

S.P. Mandali's

**R. A. PODAR COLLEGE OF COMMERCE AND  
ECONOMICS (AUTONOMOUS),**

Matunga, Mumbai-400019

**Course Structure**

**For**

Post Graduate Program

**M.Com. (Business Analytics)**

**Semester I**

[www.rapodar.ac.in](http://www.rapodar.ac.in)

S.P. Mandali's

**R. A. PODAR COLLEGE OF COMMERCE AND  
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Matunga, Mumbai-400019

Syllabus

And

Question Paper Pattern of Course

Post Graduate Program

**M.Com. (Business Analytics)**

**Semester I**

Syllabus as per National Education Policy 2020  
To be implemented from Academic Year 2023-2024

[www.rapodar.ac.in](http://www.rapodar.ac.in)

**POST GRADUATE PROGRAM OUTCOMES :**

PROGRAM OUTCOME No.	Description
PO 1	Learners will acquire advanced knowledge in accounting principles, financial reporting, and taxation policies
PO 2	Learners will master the effective communication of complex financial information to diverse stakeholders through oral and written means
PO 3	Learners will develop critical thinking skills to analyze financial statements, interpret accounting regulations, and propose strategic financial solutions.
PO 4	Learners will apply accounting principles to solve real-world financial challenges and make informed business decisions.
PO 5	Learners will employ analytical reasoning to interpret financial data, assess business performance, and support strategic planning.
PO 6	Learners will excel in conducting advanced research in accounting, showcasing proficiency in data collection, analysis, and interpretation.
PO 7	Learners will collaborate effectively with interdisciplinary teams to address complex accounting issues and achieve organizational goals.
PO 8	Learners will apply scientific reasoning to evaluate and propose innovative financial strategies and models.
PO 9	Learners will engage in reflective thinking, identifying areas for improvement and continuous learning in the field of accountancy.
PO 10	Learners will leverage digital tools for effective access, evaluation, and synthesis of financial information.
PO 11	Learners will take initiative in ongoing professional development, engaging in self-directed learning to stay updated with evolving accounting standards.
PO 12	Learners will demonstrate multicultural competence, showing sensitivity to diverse cultural perspectives in the global business environment.
PO 13	Learners will exhibit a strong ethical foundation, making decisions with integrity and considering the societal impact of financial practices.
PO14	Learners will showcase leadership qualities, being capable of guiding financial teams and contributing to organizational success.
PO15	Learners will recognize the importance of continuous learning, adapting to advancements in the field of accountancy throughout their professional careers.

**Program Specific Outcomes**  
**(M.Com. Business Analytics)**  
**Academic Year: 2024-25**

<b>Program Specific Outcomes No.</b>	<b>Program Specific Outcomes</b>
PSO1	Learners will acquire <b>disciplinary knowledge</b> in Analytics and Data Science, preparing them to meet the demands of businesses worldwide and making them business-ready professionals in analytics.
PSO2	Learners will gain <b>disciplinary knowledge</b> in Marketing, Retail Analytics, Finance and Risk Analytics, supply chain and logistics Analytics, social and web media analytics.
PSO3	Learners will apply <b>problem-solving</b> techniques using Data mining, predictive modeling and Time series forecasting and Machine learning
PSO4	Learners will strengthen their <b>analytical reasoning</b> through hands-on experience with software like Python, R, and Tableau.
PSO5	Learners will acquire <b>research-related skills</b> essential for conducting analytics projects.
PSO6	Learners will engage in <b>reflective thinking</b> to continuously assess and improve their analytical approaches.
PSO7	Learners will develop <b>critical thinking</b> to evaluate complex business scenarios and make informed decisions.

