



Savitribai Phule Pune University
(Formerly University of Pune)

Faculty of Commerce and Management
(Commerce)

Ph.D. Course Work Syllabus in Commerce
w.e.f. Academic Year 2025-2026

**Dean of the Faculty of Commerce and Management,
Chairman / Coordinator of Board of Studies (Commerce)**

Sr. No.	Name of the BOS	Name of the Dean, Chairman / Coordinator
1	Dean of the Faculty	Dr. Supriya Patil
2	Accountancy	Dr. Manohar Sanap
3	Cost and Works Accounting	Dr. Sunita Dakle
4	Business Administration	Dr. Yashodhan Mithare
5	Marketing	Prin. Dr. Anwar Shaikh
6	Business Practices	Dr. Maruti Kekane
7	Business Laws	Dr. Shivaji Takalkar
8	Banking, Finance and Insurance	Dr. Kishor Nikam
9	Statistics and Computer Applications	Prin. Dr. Nitin Ghorpade
10	Business Economics	Dr. Dipak Powdel

**Ph.D. Course Work in Commerce Syllabus
Drafting Committee**

Sr. No.	Name of the Member	Name of the College	Designation
1	Dr. Manohar Sanap	Ness Wadia College of Commerce, Pune	Chairman
2	Dr. M. G. Mulla	Abeda Inamdar College, Pune	Member
3	Dr. Ramdas Sonawane	Ness Wadia College of Commerce, Pune	Member
4	Dr. Ashok Mojad	Appasaheb Jedhe College, Pune	Member
5	Dr. Priyadarshini Hapse	Ness Wadia College of Commerce, Pune	Member
6	Dr. Ganesh Pathare	Marathwada Mitra Mandal's College of Commerce, Pune	Member
7	Dr. Rajesh Raut	Ness Wadia College of Commerce, Pune	Member

Savitribai Phule Pune University Pune
Ph.D. Course Work Syllabus in Commerce (16 Credits)
(w.e.f. 2025-2026)

Preamble:

As per the UGC Regulations and Circular No. 195/2025 dated 23rd July 2025 issued by the Savitribai Phule Pune University, the students who have admitted for Ph.D. in Commerce will have to complete course work for one semester duration. The course work shall be treated as prerequisite for the Ph.D. Program. The course will have 16 credits.

The Ph.D. Course Work in Commerce shall be 16 Credits and shall consist of the following components namely (Credit requirement, number duration, syllabus, minimum standards for completion, etc.):

Ph.D. Course Work Components

Course No.	Components	No. of Credits	Duration (Hours)	Marks
1	Research Methodology:			
	1(A): Research Methodology-I (Theory)	2	30	50
	1(B): Research Methodology-I (Practical-Laboratory)	2	60	50
2	Attending at least One National OR International Seminar / Conference / Workshop	1	15	25
3	Two Subject Specific Advanced Level Courses:			
	A) Subject Specific Advanced Level Course – I	4	60	100
	B) Subject Specific Advanced Level Course – II	4	60	100
4	Research and Publication Ethics	2	30	50
5	Pedagogical Training / Industrial Visit Report / Assessment Statement	1	30	25
Total Credits		16	255	400

Syllabus

Course-1(A): Research Methodology-I

Credits: 02 Theory Course (50 Marks)

(Mode of Teaching: Offline / Hybrid)

Course Objectives:

- 1) To impart research methodology knowledge to the students.
- 2) To develop the skills among the students towards use of quantitative and qualitative methods in research.
- 3) To acquaint the students towards the research techniques used in research.
- 4) To make computer applications in the research.
- 5) To develop the research report writing skills among the students.
- 6) To develop the writing of research proposal skills among the students for obtaining financial assistance from National Funding Agencies.

Unit No.	Units and Contents	No. of Lectures
1	Business Research: Introduction to Business Research: Definition, Objectives, Significance and Types of Research, Features of a Good Research, Steps in Research Process, Research Methods versus Methodology Literature Review: Role, Importance, Sources, Methods, Outcomes, Writing the Review, Finding Research Gap, Use of appropriate language Research Problem: Defining the Research Problem, Techniques involved in Defining Research Problem. Hypotheses: Meaning, Definition and Types of Hypotheses, Formulation of the Hypotheses Research Design: Meaning, Nature and Classification of Research Design, Need for Research Design, Phases/Steps in Research Design	10
2	Data Collection and Sampling: Variables: Identifying Variables, Levels of Variable Measurement, Types of Variables Sources of Data Collection: Primary Data: Methods, Merits and Demerits Secondary Data: Internal and External Sources of Secondary Data Collection Sampling: Meaning and definition of Sampling, Key terms in Sampling, Types of Sampling, Probability and Non-probability	10

