
	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	<b>Digital media channels</b>										
	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	<b>Online consumer behavior</b>										
	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	<b>Analytics and Gamification</b>										
	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.										
<b>Course Outcomes:</b> 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”, 2<sup>nd</sup> 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” 3<sup>rd</sup> 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. Vandana Ahuja, (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. Maity Moutusy, (2022) “Digital Marketing” 2<sup>nd</sup> 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
<b>CO1</b>	3	3	2	3	3	3	3	3	3
<b>CO2</b>	3	3	2	3	3	3	3	3	3
<b>CO3</b>	3	3	2	2	3	2	3	3	2
<b>CO4</b>	3	3	2	2	3	3	3	3	3
<b>CO5</b>	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	External	Total
23MCC1C3	<b>BANKING AND INSURANCE</b>		6	-	-	-	4	6	25	75	100
<b>Learning Objectives</b>											
1	To understand the evolution of new era banking										
2	To explore the digital banking techniques										
3	To analyse the role of insurance sector										
4	To evaluate the mechanism of customer service in insurance and the relevant regulations										
5	To analyse risk and its impact in banking and insurance industry										
<b>Course Units</b>											
<b>UNIT I</b>	<b>Introduction to Banking:</b> 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.										
<b>UNIT II</b>	<b>Contemporary Developments in Banking:</b> 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 reimaged with AI. Cloud banking - Meaning - Benefits in switching to Cloud Banking.										
<b>UNIT III</b>	<b>Indian Insurance Market:</b> 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.										
<b>UNIT IV</b>	<b>Customer Services in Insurance:</b> 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.										
<b>UNIT V</b>	<b>Risk Management:</b> Risk Management and Control in banking and insurance industries – Methods of Risk Management – Risk Management by Individuals and Corporations – Tools for Controlling Risk										
<b>Course Outcomes:</b> Students will be able to											
<b>CO 1</b>	Relate the transformation in banking from traditional to new age										
<b>CO 2</b>	Apply modern techniques of digital banking										
<b>CO 3</b>	Evaluate the role of insurance sector										
<b>CO 4</b>	Examine the regulatory mechanism										
<b>CO 5</b>	Assess risk mitigation strategies										

**Books for study:**

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

[Theo Lynn](#) , [John G. Mooney](#), [Pierangelo Rosati](#), [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. Sundharam KPM & Varshney P. N., (2020), “Banking Theory, Law and Practice”, 20<sup>th</sup> Edition, Sultan Chand & Sons, New Delhi.
2. Gordon & Natarajan, (2022), “Banking Theory, Law and Practice”, 9<sup>th</sup> Edition, Himalaya Publishing House Pvt Ltd, Mumbai.
3. Gupta P. K. (2021), “Insurance and Risk Management” 6<sup>th</sup> 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%20PDF.pdf](https://mrcet.com/downloads/digital_notes/CSE/IV%20Year/CSE%20B.TECH%20IV%20YEAR%20II%20SEM%20BCT%20(R18A0534)%20NOTES%20Final%20PDF.pdf)
3. [https://www.irdai.gov.in/ADMINCMS/cms/frmGeneral\\_Layout.aspx?page=PageNo108&flag=1](https://www.irdai.gov.in/ADMINCMS/cms/frmGeneral_Layout.aspx?page=PageNo108&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
<b>CO1</b>	2	2	1	3	3	3	3	3	3
<b>CO2</b>	3	3	3	3	3	3	3	3	3
<b>CO3</b>	2	2	1	2	2	2	2	3	2
<b>CO4</b>	3	2	2	1	2	2	2	3	2
<b>CO5</b>	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	<b>Introduction:</b> 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	<b>Artificial Intelligence:</b> 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	<b>Big Data:</b> 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	<b>Applications of IoT:</b> 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	<b>Industry 4.0:</b> 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.										
<b>Course Outcomes:</b> 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. Seema Acharya J, Subhashini Chellappan, (2019) “Big Data and Analytics”, 2<sup>nd</sup> Edition, Wiley Publication, New Delhi.
2. Russel S, Norvig P (2010), “Artificial Intelligence: A Modern approach”, 3<sup>rd</sup> Edition, 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](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://library.oapen.org/bitstream/handle/20.500.12657/43836/external_content.pdf?sequence=1)  
[https://www.vssut.ac.in/lecture\\_notes/lecture1428643004.pdf](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	<b>BIG DATA ANALYTICS</b>	DSE-1	5	-	-	-	3	5	25	75	100
<b>Learning Objectives</b>											
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										
<b>Course Units</b>											
<b>UNIT I</b>	<b>Introduction to Data Science:</b> 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.										
<b>UNIT II</b>	<b>Big Data:</b> 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.										
<b>UNIT III</b>	<b>Characteristics of Big Data :</b> 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.										
<b>UNIT IV</b>	<b>Data Science: Getting value out of Big Data:</b> 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.										
<b>UNIT V</b>	<b>Big Data Systems and Hadoop:</b> 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.										
<b>Course Outcomes:</b> Students will be able to											
<b>CO 1</b>	Describe the Big Data landscape including examples of realworld big data problems										
<b>CO 2</b>	Explain the advantages of Big Data.										
<b>CO 3</b>	Explain the Vs of Big Data and its impacts of data collection, monitoring, storage, analysis and reporting										
<b>CO 4</b>	Identify what are and what are not big data problems and be able to recast big data problems as data science questions										
<b>CO 5</b>	Explain Hadoop technology										





Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC1E3	<b>ENTERPRISE RESOURCE PLANNING</b>	DSE-2	5	-	-	-	3	5	25	75	100
<b>Learning Objectives</b>											
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										
<b>Course Units</b>											
<b>UNIT I</b>	<b>Enterprise an Overview:</b> 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.										
<b>UNIT II</b>	<b>Risk of ERP:</b> 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.										
<b>UNIT III</b>	<b>ERP and Related Technologies:</b> 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.										
<b>UNIT IV</b>	<b>ERP Market Place and Market Place Dynamics:</b> 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.										
<b>UNIT V</b>	<b>ERP Implementation:</b> 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.										
<b>Course Outcomes:</b> Students will be able to											
<b>CO 1</b>	Recall the history and growth of ERP										
<b>CO 2</b>	Appraise the risks involved while using ERP										
<b>CO 3</b>	Select from among various ERP technologies										
<b>CO 4</b>	Analyse the dynamics of ERP marketplace										
<b>CO 5</b>	Distinguish and choose appropriate ERP solutions or packages										