**M.Com**  
**(Business Analytics)**

**Under Choice Based Credit, Grading and Semester System**  
**Course Structure**

**M.Com-I**

No. of Courses	Semester I	Credits	No. of Courses	Semester II	Credits
<b><i>Mandatory</i></b>			<b><i>Mandatory</i></b>		
1	Introduction Business Analytics	<b>06</b>	1	Introduction to Financial Analytics	<b>02</b>
2	Introduction To Data Science- I	<b>06</b>	2	Data Visualization and Communication	<b>06</b>
3	Business Ethics	<b>02</b>	3	Data Science - II	<b>06</b>
<b><i>Electives</i></b>			<b><i>Electives</i></b>		
3	R – Lab Course	<b>04</b>	3	Python Data Science – Lab Course	<b>04</b>
<b><i>Research Methodology</i></b>			<b><i>Research Methodology</i></b>		
4	Research Methodology for Business	<b>04</b>	---	-----	
<b><i>On Job Training / Field Project</i></b>			<b><i>On Job Training / Field Project</i></b>		
			4	Business Analytics Based Projects	<b>04</b>
<b>Total Credits</b>		<b>22</b>	<b>Total Credits</b>		<b>22</b>

## M.Com-II

No. of Courses	Semester III	Credits	No. of Courses	Semester IV	Credits
<b>Mandatory</b>			<b>Mandatory</b>		
1	Machine Learning and Mining Algorithms	<b>06</b>	1	Predictive Analysis	<b>06</b>
2	Financial Model – Based Analytics-I	<b>06</b>	2	Financial Model – Based Analytics- II	<b>06</b>
<b>Elective Courses(EC)</b>			<b>Elective Courses(EC)</b>		
3	<b>*Any one courses from the following list of the courses</b> A. Sales and Marketing Analytics B. Tools for Data Analytics Lab Course – II C. Financial Accounting and Analysis	<b>04</b>	3	<b>*Any one courses from the following list of the courses</b> A. International Financial Regulatory Bodies B. Supply Chain Design and Management C. Foundation of Behavioral Financial Analysis	<b>04</b>
<b>RESEARCH METHODOLOGY</b>			<b>RESEARCH METHODOLOGY</b>		
4	Statistical Tools and Techniques of Research	<b>02</b>	--	----	
<b>RESEARCH PROJECT</b>			<b>RESEARCH PROJECT</b>		
	Research Project/Internship	<b>04</b>		Research project	<b>06</b>
	<b>TOTAL CREDITS</b>	<b>22</b>		<b>TOTAL CREDITS</b>	<b>22</b>

**Note:** Project work is considered as a special course involving application of knowledge in solving/ analyzing/ exploring a real life situation/difficult problem. Project work would be of 06 credits. A project work maybe undertaken in any area of Elective courses.

*Revised Syllabus of Courses of Master of Commerce (M.Com) Business Analytics  
Program at Semester I*

**1. Introduction to Business Analytics**

**Modules at a Glance**

SN	Modules/ Units	No. of Lectures
	<b>Modules</b>	
1	Basics of Business analytics	15
2	Visualization/ Data Issues	15
3	Introduction to Data Mining	15
4	Introduction to data communication	15
<b>Total</b>		<b>60</b>

SN	Objectives
1	To enable the learners to understand the scope of Business analytics in today's era
2	To provide information pertaining to basics and principles of Business analytics
3	To develop learning and analytical skills of the learners to enable them to for Data visualization of multidimensional data
4	To acquaint the learners with recent developments and trends in Business analytics

Course Outcome No.	Course Outcomes
CO 1	Analyze and interpret data visualization, recognizing its importance in conveying complex information effectively and efficiently.
CO 2	Acquire the skill to Compare and contrast structured, semi-structured, and unstructured data, appreciating the challenges and opportunities each type presents in analytics.
CO 3	Understand the importance of data quality, and learn strategies for dealing with missing or incomplete data to ensure accurate and reliable analysis.
CO 4	Evaluate the ethical and legal considerations in business analytics, recognizing the importance of responsible data usage and privacy protection.

SN	Modules/ Units
1	Basics of Business analytics
	Concept of analytics, Types of Analytics, Application fields - Marketing Analytics, Finance Analytics, HR Analytics, Operation Analytics, Retail Analytics, Healthcare Analytics, Supply Chain Analytics - Role of Data Scientist in Business & Society
2	Visualization/ Data Issues
	Organization/sources of data - Structured Vs Semi structured Vs Unstructured data, Importance of data quality - Dealing with missing or incomplete data - Data Classification Types of Data Sources- Data Warehouse Vs Databases, Relational Database vs Non-Relational Database, RDBMS Data structures, Columnar Data structures
3	Introduction to Data Mining
	Introduction to Data Mining -Data Mining meaning - Data Mining Process - Data mining tool - Market Basket Analysis, Association Rules and clustering, Decision trees, Random forests
4	Business analytics future trends
	Role of Artificial Intelligence in Business, Machine Intelligence, Competitive Intelligence, Text Mining, Web Analytics (Web content mining, Web usage mining, Web structure mining), Role of Intelligent Agents in e-business, e-commerce, m-commerce, Location Analytics, Intelligent Agent in search & retrieval, Personalization and Comparison), Social Networking Analysis, Big Data Tools & Techniques, Content Analytics (Sentimental Analysis & Opinion Analysis). Ethical and Legal considerations in Business Analytics