	<p>Designing the Data Collection Instrument: Questionnaire, Interview guide, Focus group discussion guide, Web based questionnaires</p> <p>Measurement and Scaling: Meaning and Types of Measurement Scale, Classification of Scales</p> <p>Pilot Study: Objectives, Methods, Sample, Outcomes</p>	
3	<p>Research Report:</p> <p>Research Report: Importance of Report Writing, Types of Research Reports, Structure or Layout of Research Report</p> <p>Mode of Citation and Bibliography: Author, Date, System, Footnote or Endnote System, Use of Notes, Position of Notes, Citing for the first time, Subsequent Citings, List of Abbreviation used in Citation, Mode of preparing a Bibliography, Classification of Entries, Bibliography Entries compared with Footnotes, Examples of Bibliography Entries</p> <p>Publication: Guidelines about Publishing the research work, Identifying reputed journals, indexing, etc.</p> <p>Research Proposal: Writing of Research Proposal for obtaining financial assistance from National Funding Agencies</p>	10
<p>Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.</p>		
<p>Reference Books</p> <ol style="list-style-type: none"> 1. Research Methodology-Methods and Techniques C. R. Kothari New Age International Publishers 2. Research Methodology Dipak Kumar Bhattacharyya Excel Books 3. Research Methodology-Methods and Techniques Anil Kumar Gupta Value Education of India 4. Methodology and Techniques of Social Research, P. L. Bhandarkar, T. S. Wilkison and D. K. Laldas Himalaya Publishing House, Mumbai 5. Business Research Methods, Donald R. Cooper and Pamela S. Schindler Tata McGraw- Hill Edition 6. Investigating the Social World-The Process and Practice of Research Russell K. Schutt Sage Publication 7. Business Research Methods Alan Bryman and Emma Bell Oxford University Press 8. William Josiah Goode, Paul K. Hatt (1952), "Methods in Social Research", McGraw-Hill Book Co., New York. 9. Krishnaswamy, O.R. (2010), "Methodology of Research in Social Sciences", Himalaya Publishing House, Mumbai 10. Arunangshu Giri and Debasish Biswas (2018), "Research Methodology for 		

Social Sciences”, SAGE Publications India Pvt Ltd, New Delhi

11. M. Thamilarasan (2015), “Research Methodology for Social Sciences”, New Century Publications, New Delhi

12. Sharma, Prasad and Satyanarayana (1983), “Research Methods in Social Sciences”, Sterling Publishers Private Ltd., New Delhi

13. C.A. Moser, G. Kalton (2017), “Survey Methods in Social Investigations”, eBook Published 5 January 2017

14. Sadhu AN, Amarjit Singh (2007), “Research Methodology in Social Sciences”, Himalaya Publishing House, New Delhi

15. Kurein C. T. (1973), “A guide to research in Economics”, Sangam Publishers for Madras Institute of Development Studies, Madras.

16. Devendra Thakur (2009), “Research Methodology in Social Sciences”, Deep & Deep Publications, Delhi.

17. G.R. Basotia, K.K.N. Sharma (2009), “Research Methodology”, Mangal Deep Publications, Jaipur.

18. Gopal M.H. (1971), “Introduction to Research Procedure in Social Sciences”, Asia Publishing House.

19. Sharma, B.A.V.; D. Ravindra Prasad, P. Satyanarayana (1983), “Research Methods in Social Sciences”, Sterling publishers, New Delhi.

20. Thakur Devendra (2009), “Research Methodology in Social Sciences”, Deep and Deep Publications, Delhi.

21. Young P.V. (1984), “Scientific Social Survey and Research”, Prentice Hall

22. Aaglave Pradeep, (2020), “Samajik Sanshodhan : Paddhatishastra Wa Tantr”, Shree Sainath Prakashan, Nagpur

Evaluation Pattern

Sr. No.	Pattern	Marks Allocation
1	MCQ Test (Offline): Time: 15 Minutes 10 Questions x 1 Mark each	10
2	Presentation on Research Design (Offline or Hybrid Mode): <ul style="list-style-type: none"> a) The presentation on Research Design has to be prepared by the Ph.D. Research Scholar under the guidance of his / her Ph.D. Research Guide and duly certified by the respective Ph.D. Research Supervisor. b) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work. c) There shall be a Committee for evaluation of the Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research 	10