<b>Books for study:</b>									
1. Alexis Leon (2008), “Enterprise Resource Planning”, 2 <sup>nd</sup> 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.									
<b>Books for reference:</b>									
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.									
<b>Web references:</b>									
1. <a href="https://mrcet.com/downloads/digital_notes/CSE/III%20Year/ERP%20Digital%20notes.pdf">https://mrcet.com/downloads/digital_notes/CSE/III%20Year/ERP%20Digital%20notes.pdf</a>									
2. <a href="https://mrcet.com/downloads/digital_notes/ME/III%20year/ERP%20Complete%20Digital%20notes.pdf">https://mrcet.com/downloads/digital_notes/ME/III%20year/ERP%20Complete%20Digital%20notes.pdf</a>									
3. <a href="https://www.vssut.ac.in/lecture_notes/lecture1428643004.pdf">https://www.vssut.ac.in/lecture_notes/lecture1428643004.pdf</a>									

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
<b>CO1</b>	2	1	2	2	3	3	3	3	3
<b>CO2</b>	3	3	2	3	3	3	3	3	3
<b>CO3</b>	3	3	2	3	3	3	3	3	3
<b>CO4</b>	3	3	2	3	3	3	3	3	3
<b>CO5</b>	3	3	2	3	3	3	3	3	3
<b>Strong - 3</b>			<b>Medium – 2</b>			<b>Low - 1</b>			

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	<b>DATABASE MANAGEMENT SYSTEM</b>	DSE-2	5	-	-	-	3	5	25	75	100
<b>Learning Objectives</b>											
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										
<b>Course Units</b>											
<b>UNIT I</b>	<b>Introduction to Database Systems and Linux:</b> 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.										
<b>UNIT II</b>	<b>SQL Definition and Normalization:</b> 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.										
<b>UNIT III</b>	<b>Files and RDBMs:</b> 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.										
<b>UNIT IV</b>	<b>Data Definition and Manipulation Language:</b> 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										
<b>UNIT V</b>	<b>Constraints and MYSQL:</b> 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.										
<b>Course Outcomes:</b> Students will be able to											
<b>CO 1</b>	Identify models and schemas in DBMS and LINUX										
<b>CO 2</b>	Demonstrate Queries in SQL										
<b>CO 3</b>	Discuss handling files and databases										
<b>CO 4</b>	Apply skills on functions and operators in RDBMS										
<b>CO 5</b>	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](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
<b>CO1</b>	2	3	3	3	2	2	2	3	2
<b>CO2</b>	3	3	2	3	3	3	2	2	3
<b>CO3</b>	1	2	2	2	1	2	1	2	2
<b>CO4</b>	3	3	3	3	3	3	3	3	3
<b>CO5</b>	3	3	3	3	1	2	1	3	2

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

## STRATEGIC COST MANAGEMENT

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”, 5<sup>th</sup> Edition, Taxmann Publications Pvt. Ltd, New Delhi.
2. Bandgar P. K., (2017), “Strategic Cost Management”, 1<sup>st</sup> Edition, Himalaya Publishing House Pvt Ltd, Mumbai.
3. Sexena V. K., (2020), “Strategic Cost Management and Performance Evaluation”, 1<sup>st</sup> 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. Jawahar Lal, (2015), “Strategic Cost Management”, 1<sup>st</sup> Edition, Himalaya Publishing House Pvt Ltd, Mumbai.)
3. Arora M. N., (2021), “A Text Book of Cost and Management Accounting”, 11<sup>th</sup> 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

# CORPORATE ACCOUNTING

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC2C2	<b>CORPORATE ACCOUNTING</b>	Core	6	-	-	-	4	6	25	75	100
<b>Learning Objectives</b>		<ul style="list-style-type: none"> <li>➤ To understand the accounting treatment for issue of shares</li> <li>➤ To determine profits for fire and marine insurance</li> <li>➤ To prepare consolidated financial statements</li> <li>➤ To account for price level changes</li> <li>➤ To adopt financial reporting standards</li> </ul>									
<b>Course Units</b>											
<b>UNIT 1</b>	<b>Issue of Shares and Final Accounts of Companies</b> 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.										
<b>UNIT II</b>	<b>Insurance Company Accounts</b> 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.										
<b>Unit III</b>	<b>Consolidated financial statements</b> 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.										
<b>UNIT IV</b>	<b>Contemporary Accounting Methods</b> Accounting for price level changes – Social responsibility accounting – Human resource accounting - Forensic Accounting.										
<b>UNIT V</b>	<b>Financial reporting</b> 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.										
<b>Question pattern: Theory: 20%; Problems: 80%</b>											
<b>Course Outcomes</b>											
Students will be able to											
CO1	Prepare Financial Statements of companies as per schedule III of Companies Act, 2013										
CO2	Apply the provisions of IRDA Regulations, 2002 in the preparation of final accounts of Life Insurance and General Insurance Companies.										
CO3	Prepare Consolidated Financial Statements of Holding Companies in accordance with AS 21.										
CO4	Assess contemporary accounting methods										
CO5	Examine Financial Reporting based on appropriate Accounting Standards and provisions of Companies Act 2013 with respect to Corporate Social Responsibility										

**Books for study:**

1. Gupta R. L. &Radhaswamy M. (2021), “Corporate Accounting – Volume I & II”, 14<sup>th</sup> Edition, Sultan Chand & Sons, New Delhi.
2. Maheshwari S. N., Sharad K. Maheshwari & Suneel K. Maheshwari, (2022), “Advanced Accountancy - Volume I & II”, 11<sup>th</sup> Edition, Vikas Publishing House Pvt. Ltd., New Delhi.
3. Jain S. P., Narang K. L., Simmi Agrawal and Monika Sehgal (2019), “Advanced Accountancy - Corporate Accounting – Volume - II”, 22<sup>nd</sup> Edition, Kalyani Publishers, New Delhi.
4. Reddy T. S. & Murthy A., (2022), “Corporate Accounting – Volume I & II”, 17<sup>th</sup> Edition, Margham Publications, Chennai.