### Suggested Readings

1. Essentials of Business Analytics: An Introduction to the methodology and its application, Bhimasankaram Pochiraju, Sridhar Seshadri, Springer
2. Ben Fry- Visualizing Data. Released December 2007. Publisher(s): O'Reilly Media, Inc.
3. An Introduction to Business Analytics, Ger Koole, Lulu.com, 2019



**EXAMINATION PATTERN**  
**(Under Choice Based Credit, Grading and Semester System)**  
**(With effect from Academic Year: 2024-2025)**  
**(Evaluation pattern)**

**1. Continuous Internal Evaluation System:**

<b>Continuous Internal Evaluation (CIE)</b>	<b>40 Marks</b>
The internal evaluation of 40 marks for M.Com for each semester would be of tests and of class participation, project, case study analysis, Case lets, PowerPoint presentations, group discussion, book review, Research paper, article analysis and any other mode depending on the nature and scope of the course. Continuous Internal Evaluation (CIE), to be conducted by the subject teacher all through the semester. The total mark break up would be suitably divided and the total marks scored by the learner would be submitted to the Controller of Examination.	

## 2. Question Paper Pattern (Practical/ Theory Courses) :

Maximum Marks: 60

Questions to be set: 04

Durations: 02 hrs

All Questions are compulsory carrying 15 Marks each:

Question No	Particulars	Marks
Q1	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q2	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q3	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q4	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks

*Note: Full-Length questions of 15 Marks may be divided into two sub-questions of 08 and 07 marks.*

**Revised Syllabus of Courses of Master of Commerce (M.Com) Business Analytics  
Program at Semester I**

**2. Business Ethics**

**Modules at a Glance**

SN	Modules	No. of Lectures
1	Introduction to Business Ethics	15
2	Indian Ethical Practices and Corporate Governance	15
<b>Total</b>		<b>30</b>

SN	Objectives
1	To familiarize the learners with the concept and relevance of Business Ethics in the modern era
2	To enable learners to understand the scope and complexity of Corporate Social responsibility in the global and Indian context

Course Outcome No.	Course Outcomes
CO 1	Understand the concept and importance of business ethics. Recognize the role of Indian ethos, ethics, values, and work ethos in shaping ethical behavior.
CO 2	Analyze various approaches to business ethics: Evaluate different ethical theories, including Friedman's Economic theory, Kant's Deontological theory, and Mill & Bentham's Utilitarianism theory, and understand how these theories guide ethical decision-making in business.
CO 3	Understand the evolution of corporate governance and its principles. Evaluate the corporate governance regulatory framework in India.
CO 4	Analyze, and Application ethical issues, make informed decisions, and contribute to the establishment of ethical practices and effective corporate governance within organizations.

SN	Modules/ Units
1	<b>Introduction to Business Ethics</b>
	<p>Business Ethics – Concept, Characteristics, Importance and Need for business ethics. Indian Ethos, Ethics, and Values, Work Ethos.</p> <p>Sources of Ethics, Ethical dilemma in business. Ethics in Marketing and Advertising, Human Resources Management, Finance and Accounting, Production, Information Technology, Copyrights and Patents</p> <p>Various approaches to Business Ethics - Theories of Ethics- Friedman’s Economic theory, Kant’s Deontological theory, Mill &amp; Bentham’s Utilitarianism theory</p> <p>Gandhian Approach in Management and Trusteeship, Importance and relevance of trusteeship principle in Modern Business, Gandhi’s Doctrine of Satya and Ahimsa.</p>
2	<b>Indian Ethical Practices and Corporate Governance</b>
	<p>Corporate Governance: Concept, Importance, Evolution of Corporate Governance, Principles of Corporate Governance,</p> <p>Regulatory Framework of Corporate Governance in India, SEBI Guidelines and Clause 49, Audit Committee, Role of Independent Directors, Protection of Stake Holders, Changing roles of corporate Boards.</p> <p>Elements of Good Corporate Governance, Failure of Corporate Governance and its consequences</p>