	<p>Supervisor).</p> <p>d) Joint Evaluation of the presentation to be done by the Committee.</p> <p>e) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for presentation for his / her presentation by the Committee.</p>	
3	<p>Presentation Research Proposal for National Funding Agencies (Offline or Hybrid Mode):</p> <p>a) Ph.D. Research Supervisor has to draft Research Proposal for obtaining financial assistance from National Funding Agencies under the guidance of his / her Ph.D. Research Supervisor and the same duly certified by the respective Ph.D. Research Supervisor.</p> <p>b) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work.</p> <p>c) There shall be a Committee for evaluation of the Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor).</p> <p>d) Joint Evaluation of the presentation to be done by the Committee.</p> <p>e) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for presentation for his / her presentation by the Committee.</p>	10
4	<p>Theory Examination (Offline): (Time: 1 Hour)</p> <p>Que-1: Theory Question on any Unit = 10 Marks OR Que-1: Theory Question on remaining Unit other than above = 10 Marks Que-2: Short Notes (Any 2 out of 3) = 10 Marks</p>	20
Total		50

Course Outcomes:

After completion of course, students will be able to:

- 1) Understand basic knowledge of research methodology and apply skills to prepare research design and describe the data and analyse data through graphs and charts.
- 2) Acquaint the students towards the research techniques used in research.
- 3) Create theoretical and empirical foundation in analysis of data and test hypotheses and draw inference using SPSS.

Syllabus

Course-1(B): Research Methodology-II

Credits: 02 Practical Course (50 Marks)

(Mode of Teaching: Offline in the Laboratory / Hybrid with the help of sharing of SPSS)

Course Objectives:

- 1) To provide basic knowledge about SPSS.
- 2) To impart basic awareness in data analysis using SPSS.
- 3) To familiarize students with data using SPSS.
- 4) To provide skills for research analysis and increase employability.
- 5) To lay a foundation for advance data analysis work and higher education.

Unit No.	Units and Contents	No. of Lectures
1	Introduction of SPSS: Getting Started with SPSS: Starting SPSS, The SPSS Main Menus and Toolbar, Using SPSS Help, and A Brief SPSS Tour Creating and Working with Data Files: Defining Variable, Entering and Editing Data, Inserting and Deleting Cases and Variables, Selecting, Copying, Cutting, and Pasting Data, Printing and Exiting an SPSS Data File, Exporting and Importing SPSS Data, Validating SPSS Data	15
2	Working with Data: Working with Data: Finding Values, Variables, and Cases, Recoding Data and Computing Values, Sorting, Transposing, and Ranking data, Splitting and Merging Files Working with SPSS Graphs and Output for Windows: Creating an SPSS Graph, Enhancing SPSS Graphs, Using the Viewer and Pivot Tables Creating Variables and Computing Descriptive Statistics: Creating Variables, Univariate Descriptive Statistics for Qualitative Variables, Univariate Descriptive Statistics for Quantitative Variables.	15
3	Statistical Tests using SPSS: t Test Procedure: One-Sample t Test, Paired-Samples t Test, Independent-Samples t Test Univariate and Multivariate Analysis of Variance Techniques: One-Way Analysis of Variance, Two-Way	15