**Books for reference:**

1. Arulanandam M. A. & Raman K. S., (2021), “Advanced Accounting (Corporate Accounting – II)”, 8<sup>th</sup> Edition, Himalaya Publishing House Pvt Ltd, Mumbai.
2. Shukla M C, Grewal T S and Gupta S C, (2022), “Advanced Accounts Volume II”, 19<sup>th</sup> Edition, Sultan Chand & Sons, New Delhi.
3. Gupta R. L., (2022), “Problems and Solutions in Company Accounts”, 2<sup>nd</sup> Edition, 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	<b>SETTING UP OF BUSINESS ENTITIES</b>		6	-	-	-	4	6	25	75	100
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ To understand the startup landscape and its financing</li> <li>➤ To analyse the formation and registration of Section 8 company</li> <li>➤ To outline the concept of LLP and business collaboration</li> <li>➤ To understand the procedure for obtaining registration and license</li> <li>➤ To create awareness about the legal compliances governing business entities</li> </ul>										
<b>Course Units</b>											
<b>UNIT I</b>	<b>Startups in India</b> 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.										
<b>UNIT II</b>	<b>Not-for-Profit Organisations</b> 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.										
<b>UNIT III</b>	<b>Limited Liability Partnership and Joint Venture</b> 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.										
<b>UNIT IV</b>	<b>Registration and Licenses</b> 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.										
<b>UNIT V</b>	<b>Environmental Legislations in India</b> 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
<b>Books for study:</b>	
<ol style="list-style-type: none"><li>1. Kailash Thakur, (2007) “Environment Protection Law and Policy in India”, 2<sup>nd</sup> Edition, Deep &amp; Deep Publication Pvt. Ltd., New Delhi.</li><li>2. Avtar Singh, (2015), “Intellectual Property Law”, Eastern Book Company, Bangalore</li><li>3. Zad N.S and DivyaBajpai, (2022) “Setting up of Business Entities and Closure” (SUBEC), Taxmann, Chennai</li><li>4. AmitVohra&amp;RachitDhingra (2022) “Setting Up Of Business Entities &amp; Closure”, 6<sup>th</sup> Edition, Bharath Law House, New Delhi</li></ol>	
<b>Books for reference:</b>	
<ol style="list-style-type: none"><li>1. Setting up of Business Entities and Closure (2021), Module 1, Paper 3, The Institute of Company Secretaries of India, MP Printers, Noida</li><li>2. The Air (Prevention and Control of Pollution) Act, 1981, Bare Act, 2022 Edition, Universal/LexisNexis, Noida</li><li>3. The Water (Prevention and Control of Pollution) Act, 1974, Bare Act, 2022 Edition, Universal/LexisNexis, Noida</li><li>4. Cliff Ennico, (2005) “Small Business Survival Guide Starting Protecting and Securing your Business for Long-Term Success”, Adams Media, USA</li><li>5. Daniel Sitarz, (2011) “Sole Proprietorship: Small Business Start-up Kit”, 3<sup>rd</sup> Edition, Nova Publishing, USA</li></ol>	
<b>Web references:</b>	
<ol style="list-style-type: none"><li>1. <a href="https://www.icsi.edu/media/webmodules/FINAL_FULL_BOOK_of_EP_SBEC_2018.pdf">https://www.icsi.edu/media/webmodules/FINAL_FULL_BOOK_of_EP_SBEC_2018.pdf</a></li><li>2. <a href="https://www.mca.gov.in/MinistryV2/incorporation_company.html">https://www.mca.gov.in/MinistryV2/incorporation_company.html</a> 3)</li><li>3. <a href="https://legislative.gov.in/sites/default/files/The%20Limited%20Liability%20Partnership%20Act,%202008.pdf">https://legislative.gov.in/sites/default/files/The%20Limited%20Liability%20Partnership%20Act,%202008.pdf</a></li><li>4. <a href="https://legislative.gov.in/sites/default/files/A1999-48.pdf">https://legislative.gov.in/sites/default/files/A1999-48.pdf</a></li><li>5. <a href="https://www.indiacode.nic.in/bitstream/123456789/6196/1/the_environment_protection_act%2C1986.pdf">https://www.indiacode.nic.in/bitstream/123456789/6196/1/the_environment_protection_act%2C1986.pdf</a></li></ol>	

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			

# DATA MINING AND DATA WAREHOUSING

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC2E1	<b>DATA MINING AND DATA WAREHOUSING</b>	DSE-3	4	-	-	-	3	4	25	75	100
<b>LEARNING OBJECTIVES</b>											
	<ul style="list-style-type: none"> <li>➤ To understand the basic concepts, principles and need of data warehousing</li> <li>➤ To gain knowledge on the data warehouse architecture, modelling and its implementation.</li> <li>➤ To understand steps in implementing data mart and its various dimensions</li> <li>➤ To learn the features, types and challenges of data mining</li> <li>➤ To aid the students to understand the various data mining tools and techniques</li> </ul>										
<b>Course Units</b>											
<b>UNIT I</b>	<b>Data Warehouse</b> 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.										
<b>UNIT II</b>	<b>Data Warehouse Architecture</b> 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.										
<b>UNIT III</b>	<b>Data Mart</b> 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.										
<b>UNIT IV</b>	<b>Data Mining</b> 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.										
<b>UNIT V</b>	<b>Data Mining Tools &amp; Techniques</b> 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.										

<b>Course Outcomes</b> Students will be able to:	
<b>CO 1</b>	Explain the basic concepts, principles and need of data warehousing
<b>CO 2</b>	Appraise data warehouse architecture, modelling and its implementation.
<b>CO 3</b>	Choose various steps in implementing data mart and its dimensions
<b>CO 4</b>	Recall the features and types of data mining
<b>CO 5</b>	Apply various data mining tools and techniques
<b>Books for study:</b> <ol style="list-style-type: none"> <li>1. Jiawei Han, MichelineKamber (2011), Data Mining, Concepts and Techniques, Morgan Kauffman Publishers, California.</li> <li>2. Pang Ning Tan, Michael Steinbach, Vipin Kumar (2005), Introduction to Data Mining, Addison Wesley, USA.</li> <li>3. K. P. Soman, ShyamDiwakar, V. Ajay (2006), Insight into Data Mining: Theory &amp; Practice, Prentice Hall of India, New Delhi.</li> </ol>	
<b>Books for reference:</b> <ol style="list-style-type: none"> <li>1. BPB Editorial Board (2004), “Data Mining”, BPB publications, Noida.</li> <li>2. Ian H. Witten &amp;Eibe Frank (2011), “Data Mining, Practical Machine Learning Tools and Techniques”, Morgan Kaufmann series.</li> <li>3. Ramesh Sharda, DursunDelen, Efraim Turban (2018), “Business Intelligence”, Pearson Education Services Pvt Ltd, Noida.</li> </ol>	
<b>Web references:</b> <ol style="list-style-type: none"> <li>1. <a href="https://mrcet.com/downloads/digital_notes/ME/III%20year/ERP%20Complete%20Digital%20notes.pdf">https://mrcet.com/downloads/digital_notes/ME/III%20 year/ERP%20 Complete%20Digital%20notes.pdf</a></li> <li>2. <a href="https://mrcet.com/pdf/Lab%20Manuals/IT/DATA%20WAREHOUSING%20AND%020DATA%20MINING%20(R18A0524).pdf00">https://mrcet.com/pdf/Lab%20Manuals/IT/DATA%20WAREHOUSING%20AND%020DATA%20MINING%20(R18A0524).pdf00</a></li> </ol>	