### ***Suggested Readings***

- Sharma J.P ‘ Corporate Governance, business ethics and CSR, Ane Books Pvt Ltd, New Delhi
- Sharma J.P. Corporate Governance and Social Responsibility of business, Ane Books Pvt ltd, New Delhi
- S.K.Bhatia, Business Ethics and Corporate Governance
- William Shaw, Business Ethics, Wordsworth Publishing Company, International ThomsonPublishing Company.
- Corporate Crimes and Financial Frauds, Dr. Sumit Sharma, New Delhi India
- R.C. Sekhar, Ethical choices in Business, Sage Publications, New Delhi
- Business Ethics, Andrew Crane and Dirk Matten, Oxford University Press.
- Business Ethics, Text and Cases, C.S.V. Murthy, Himalaya Publication House.
- Mallin, Christine A. Corporate Governance (Indian Edition) Oxford University press. New Delhi
- Blow field ,Michael and Alan Murray, Corporate Responsibility, Oxford University Press,
- Philip Kotler and Nancy Lee, CSR : doing the most good for Company and your cause , Wiley 2005
- Beeslory, Michel and Evens, CSR , Taylor and Francis, 1978
- Subhabrata Bobby Banerjee, CSR: the good, the bad and the ugly. Edward Elgar Publishing 2007
- Joseph A. Petrick and John F. Quinn, Management Ethics- Integrity at work , Sage Publication , 1997
- Francesco Perrini, Stefano and AntanioTencati, Developing CSR- A European Perspective , Edward

## EXAMINATION PATTERN

(Under Choice Based Credit, Grading and Semester System)

(With effect from Academic Year: 2024-2025)

(Evaluation pattern)

### 1. Continuous Internal Evaluation System:

Continuous Internal Evaluation (CIE)	40 Marks
The internal evaluation of 40 marks for M.Com for each semester would be of tests and of class participation, project, case study analysis, Case lets, PowerPoint presentations, group discussion, book review, Research paper, article analysis and any other mode depending on the nature and scope of the course. Continuous Internal Evaluation (CIE), to be conducted by the subject teacher all through the semester. The total mark break up would be suitably divided and the total marks scored by the learner would be submitted to the Controller of Examination.	

## 2. Question Paper Pattern (Practical/ Theory Courses) :

Maximum Marks: 60

Questions to be set: 04

Durations: 02 hrs

**All Questions are compulsory carrying 15 Marks each:**

Question No	Particulars	Marks
Q1	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q2	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q3	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q4	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks

*Note: Full-Length questions of 15 Marks may be divided into two sub-questions of 08 and 07 marks.*

*Revised Syllabus of Courses of Master of Commerce (M.Com) Business Analytics  
Program at Semester I*

**3. Introduction to Data Science I**

**Modules at a Glance**

SN	Modules	No. of Lectures
1	Introduction	15
2	Data Collection and Data Pre-Processing	15
3	Model Development	15
4	Model Evaluation	15
	<b>Total</b>	<b>60</b>

SN	Objectives
1	To familiarize the learners with the concept and Foundation of Data Science
2	To enable learners to understand the scope and complexity of data science

Course Outcome No.	Course Outcomes
CO 1	Learn the importance of data pre-processing in ensuring data quality, consistency, and compatibility for analysis.
CO 2	Recognize the issues of overfitting and underfitting and their impact on model performance. Select appropriate models using model selection techniques.
CO 3	Applying polynomial regression and using pipelines for data preprocessing and modeling. Understand the benefits and limitations of these techniques.
CO 4	Understand the limitations and uncertainties associated with predictions based on regression models.