	<p>Analysis of Variance, One-Way Analysis of Covariance, One-Way Multivariate Analysis of Variance, One-Way Repeated-Measures Analysis of Variance, Two-Way Repeated-Measures Analysis of Variance.</p> <p>Correlation, Registration and Discriminant Analysis</p> <p>Procedures: Pearson Product-Moment Correlation Coefficient, Partial Correlations, Bivariate Linear Regression, Discriminant Analysis</p>	
4	<p>Scaling and Nonparametric Tests:</p> <p>Scaling Procedures: Factor Analysis, Internal Consistency Estimates of Reliability, Item Analysis Using the Reliability Procedure</p> <p>Nonparametric Procedures: Binomial Test, One-Sample Chi-Square Test, Two-Way Contingency Table Analysis Using Crosstabs, Two Independent-Samples Tests: The Mann-Whitney U Test, K Independent-Samples Tests: The Kruskal-Wallis and the Median Tests, Two Related-Samples Tests: The McNemar, the Sign, and the Wilcoxon Tests, K Related-Samples Tests: The Friedman and the Cochran Tests</p>	15
<p>Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.</p>		
<p align="center">References</p> <ol style="list-style-type: none"> 1. SPSS 17.0 for Researchers, 2nd Edition, by Dr. S. L. Gupta and Hitesh Gupta, International Book House P. Limited 2. Using SPSS for Windows and Macintosh Analysing and Understanding Data (5th Edition) by Samuel B. Green and Neil J. Salkind, Pearson International Edition. 3. Research Method and Data Analysis for Business Decisions: A primer using SPSS, James E. Sallis, Geir Gripsrud, Ulf Henning Olsson, and Ragnhild Silkoiset, Springer 4. Exploratory Data Analysis in Business and Economics: An Introduction using SPSS, Stata, and Excel, Thomas Cleff, Springer 5. Performing Data Analysis using IBM SPSS, Lawrence S, Meyers, Glenn C. Gamst, A. J. Guarino, Wiley Publication 6. SPSS for Windows Step by Step A Simple Guide and Reference, Darren George and Paul Malley 7. SPSS in Simple Steps, Kiran Pandya, Smruti Bulsari, Sanjay Sinha, Dreamtech Press 8. Using in SPSS in Research, Dr. Radha Mohan, Neelkamal 9. IBM 2016, IBM Knowledge Centre: SPSS Statistics, IBM 10. How to use SPSS: A Step-By-Step Guide to Analysis and Interpretation, 		

Brian C. Cronk, Routledge
11. SPSS for Intermediate Statistics: Use and Interpretation, Nancy L. Leech et. al., Second Edition, Lawrence Erlbaum Associates, Inc

Evaluation Pattern		
Sr. No.	Question Paper Pattern	Marks Allocation
1	<p>Preparation of Pilot Study Report on the Research Topic:</p> <ul style="list-style-type: none"> a) Defining a research problem b) Stating hypotheses c) Collection and classification of data to test hypotheses d) Graphical presentation of data using SPSS e) Testing of hypotheses using SPSS f) Findings and conclusions <p>Instructions:</p> <ul style="list-style-type: none"> a) Ph.D. Scholar has to prepare Pilot Study Report on the Research Topic under the guidance of his/her Ph.D. Research Supervisor and the same duly certified by the respective Ph.D. Research Supervisor. b) Ph.D. Scholar has to submit Two Copies of the Pilot Study Report at the Research Centre which has organized Ph.D. Course Work. c) The Pilot Study Report to be evaluated by the Research Centre which has organized Ph.D. Course Work through an Expert (He / She should be Ph.D. Research Supervisor). 	30
2	<p>Presentation of Pilot Project:</p> <p>Instructions:</p> <ul style="list-style-type: none"> a) The Pilot Study Report presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work. b) There shall be a Committee for evaluation of the Pilot Project Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor). c) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for presentation for his / her presentation by the Committee. d) Joint Evaluation of the Pilot Study Report Presentation to be done by the Committee. e) The suggestions given by the Committee shall be 	20

	incorporated by the Ph.D. Research Scholar in his / her further research study in consultation with Ph.D. Research Supervisor.	
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Course Outcomes:

After completion of course, students will be able to:

- 1) Understand basic functions of SPSS for managing variables
- 2) Generate descriptive statistics to describe the data and analyse data through graphs and charts.
- 3) Use tool box of statistical software.
- 4) Create theoretical and empirical foundation in statistical analysis.
- 5) Test statistical hypotheses and draw inference using SPSS.

Syllabus

Course-2: Attending at least One National OR International Level Seminar / Conference / Workshop
Credits: 01 (25 Marks)

Nature of the Course:

Students admitted for Ph.D. Program in Commerce have to attend or participate in the National or International Level Seminars or Conferences or Workshops organized by the Higher Educational Colleges or Institutes or Universities or any Government Agency. The Ph.D. Research Scholar will obtain 01 Credit after producing a Certificate of Participation issued by the organizing Colleges or Institutes or Universities or Government Agency to the Research Centre where the Ph.D. Research Scholar has enrolled for Ph.D. Course Work.

Further, Research Centre which has organized Ph.D. Course Work has to verify the Authenticity of the submitted Certificate of Participation by the Ph.D. Research Scholars.