### Mapping of course outcomes with POs and PSOs

	<b>POs</b>						<b>PSOs</b>		
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>CO1</b>	1	1	1	1	2	3	2	2	3
<b>CO2</b>	2	3	2	2	2	3	2	2	3
<b>CO3</b>	3	3	3	3	3	3	3	3	3
<b>CO4</b>	3	3	3	3	3	3	3	3	3
<b>CO5</b>	3	3	3	3	3	3	3	3	3
	<b>Strong - 3</b>			<b>Medium – 2</b>			<b>Low – 1</b>		

## TECHNOLOGY IN BANKING

[illegible]

<b>Course Outcomes</b> <b>Students will be able to</b>	
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”, 1<sup>st</sup> 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”, 3<sup>rd</sup> 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”, 1<sup>st</sup> 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”, 3<sup>rd</sup> 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](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/kbadqkdlcswfjdelrquehwuxcfmijmuixngudufgubuubgubfugbububjxcgfvsbdihbfgGhdFgFHytyhRtMjk4NzY=#:~:text=%5B9th%20June%2C%202000%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**

	<b>POs</b>						<b>PSOs</b>		
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>1</b>	<b>2</b>	<b>3</b>
<b>CO1</b>	2	3	2	3	3	2	3	2	2
<b>CO2</b>	2	3	2	3	3	3	3	3	3
<b>CO3</b>	1	2	3	3	3	3	3	3	3
<b>CO4</b>	2	2	2	3	3	3	3	3	3
<b>CO5</b>	1	2	3	2	2	3	2	3	3
<b>Strong - 3</b>			<b>Medium – 2</b>			<b>Low - 1</b>			

## FINANCIAL ANALYTICS

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>23MCC2E3</b>	<b>FINANCIAL ANALYTICS</b>	DSE-4	4	-	-	-	3	4	25	75	100
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ To understand the statistical concepts relating to Probability, decision making under uncertainty and analysis of exploratory data</li> <li>➤ To learn the use of regression, time series analysis and building of models using accounting data</li> <li>➤ To gain knowledge on R and python programming</li> <li>➤ To prepare, analyse and forecast financial statements using cash flow statements</li> <li>➤ To gain knowledge on concept, application, and issues in capital budgeting</li> </ul>										
<b>Course Units</b>											
<b>UNIT I</b>	<b>Statistical Concepts</b> Probability, Normal, Lognormal distribution properties, Decision making under uncertainty - Cleaning and pre-processing financial data, Exploratory Data Analysis in Finance.										
<b>UNIT II</b>	<b>Simple Linear Models</b> Use of Regression in Finance, Building Models using Accounting Data, Understanding stock price behaviour, time series analysis in finance.										
<b>UNIT III</b>	<b>Using R for Analysis of Data</b> Quick introduction to R and Python, understanding data in finance, sources of data, Using R for analysis of data.										
<b>UNIT IV</b>	<b>Cash Flow Concepts</b> Cash flow statement – Prepare and Analyse, Modelling and forecasting of financial statements.										
<b>UNIT V</b>	<b>Capital Budgeting</b> NPV, IRR – Concept, application, and issues, Use of real options for better financial outcomes.										
<b>Course Outcomes</b>											
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										
<b>Books for study:</b>											
1. Gary Koop, “Analysis of Economic Data”, 4 <sup>th</sup> Edition, Wiley, USA.											
2. David Ruppert, David S. Matteson, “Statistics and Data Analysis for Financial Engineering: with R examples”, Springer, USA.											
<b>Books for reference:</b>											
1. Ang Clifford, “Analyzing Financial Data and Implementing Financial Models Using ‘R’”, Springer, USA.											
2. Wayne L. Winston, “Microsoft Excel 2013: Data Analysis and Business Modeling”, Microsoft Publishing, USA											
<b>Web references:</b>											
1. <a href="https://personal.ntu.edu.sg/nprivault/MH8331/financial_risk_analytics.pdf">https://personal.ntu.edu.sg/nprivault/MH8331/financial_risk_analytics.pdf</a>											
2. <a href="https://dynamics.microsoft.com/en-us/finance/what-is-financial-analytics/">https://dynamics.microsoft.com/en-us/finance/what-is-financial-analytics/</a>											

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			



# MANAGEMENT INFORMATION SYSTEM

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC2E4	<b>MANAGEMENT INFORMATION SYSTEM</b>	DSE-4	4	-	-	-	3	4	25	75	100
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ To understand the basic concept of Information system</li> <li>➤ To identify the importance of MIS</li> <li>➤ To understand the Functional Management Information System</li> <li>➤ To learn the role of system analyst</li> <li>➤ To apply the concept of Enterprise Resource Planning</li> </ul>										
<b>UNIT I</b>	<b>Information System</b> 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.										
<b>UNIT II</b>	<b>Types of Management Information Systems</b> Transaction Processing Information System - Information system for managers - Intelligence information system – Decision support system - Executive information systems.										
<b>UNIT III</b>	<b>Functional Management Information Systems</b> Functional Management Information System: Production Information system - Marketing Information Systems - Accounting Information System - Financial Information System - Human Resource Information System.										
<b>UNIT IV</b>	<b>System design and Database</b> 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.										
<b>UNIT V</b>	<b>Enterprise Resource Planning</b> 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										
<b>Course Outcomes</b>											
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
<b>CO1</b>	1	1	2	2	1	2	1	2	2
<b>CO2</b>	2	2	2	2	1	2	1	2	2
<b>CO3</b>	3	3	3	3	1	2	1	2	3
<b>CO4</b>	3	3	3	3	2	3	2	3	3
<b>CO5</b>	3	3	3	3	2	3	2	3	3
	<b>Strong - 3</b>			<b>Medium – 2</b>		<b>Low - 1</b>			

## First Year AEC I Semester II

### Mapping of Course Outcomes with POs and PSOs

CO	PO <sub>s</sub>						PSO <sub>s</sub>		
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									

## First Year SEC I Semester II

**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 ACTIVITIES**

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

## TAXATION

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](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](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](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**  
**Core – VIII**  
**RESEARCH METHODOLOGY**

[illegible]