SN	Modules/ Units
1	<b>Introduction to Data Science</b>
	What is Data Science? Introduction to Data Science – Evolution of Data Science – Data Science Roles – Stages in a Data Science Project – Applications of Data Science in various fields – Data Security Issues.
2	<b>Data Collection and Data Pre-Processing</b>
	Data Collection Strategies – Data Pre-Processing Overview – Data Cleaning – Data Integration and Transformation – Data Reduction – Data Discretization.
3	<b>Model Development</b>
	Simple and Multiple Regression – Model Evaluation using Visualization – Residual Plot – Distribution Plot – Polynomial Regression and Pipelines – Measures for In-sample Evaluation – Prediction and Decision Making
4	<b>Model Evaluation</b>
	Generalization Error – Out-of-Sample Evaluation Metrics – Cross Validation – Overfitting – Under Fitting and Model Selection – Prediction by using Ridge Regression – Testing Multiple Parameters by using Grid Search.

### Suggested Readings

- Jojo Moolayil, “Smarter Decisions: The Intersection of IoT and Data Science”, PACKT, 2016.
- Cathy O’Neil and Rachel Schutt , “Doing Data Science”, O’Reilly, 2015.
- David Dietrich, Barry Heller, Beibei Yang, “Data Science and Big data Analytics”, EMC 2013
- Raj, Pethuru, “Handbook of Research on Cloud Infrastructures for Big Data Analytics”, IGI Global.



**EXAMINATION PATTERN**  
**(Under Choice Based Credit, Grading and Semester System)**  
**(With effect from Academic Year: 2024-2025)**  
**(Evaluation pattern)**

**1. Continuous Internal Evaluation System:**

<b>Continuous Internal Evaluation (CIE)</b>	<b>40 Marks</b>
The internal evaluation of 40 marks for M.Com for each semester would be of tests and of class participation, project, case study analysis, Case lets, PowerPoint presentations, group discussion, book review, Research paper, article analysis and any other mode depending on the nature and scope of the course. Continuous Internal Evaluation (CIE), to be conducted by the subject teacher all through the semester. The total mark break up would be suitably divided and the total marks scored by the learner would be submitted to the Controller of Examination.	

## 2. Question Paper Pattern (Practical/ Theory Courses) :

Maximum Marks: 60

Questions to be set: 04

Durations: 02 hrs

**All Questions are compulsory carrying 15 Marks each:**

Question No	Particulars	Marks
Q1	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q2	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q3	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q4	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks

*Note: Full-Length questions of 15 Marks may be divided into two sub-questions of 08 and 07 marks.*

*Revised Syllabus of Courses of Master of Commerce (M.Com) Business Analytics  
Program at Semester I*

**3. R– Lab course**

**Modules at a Glance**

SN	Modules	No. of Lectures
1	Introduction to R	15
2	Matrices, Arrays and Data Frames	15
<b>Total</b>		<b>30</b>

SN	Objectives
1	To enable the students to know about the information needs of Management
2	To introduce the concepts of data analysis methods
3	To have hands-on training of Statistical Data Analysis through R Programming and Python Programming

Course Outcome No.	Course Outcomes
CO 1	Evaluate the Manipulate matrices: Create and manipulate matrices in R, and perform operations such as addition, subtraction, and multiplication. Understand the fundamentals of R: Describe the basic features and functionalities of the R programming language and environment.
CO 2	Understand the fundamentals of R: Describe the basic features and functionalities of the R programming language and environment.
CO 3	Understand the concept of arrays in R and perform array operations, including reshaping, indexing, and slicing arrays for data manipulation and analysis.

SN	Modules/ Units
<b>1</b>	<b>Introduction to R</b>
	Introducing to R – R Data Structures – Help functions in R – Vectors – Scalars – Declarations – recycling – Common Vector operations – Using all and any – Vectorised operations – NA and NULL values – Filtering – Vectorised if-then else – Vector Equality – Vector Element names
<b>2</b>	<b>Matrices, Arrays and Data Frames</b>
	Creating matrices – Matrix operations – Applying Functions to Matrix Rows and Columns – Adding and deleting rows and columns – Vector/Matrix Distinction – Avoiding Dimension Reduction – Higher Dimensional arrays – lists – Creating lists – General list operations – Accessing list components and values – applying functions to lists – recursive lists Creating Data Frames – Matrix-like operations in frames – Merging Data Frames – Applying functions to Data frames – Factors and Tables – factors and levels – Common functions used with factors – Working with tables
<b>3</b>	<b>Series and data Frame</b>
	The Series Data Structure, Querying a Series, The DataFrame Data Structure, DataFrame Indexing and Loading, Querying a DataFrame, Indexing Dataframes, Merging Dataframes , Data
	Aggregation and Group Operations, Time Series, Date and Time Data Types and Tools, Time Series Basics, Date Ranges, Frequencies, and Shifting, Time Zone Handling, Periods and Period Arithmetic, Resampling and Frequency Conversion, Time Series Plotting, Moving Window Functions