CO 3	Select appropriate method for data collection
CO 4	Make inferences based on statistical tests
CO 5	Draft a research report avoiding plagiarism
<b>Books for study:</b> <ol style="list-style-type: none"> <li>1. Tripathi, (2014) “Research Methodology in Management and Social Sciences”. Sultan Chand &amp; Sons, New Delhi.</li> <li>2. Kothari C.R and GauravGarg, (2020) “Research Methodology” – Methods and Techniques. New Age International (P) Limited, New Delhi.</li> <li>3. Krishnaswami and Ranganathan, (2011) “Methodology of Research in Social Sciences”, Himalaya Publishing House, Mumbai.</li> </ol>	
<b>Books for reference:</b> <ol style="list-style-type: none"> <li>1. Donald R. Cooper, Pamela S. Schindler and J.K.Sharma, “Business Research Methodology”, 12<sup>th</sup> Edition, Tata Mcgraw Hill, Noida (UP).</li> <li>2. SashiK.Guptha and ParneetRangi,(2018) “Research Methodology” , Kalyani Publisher, Ludhiana.</li> <li>3. Sharma R D and HardeepChahal, (2004) “Research Methodology In Commerce and Management”, Anmol Publications, New Delhi</li> </ol>	
<b>Web references:</b> <ol style="list-style-type: none"> <li>1. <a href="https://www.cartercenter.org/resources/pdfs/health/ephti/library/lecture_notes/health_science_students/ln_research_method_final.pdf">https://www.cartercenter.org/resources/pdfs/health/ephti/library/lecture_notes/health_science_students/ln_research_method_final.pdf</a></li> <li>2. <a href="https://ccsuniversity.ac.in/bridge-library/pdf/MPhil%20Stats%20Research%20Methodology-Part1.pdf">https://ccsuniversity.ac.in/bridge-library/pdf/MPhil%20Stats%20Research%20Methodology-Part1.pdf</a></li> <li>3. <a href="https://prog.lmu.edu.ng/colleges_CMS/document/books/EIE%20510%20LECTURE%20NOTES%20first.pdf">https://prog.lmu.edu.ng/colleges_CMS/document/books/EIE%20510%20LECTURE%20NOTES%20first.pdf</a></li> <li>4. <a href="https://www.statisticssolutions.com/academic-research-consulting/data-analysis-plan/">https://www.statisticssolutions.com/academic-research-consulting/data-analysis-plan/</a></li> </ol>	

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**  
**Core–IX**  
**COMPUTERS IN BUSINESS**

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>23MCC3P1</b>	<b>COMPUTERS IN BUSINESS</b>	<b>Core</b>	1	-	4	-	4	5	25	75	100
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ To understand the fundamentals of SPSS</li> <li>➤ To compare the values obtained in t-test and ANOVA</li> <li>➤ To perform regression and non-parametric tests</li> <li>➤ To create company, groups and ledgers and obtain financial statements using Tally Prime</li> <li>➤ To understand inventory management and account for goods and services tax</li> </ul>										
<b>Course Units</b>											
<b>UNIT I</b>	<b>Introduction to SPSS</b> 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.										
<b>UNIT II</b>	<b>Parametric Tests in SPSS</b> 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.										
<b>UNIT III</b>	<b>Non-parametric Tests in SPSS</b> 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										
<b>UNIT IV</b>	<b>Introduction to Tally Prime</b> 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.										
<b>UNIT V</b>	<b>Inventory and GST in Tally Prime</b> 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.										
<b>Question Pattern: 100% Practical</b>											
<b>Course Outcomes</b>											
Students will be able to:											
<b>CO 1</b>	Create data file in SPSS										
<b>CO 2</b>	Examine Means of samples										
<b>CO 3</b>	Conduct non-parametric tests										
<b>CO 4</b>	Create a company, form groups and get automated financial statements										
<b>CO 5</b>	Automate inventory management and GST filing										

<b>Books for study:</b> <ol style="list-style-type: none"> <li>1. SundaraPandian.P, Muthulakshmi. S &amp;Vijayakumar, T (2022), Research Methodology &amp;Applications of SPSS in Social Science Research, Sultan Chand &amp; Sons, New Delhi</li> <li>2. Morgan George. A, Barrett C Karen, Leech L Nancy and Gloeckner Gene W (2019), IBM SPSS for Introductory Statistics, Routledge, 6<sup>th</sup> Edition, U.K</li> <li>3. Official Guide to Financial Accounting using TallyPrime (2021), BPB Publication, Delhi</li> <li>4. Chheda Rajesh, U (2020), Learn Tally Prime, Ane Books, 4<sup>th</sup> Edition, New Delhi</li> </ol>
<b>Books for reference:</b> <ol style="list-style-type: none"> <li>1. Kulas John, Renata Garcia Prieto Palacios Roji, Smith Adams (2021), IBM SPSS Essentials: Managing and Analysing Social Sciences Data, 2<sup>nd</sup> Edition, John Wiley &amp; Sons Inc., New York</li> <li>2. Rajathi. A, Chandran. P (2011), SPSS for You, MJP Publishers, Chennai</li> <li>3. SangwanRakesh (2022), Learn Tally Prime in English, Ascend Prime Publication, Pilani</li> <li>4. LodhaRoshan (2022), Tally Prime with GST Accounting, Law Point Publication, Kolkata</li> </ol>
<b>Web references:</b> <ol style="list-style-type: none"> <li>1. <a href="https://www.spss-tutorials.com/basics/">https://www.spss-tutorials.com/basics/</a></li> <li>2. <a href="https://www.tallyclub.in/">https://www.tallyclub.in/</a></li> <li>3. <a href="https://tallysolutions.com/business-guides/inventory-management-in-tally-erp9/">https://tallysolutions.com/business-guides/inventory-management-in-tally-erp9/</a></li> </ol>

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
<b>CO 1</b>	2	3	2	2	3	3	2	3	3
<b>CO 2</b>	3	3	2	2	3	3	2	3	3
<b>CO 3</b>	3	3	2	2	3	3	2	3	3
<b>CO 4</b>	3	3	2	3	3	3	3	3	3
<b>CO 5</b>	3	3	2	3	3	3	3	3	3

**Strong - 3**

**Medium – 2**

**Low - 1**

# INTERNATIONAL BUSINESS

Students will be able to:

CO 4	Explain the different types of economic integrations.
CO 5	Identify the operations of MNCs through real case assessment
<b>Books for study:</b> <ol style="list-style-type: none"> <li>1. Charles W.L. Hill, International Business: Competing in the Global Market Place, McGraw Hill, New York</li> <li>2. Charles W. L. Hill, Chow How Wee &amp; Krishna Udayasankar, International Business: An Asian Perspective- McGraw Hill, New York</li> <li>3. Rakesh Mohan Joshi (2009), International Business, Oxford University Press</li> </ol>	
<b>Books for reference:</b> <ol style="list-style-type: none"> <li>1. Donald Ball, Michael Geringer, Michael Minor &amp; Jeanne McNett, International Business: The Challenge of Global Competition, McGraw Hill Education, New York</li> <li>2. Alan M Rugman &amp; Simon Collinson, International Business: Pearson Education, Singapore</li> </ol>	
<b>Web references:</b> <ol style="list-style-type: none"> <li>1. <a href="https://www.icsi.edu/media/webmodules/publications/9.5%20International%20Business.pdf">https://www.icsi.edu/media/webmodules/publications/9.5%20International%20Business.pdf</a></li> <li>2. <a href="https://ebooks.lpude.in/commerce/mcom/term_3/DCOM501_INTERNATIONAL_BUSINESS.pdf">https://ebooks.lpude.in/commerce/mcom/term_3/DCOM501_INTERNATIONAL_BUSINESS.pdf</a></li> <li>3. <a href="https://www.shobhituniversity.ac.in/pdf/econtent/International-Business-Unit-1-Dr-Neha-Yajurvedi.pdf">https://www.shobhituniversity.ac.in/pdf/econtent/International-Business-Unit-1-Dr-Neha-Yajurvedi.pdf</a></li> </ol>	

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			

## APPLIED DATA ANALYTICS AND MACHINE LEARNING

[illegible]

**Books for reference:**

1. Wes McKinney, “Python for Data Analysis”, 2<sup>nd</sup> 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”, 3<sup>rd</sup> 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](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
<b>CO1</b>	1	2	1	3	3	1	3	2	1
<b>CO2</b>	1	2	1	3	3	1	3	2	1
<b>CO3</b>	1	2	1	3	3	1	3	2	1
<b>CO4</b>	1	2	1	3	3	1	3	2	1
<b>CO5</b>	1	2	1	3	3	1	3	2	1
	<b>Strong - 3</b>			<b>Medium – 2</b>		<b>Low - 1</b>			



# PYTHON AND R FOR DATA ANALYTICS

[illegible]

**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/](http://www.sthurlow.com/python/)
2. [www.learnpython.org](http://www.learnpython.org)
3. [www.codecademy.com/en/tracks/python](http://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
<b>CO1</b>	2	2	2	2	1	2	1	2	3
<b>CO2</b>	2	2	2	2	1	2	1	2	2
<b>CO3</b>	3	3	3	3	2	3	2	3	3
<b>CO4</b>	3	3	3	3	3	3	3	3	3
<b>CO5</b>	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	<b>EXPORT – IMPORT DOCUMENTATION</b>	AEC	2	-	-	-	2	2	25	75	100
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ Understand the Concepts and significance of export procedure, offer and receipts of export/import orders, shipment procedure, export documentation, letter of credit and types.</li> <li>➤ 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.</li> <li>➤ Through in General provisions regarding exports and imports, special focus initiatives for agriculture, handloom, handicrafts, leather goods and gems and jewellery authorization.</li> <li>➤ Competent Foreign Trade Schemes Export Promotion Capital Goods Schemes, Export Oriented Units, Special Economic Zone, Bio Tech Park.</li> <li>➤ Know about the Export oriented schemes.</li> </ul>										
<b>UNIT I</b>	<b>Export Procedure:</b> 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.										
<b>UNIT II</b>	<b>Shipment of Export cargo:</b> 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										
<b>UNIT III</b>	<b>Foreign Trade Policy and Provisions:</b> 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)										
<b>UNIT IV</b>	<b>Foreign Trade Schemes:</b> 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.										
<b>UNIT V</b>	<b>Role and Functions of Special Institutions:</b> 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.										
<b>Outcomes</b> <ol style="list-style-type: none"> <li>Understand the export procedure and shipment of export cargo.</li> <li>Comprehend the letter of credit and types, export credit insurance.</li> <li>Appreciate the foreign trade policy and provisions and foreign trade schemes.</li> <li>Make role and functions of special institutions.</li> </ol>											

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

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

IIFT, Background Papers on Export Procedures &amp; 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, *Foreign Trade Policy*, CCH India, 2010

CO	PO <sub>s</sub>						PSO <sub>s</sub>		
<b>CO1</b>	3	2	3	3	1	1	3	2	2
<b>CO2</b>	2	3	2	2	3	3	2	3	1
<b>CO3</b>	3	2	2	2	2	2	1	3	3
<b>CO4</b>	2	1	1	3	3	3	3	1	3
<b>CO5</b>	3	3	3	1	2	3	3	3	3
<b>(3) S-Strong, (2) M-Medium, (1) L-Low</b>									

## ENTREPRENEURSHIP DEVELOPMENT SKILLS

### Second Year SEC II Semester III

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
23MCC3S2	<b>ENTREPRENEURSHIP DEVELOPMENT SKILLS</b>	SEC	2	-	-	-	2	2	25	75	100
<b>Course Objectives</b>	<ul style="list-style-type: none"> <li>➤ To introduce students to entrepreneurship and growth in India.</li> <li>➤ To impart knowledge on innovation, its types, role of technology in innovation, patents and licensing.</li> <li>➤ To orient the students on new venture creation.</li> <li>➤ To enable students to prepare a feasible business plan</li> <li>➤ To give inputs on various types of financing available for new ventures.</li> </ul>										
<b>UNIT I</b>	<b>Introduction:</b> 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
<b>UNIT II</b>	<b>Innovation in Business:</b> Types of Innovation-Creating and Identifying Opportunities for Innovation-Design Thinking-The Technological Innovation Process-Creating New Technological Innovation.										5
<b>UNIT III</b>	<b>New Venture Creation:</b> 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
<b>UNIT IV</b>	<b>Business Plan Preparation:</b> 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
<b>UNIT V</b>	<b>Financing the New Venture:</b> 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	<a href="http://www.jimssouthdelhi.com/smBBA6/ED.pdf">http://www.jimssouthdelhi.com/smBBA6/ED.pdf</a>
2	<a href="https://www.cengage.com/highered">https://www.cengage.com/highered</a>
3	<a href="https://roadmapresearch.com/entrepreneurship-beyond-curriculum">https://roadmapresearch.com/entrepreneurship-beyond-curriculum</a>
4	The International Journal of Entrepreneurship and Innovation

1. Reddy, N., Entrepreneurship: Text and Cases, Cengage Learning, 2010.
2. Roy, R., Entrepreneurship, 2<sup>nd</sup> Edition, Oxford University Press, 2011.
3. Barringer, B., Entrepreneurship: Successfully Launching New Ventures, 3<sup>rd</sup> Edition, Pearson, 2011.
4. Bassant, J., and Tidd, J., Innovation and Entrepreneurship, 2<sup>nd</sup> 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, 6<sup>th</sup> Edition Bruce R. Barringer, Texas A & amp: M University. R. Duane [Ireland.@2018](#) Pearson.