### Suggested Readings

1. R Cookbook”, Paul Teetor
2. “R for Data Science”, Garrett Golemund and Hadley Wickham
3. “Hands-On Programming with R”, Garrett Golemund
4. “An Introduction to Statistical Learning: With Applications in R”, Daniela Witten, Gareth James Robert Tibshirani, and Trevor Hastie
5. “Introduction to Machine Learning with Python: A Guide for Data Scientists”, Andreas C. Muller and Sarah Guido

**EXAMINATION PATTERN**  
**(Under Choice Based Credit, Grading and Semester System)**  
**(With effect from Academic Year: 2024-2025)**  
**(Evaluation pattern)**

**1. Continuous Internal Evaluation System:**

<b>Continuous Internal Evaluation (CIE)</b>	<b>40 Marks</b>
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## 2. Question Paper Pattern (Practical/ Theory Courses) :

Maximum Marks: 60

Questions to be set: 04

Durations: 02 hrs

**All Questions are compulsory carrying 15 Marks each:**

Question No	Particulars	Marks
Q1	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q2	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q3	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks
Q4	A) Practical/ Theory Question	15 Marks
	OR B) Practical/ Theory Question	15 Marks

*Note: Full-Length questions of 15 Marks may be divided into two sub-questions of 08 and 07 marks.*

**Revised Syllabus of Courses of Master of Commerce (M.Com) Business Analytics  
Program at Semester I**

**5. Research Methodology for Business**

**Modules at a Glance**

SN	Modules	No. of Lectures
1	Introduction to Research	15
2	Research Process	15
3	Data Processing and Statistical Analysis	15
4	Research Reporting and Modern Practices in Research	15
	<b>Total</b>	<b>60</b>

SN	Objectives
1	To enhance the abilities of learners to undertake research in business & social sciences
2	To enable the learners to understand, develop and apply the fundamental skills in formulating research problems
3	To enable the learners in understanding and developing the most appropriate methodology for their research
4	To make the learners familiar with the basic statistical tools and techniques applicable for research

Course Outcome No.	Course Outcomes
CO 1	Understand the research process: Identify the key components of the research process, including formulating research questions or hypotheses, designing research studies, collecting data, analysing data, and drawing conclusions. Recognize the importance of ethical considerations in research.
CO 2	Apply data processing techniques: Utilize appropriate techniques for data processing, including data cleaning, data coding, data entry, and data transformation, to ensure data quality and integrity for analysis.
CO 3	Interpret statistical results: Interpret the results of statistical analysis in the context of research questions or hypotheses, and effectively communicate the findings in a clear and meaningful manner.
CO 4	Develop effective research communication: Develop effective oral and written communication skills to present research findings, including creating research posters, delivering presentations, and writing research reports or academic papers.