CO	PO <sub>s</sub>						PSO <sub>s</sub>		
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
<b>23MCC3I/ 23MCC3IA</b>	<b>❖ INTERNSHIP / INDUSTRIAL ACTIVITIES</b>		-	-	-	-	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.

## CORPORATE AND ECONOMIC LAWS

[illegible]



<b>Course Outcomes</b> 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.
<b>Books for study:</b> <ol style="list-style-type: none"> <li>1. MunishBandari (2022), A Textbook on Corporate and Economic Laws, 33<sup>rd</sup> Edition, Bestword Publications, New Delhi</li> <li>2. AmitVohra and RachitDhingra (2022), Economic, Business and Commercial Laws, 18th Edition, Bharat Book House, Siliguri</li> <li>3. PankajGarg (2021), Taxmann's Corporate and Economic Laws, 7<sup>th</sup> Edition, Taxmann Publications, New Delhi</li> </ol>	
<b>Books for reference:</b> <ol style="list-style-type: none"> <li>1. Sekar G and SaravanaPrasath B (2022), Students' Handbook on Corporate and Economic Law, Commercial Law Publishers (India) Pvt.Ltd., New Delhi</li> <li>2. Taxmann (2021), FEMA &amp; FDI Ready Reckoner, 15<sup>th</sup> Edition, Taxmann Publications, New Delhi</li> <li>3. <a href="#">AhujaV.K.</a> and <a href="#">ArchaVashishtha</a> (2020), Intellectual Property Rights (contemporary Developments), Thomson Reuters, Toronto, (CAN)</li> </ol>	
<b>Web references:</b> <ol style="list-style-type: none"> <li>1. <a href="https://resource.cdn.icai.org/67333bos54154-m3cp1.pdf">https://resource.cdn.icai.org/67333bos54154-m3cp1.pdf</a></li> <li>2. <a href="https://resource.cdn.icai.org/67335bos54154-m3cp3.pdf">https://resource.cdn.icai.org/67335bos54154-m3cp3.pdf</a></li> <li>3. <a href="https://resource.cdn.icai.org/68523bos54855-cp1.pdf">https://resource.cdn.icai.org/68523bos54855-cp1.pdf</a></li> <li>4. <a href="https://resource.cdn.icai.org/68524bos54855-cp2.pdf">https://resource.cdn.icai.org/68524bos54855-cp2.pdf</a></li> </ol>	

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
<b>CO1</b>	3	3	2	2	3	3	3	2	3
<b>CO2</b>	3	3	3	2	2	3	2	2	3
<b>CO3</b>	3	3	2	2	2	3	2	2	3
<b>CO4</b>	3	3	3	3	3	3	3	2	3
<b>CO5</b>	3	3	2	2	3	3	3	2	3
<b>Strong - 3</b>			<b>Medium – 2</b>			<b>Low - 1</b>			

## HUMAN RESOURCE ANALYTICS

Course Code	Title of the Course	Category	L	T	P	O	Credits	Inst. Hours	Marks		
									CIA	External	Total
<b>23MCC4C2</b>	<b>HUMAN RESOURCE ANALYTICS</b>	Core	6	-	-	-	4	6	25	75	100
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ To understand the concept and framework of human resource analytics</li> <li>➤ To evaluate the process of human resource analytics and the relevant research tools</li> <li>➤ To illustrate the evolution, types and design of HR metrics</li> <li>➤ To deal with data collection and transformation</li> <li>➤ To adopt tools and techniques for predictive modelling</li> </ul>										
<b>Course Units</b>											
<b>UNIT I</b>	<b>Introduction to Human Resource Analytics</b> Human Resource Analytics: Introduction –Concept – Evolution - Importance – Benefits – Challenges - Types of HR Analytics – HR Analytics Framework and Models.										
<b>UNIT II</b>	<b>Business Process and HR Analytics</b> 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										
<b>UNIT III</b>	<b>Introduction to HR Metrics</b> HR Metrics: Introduction - Historical Evolution of HR metrics- Importance – Types of HR Metrics – Types of data - HR Metrics Design Principles — HR Scorecard – HR Dashboards.										
<b>UNIT IV</b>	<b>HR Analytics and Data</b> 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.										
<b>UNIT V</b>	<b>HR Analytics and Predictive Modelling</b> 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.										
<b>Course Outcomes</b> Students will be able to:											
<b>CO 1</b>	Examine the concept of human resource analytics										
<b>CO 2</b>	Apply the HR tools and techniques in decision making										
<b>CO 3</b>	Examine the different types of HR metrics and their relative merits										
<b>CO 4</b>	Collect and transform data leading to HR reporting										
<b>CO 5</b>	Build models for predictive analysis										

**Books for study:**

1. NishantUppal (2020), Human Resource Analytics Strategic Decision Making, 1st Edition, Pearson Education Pvt. Ltd., Chennai
2. Sarojkumar and Vikrant Verma (2022), HR analytics, Thakur Publication Pvt. Ltd, Lucknow.
3. Dipak Kumar Bhattacharyya (2017), HR analytics: understanding theories and applications, 1<sup>st</sup> 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. Anshul Saxena (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”, 7<sup>th</sup> 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
<b>CO1</b>	3	2	2	3	3	3	3	3	3
<b>CO2</b>	3	3	2	3	3	3	3	3	3
<b>CO3</b>	3	3	2	3	3	3	3	3	3
<b>CO4</b>	3	3	2	3	3	3	3	3	3
<b>CO5</b>	3	3	2	3	3	3	3	3	3
	<b>Strong - 3</b>			<b>Medium – 2</b>		<b>Low – 1</b>			

**Core 13 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
<b>23MCC4PR</b>	Project with Viva-voce	<b>Core</b>	10	-	-	-	6	10	50	150	200

## CYBER AND DATA SECURITY

[illegible]

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
<b>Books for study:</b> <ol style="list-style-type: none"> <li>1. Nina Godbole, SunitBelapure(2016), "Cyber Security", Wiley India, New Delhi.</li> <li>2. AvantikaYadav (2017), "Cyber security", Narosa Publishing House Pvt Ltd. New Delhi.</li> <li>3. Tim Mather, SubraKumaraswamy, ShahedLatif (2010), "Cloud Security and Privacy", OREILLY Media, USA.</li> </ol>	
<b>Books for reference:</b> <ol style="list-style-type: none"> <li>1. Nina Godbole, "Information Systems Security", Wiley India, New Delhi.</li> <li>2. Kenneth J. Knapp, "Cyber Security &amp; Global Information Assurance", Information Science Publishing.</li> <li>3. Thomas J Mowbray (2016), "Cyber Security Managing Systems, Conducting Testing and Investigating Intrusions", Wiley India Pvt. Ltd, New Delhi.</li> </ol>	
<b>Web references:</b> <ol style="list-style-type: none"> <li>1. <a href="https://mrcet.com/pdf/Lab%20Manuals/IT/CYBER%20SECURITY%20(R18A0521).pdf">https://mrcet.com/pdf/Lab%20Manuals/IT/CYBER%20SECURITY%20(R18A0521).pdf</a></li> <li>2. <a href="http://www.uptti.ac.in/classroom-content/data/cyber%20security%20unit-3.pdf">http://www.uptti.ac.in/classroom-content/data/cyber%20security%20unit-3.pdf</a></li> </ol>	