SN	Modules/ Units
1	<b>Introduction to Research</b>
	<p>Features and Importance of research in business, Objectives and Types of research- Basic, Applied, Descriptive, Analytical and Empirical Research.</p> <p>Formulation of research problem, Research Design, significance of Review of Literature Hypothesis: Formulation, Sources, Importance and Types</p> <p>Sampling: Significance, Methods, Factors determining sample size</p>
2	<b>Research Process</b>
	<p>Stages in Research process</p> <p>Data Collection: Primary data: Observation, Experimentation, Interview, Schedules, Survey, Limitations of Primary data</p> <p>Secondary data: Sources and Limitations, Factors affecting the choice of method of data collection.</p> <p>Questionnaire: Types, Steps in Questionnaire Designing, Essentials of a good questionnaire</p>
3	<b>Data Processing and Statistical Analysis</b>
	<p>Data Processing: Significance in Research, Stages in Data Processing: Editing, Coding, Classification, Tabulation, Graphic Presentation</p> <p>Statistical Analysis: Tools and Techniques, Measures of Central Tendency, Measures of Dispersion, Correlation Analysis and Regression Analysis.</p> <p>Testing of Hypotheses –</p> <p>Parametric Test-t test, f test, z test</p> <p>Non-Parametric Test -Chi square test, ANOVA, Factor Analysis</p> <p>Interpretation of data: significance and Precautions in data interpretation</p>
4	<b>Research Reporting and Modern Practices in Research</b>
	<p>Research Report Writing: Importance, Essentials, Structure/Layout, Types References, and Citation Methods:</p> <p>APA (American Psychological Association)</p> <p>Footnotes and Bibliography</p> <p>Modern Practices: Ethical Norms in Research, Plagiarism, Role of Computers in Research</p>



### ***Suggested Readings***

1. Research Methodology – Text and Cases with SPSS Applications, by Dr S.L. Gupta and HiteshGupta, International Book House Pvt Ltd
2. Business Research Methodology by T N Srivastava and Shailaja Rego, Tata Mcgraw Hill Education Private Limited, New Delhi
3. Methodology of Research in Social Sciences, by O.R. Krishnaswami, Himalaya Publishing House
4. Research Methodology by Dr Vijay Upagude and Dr Arvind Shende
5. Business Statistics by Dr S. K Khandelwal, International Book House Pvt Ltd
6. Quantitative Techniques by Dr S. K Khandelwal, International Book House Pvt Ltd
7. SPSS 17.0 for Researchers by Dr S.L Gupta and Hitesh Gupta, 2nd edition, Dr S. K Khandelwal, International Book House Pvt Ltd
8. Foundations of Social Research and Econometrics Techniques by S.C. Srivastava, Himalaya publishing House
9. Statistical Analysis with Business and Economics Applications, Hold Rinehart & Wrintston, 2nd Edition, New York
10. Business Research Methods, Clover, Vernon T and Balsely, Howard L, Colombus O. Grid, Inc
11. Business Research Methods, Emary C. Willima, Richard D. Irwin In. Homewood
12. Research Methods in Economics and Business by R. Gerber and P.J. Verdoom, The Macmillan Company, New York Research and Methodology in Accounting and Financial Management, J.KCourtis
13. Statistics for Management and Economics, by Menden Hall and Veracity, Reinmuth J.E
14. Panneerselvam, R., Research Methodology, Prentice Hall of India, New Delhi, 2004.
15. Kothari CR, Research Methodology- Methods and Techniques, New Wiley Ltd., 2009

## EXAMINATION PATTERN

(Under Choice Based Credit, Grading and Semester System )

(With effect from Academic Year: 2024-2025)

(Evaluation pattern)

### 1. Continuous Internal Evaluation System:

<b>Continuous Internal Evaluation (CIE)</b>	<b>40 Marks</b>
<p>The internal evaluation of 40 marks for M.Com for each semester would be of tests and of class participation, project, case study analysis, Case lets, PowerPoint presentations, group discussion, book review, Research paper, article analysis and any other mode depending on the nature and scope of the course. Continuous Internal Evaluation (CIE), to be conducted by the subject teacher all through the semester. The total mark break up would be suitably divided and the total marks scored by the learner would be submitted to the Controller of Examination.</p>	

## 2. Question Paper Pattern (Practical Courses) :

Maximum Marks: 60

Questions to be Set: 04

Durations: 02 hrs

All Questions are compulsory carrying 15 Marks each:

Question No.	Particulars	Marks
Q1	A) Practical Question	15 Marks
	OR	
	B) Practical Question	15 Marks
Q2	A) Practical Question	15 Marks
	OR	
	B) Practical Question	15 Marks
Q3	A) Practical Question	15 Marks
	OR	
	B) Practical Question	15 Marks
Q4	A) Practical Question	15 Marks
	OR	
	B) Practical Question	15 Marks

*Note: Full-Length questions of 15 Marks may be divided into two sub-questions of 08 and 07 marks.*

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