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

[illegible]

**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, Tushar Agarwal and Vijalakshmi Kannan, (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
<b>CO1</b>	2	2	1	2	2	2	2	2	2
<b>CO2</b>	2	2	2	2	2	2	2	2	2
<b>CO3</b>	3	3	3	3	3	3	3	3	3
<b>CO4</b>	3	3	3	3	3	3	3	3	3
<b>CO5</b>	3	3	3	3	3	3	3	3	3
	<b>Strong - 3</b>			<b>Medium – 2</b>		<b>Low - 1</b>			



## 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
<b>Learning Objectives</b>	<ul style="list-style-type: none"> <li>➤ Know the basics of Advanced Excel and help the students to understand how this Advanced</li> <li>➤ Excel is different from other versions of Excel.</li> <li>➤ Understand how to format the cells and different types of pasting techniques which are available in Advanced Excel.</li> <li>➤ Get the knowledge about creating charts and protecting the workbook from others.</li> <li>➤ Perform the statistical, mathematical and finance functions of Advanced Excel.</li> </ul>										
<b>UNIT I</b>	Introduction to Advanced Excel - Formatting Cells and Proofing Tools										
<b>UNIT II</b>	Paste and Paste Special Techniques in Excel - Customizing and Protecting Excel										
<b>UNIT III</b>	Creating Charts and Templates - Text, Date and Time Functions										
<b>UNIT IV</b>	Statistical Functions - Mathematical and Finance Functions										
<b>UNIT V</b>	What if Analysis and logical functions in Excel - Sorting, Filtering and Printing Workbooks										
<b>Outcomes</b> <i>Students will above to</i> 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											
<b>Books for Study</b> <ol style="list-style-type: none"> <li>1. Michael Alexander, Richard Kusleika, John Walkenback, Microsoft Excel 2019 Bible, Kindle Edition, 2019.</li> <li>2. McFedries, Microsoft Excel 2019 Formulas and Functions (Business Skills), Kindle Edition, 2019.</li> </ol>											
<b>Books for Reference</b> <ol style="list-style-type: none"> <li>1. Wayne L.Winston, Microsoft Excel 2013: Data Analysis and Business Modeling, Prentice</li> <li>2. Hall of India Learning, 2011.</li> <li>3. Conrad Carlberg, Statistical Analysis: Microsoft Excel 2013, Pearson Education, 2014.</li> </ol>											
<b>Related Online Contents</b> <ol style="list-style-type: none"> <li>1. <a href="https://www.youtube.com/watch?v=zGm7oOsvyM">https://www.youtube.com/watch?v=zGm7oOsvyM</a></li> <li>2. <a href="https://www.youtube.com/watch?v=GTbd4y1CtrU">https://www.youtube.com/watch?v=GTbd4y1CtrU</a></li> <li>3. <a href="https://www.youtube.com/embed/WU4LHrf8yvg">https://www.youtube.com/embed/WU4LHrf8yvg</a></li> </ol>											

### Mapping of Course Outcomes with POs and PSOs

CO	PO <sub>s</sub>						PSO <sub>s</sub>		
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
<b>23MCC4S2</b>	<b>EMPLOYABILITY SKILLS</b>		2	-	-	-	2	2	25	75	100
<b>Course Objectives</b>	<ul style="list-style-type: none"> <li>➤ To Learn about the employability skills</li> <li>➤ To understand dimensions of task oriented skills</li> <li>➤ To study on critical problem-solving techniques</li> <li>➤ To develop employability skills</li> <li>➤ To understand the logical and reasoning skills</li> </ul>										
<b>UNIT I</b>	<b>Introduction to employability skills:</b> Meaning-definition-Hard skills and soft skills-Employability skills and vocational skills-Employability and employment-Employability attributes.										
<b>UNIT II</b>	<b>Unpacking Employability Skills:</b> Embedded employability skills-Dimensions of competency-Task skills-Task Management skills-Contingency Management skills-Job/Role Environment skills.										
<b>UNIT III</b>	<b>Inter – Relationships of employability skills:</b> Communication-Team work-Problem solving-Initiative and Enterprise-Planning and Organizing-Self management-Learning-Technology.										
<b>UNIT IV</b>	<b>Resume writing:</b> Meaning-Features of good resume-Model (Exercise). Etiquettes-Dress, Cleanliness, Etiquettes to be followed inside the employment seeking process.										
<b>UNIT V</b>	Arithmetic and Logical Reasoning Skills-Exercise.										
<b>Course Outcomes</b>											
<b>Students will able to</b>											
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										
<b>Reading List</b> <ol style="list-style-type: none"> <li><a href="https://www.jobjumpstart.gov.au/article/what-are-employability-skills">https://www.jobjumpstart.gov.au/article/what-are-employability-skills</a></li> <li><a href="https://www.simplilearn.com/why-are-employability-skills-important-article">https://www.simplilearn.com/why-are-employability-skills-important-article</a></li> <li><a href="https://blog.hubspot.com/marketing/employability-skills">https://blog.hubspot.com/marketing/employability-skills</a></li> <li><a href="https://www.indeed.com/career.advice/finding-a-job/employability-skills">https://www.indeed.com/career.advice/finding-a-job/employability-skills</a></li> </ol>											
<b>References Books</b>											
<ol style="list-style-type: none"> <li>Soft Skills, Dr.K.Alex</li> <li>Winning Interview Skills, Compiled &amp; Edited by J.K. Chopra.</li> <li>A Modern Approach to Verbal and Non-Verbal Reasoning. R.S. Aggarwal.</li> <li>Fafinski, S., Finch, Employability Skills for Law Students. United Kingdom: OUP Oxford.</li> <li>Trought, F. (2017). Brilliant Employability Skills: How to Stand Out from the Crowded in the Graduate Job Market. United Kingdom: Pearson Education Limited.</li> <li>Chaita, M.V. (2016). Developing Graduate Employability Skills: Your Pathway to Employment United States: Universal Publishers.</li> </ol>											

### 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									