Syllabus

Course-3(A): Subject Specific Advanced Level Course – I

(Domain Specific-Commerce-Compulsory)

Credits: 04 (100 Marks)

Course Objectives:

- 1) To build advanced theoretical and analytical competence in Accountancy, Taxation, Business Laws, Business Economics and Business Finance and contemporary issues relevant to businesses.
- 2) To equip scholars with the ability to apply contemporary aspects and interdisciplinary insights to analyse complex business environments.
- 3) To develop critical and strategic thinking for decision-making in business world.
- 4) To encourage independent research, critical evaluation of literature, and application of contemporary aspects and insights to resolve real-world business problems.

Unit No.	Units and Contents	No. of Lectures
1	Accountancy and Taxation: 1.1 Accounting Standards 1.2 Ind AS (Indian Accounting Standards) 1.3 GAAP (Globally Accepted Accounting Principles) 1.4 International Financial Reporting Standards (IFRS) 1.5 Blockchain Technology and Cryptocurrencies	15
2	Business Laws: 2.1 Digital Personal Data Protection (DPDP) Act 2023 2.2 The Arbitration and Conciliation Act 1996 2.3 Foreign Exchange Management Act 1999 2.4 Insolvency and Bankruptcy Code, 2016 2.5 The SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 2011	15
3	Business Economics: 3.1 Macroeconomic policy, stability, inflation, and monetary regime design 3.2 Inequality, redistribution, development and political economy 3.3 Inequality of opportunities and human capital formation 3.4 Development economics and global poverty in a fragmented world 3.5 Labor markets, automation, and AI	15

	3.6 Behavioural economics and policy experiments 3.7 Replacement of planning commission by NITI Ayog 3.8 Climate economics and the energy transition 3.9 International economics, trade fragmentation, and deglobalization 3.10 Gig Economy	
4	Business Finance: 4.1 Corporate Governance and Risk Management 4.2 International Finance and Globalization 4.3 Startup and Entrepreneurial Finance 4.4 Crowdfunding 4.5 Rise of Digital Currencies and Blockchain 4.6 Digital platforms, market design, and big data economics 4.7 Finance, systemic risk, and real-time data integration 4.8 Financial Technology (FinTech) 4.9 Sustainable and Green Finance 4.10 Behavioural Finance	15
Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.		
Reference Books		
1) Management Accounting- Text, Problems and Cases, M.Y. Khan & P.K. Jain, Tata McGraw Hill Education Private Limited, New Delhi 2) Management Accounting, R.S.N. Pillai and Bagawati, S. Chand Publication, New Delhi 3) Advanced Management Accounting, Jawahar Lal, S. Chand Publication, New Delhi 4) Accounting for Management, N. P. Srinivas & M. Shaktivel Murugan, S. Chand Publication, New Delhi 5) Management Accounting, M.A. Sahaf, S. Chand Publication, New Delhi 6) Fundamental of Financial Management, Amit Singhal, S. Chand Publication, New Delhi 7) Management Accounting, Dr. S. K. Paul, New Century Book Agency (P) Ltd. 8) Accounting for Management, Dr. Suneel K. Maheshwari, CA Shard Maheshwari, Vikas Publishing House Pvt. Ltd. 9) Management Accounting and Financial Control, Dr. S.N. Maheshwari, Sultan Chand and Sons, New Delhi 10) Accounting for Management, S. Ramanathan, Oxford University Press, New Delhi 11) Advanced Cost and Management Accounting, V. K. Saxena & C. D. Vashist, Sultan Chand and Sons, New Delhi.		

12) Cost and Management Accounting, Inamdar S.M., Everest Publishing House.

13) Study Materials of ICAI, ICSI, ICMA

14) Journal of Chartered Accountants, Journal of Cost and Management Accountants and Journal of Company Secretary

15) A Textbook of Accounting for Management, 3rd Edition, S. N. Maheshwari, Suneel K. Maheswhari and Sharad Maheshwari, Vikas Publishing House Pvt. Ltd., New Delhi.

16) Financial Accounting for BBA, 3rd Edition, S. N. Maheshwari, Suneel K. Maheswhari and Sharad Maheshwari, Vikas Publishing House Pvt. Ltd., New Delhi.

17) Financial and Management Accounting, Dr. S. N. Maheshwari and Sharad Maheshwari, Sultan Chand & Sons (Educational Publishers), New Delhi.

18) Students Guide to Accounting Standards by D. S. Rawat, Taxmann Publication (P.) Ltd., New Delhi

19) Students' Guide to Accounting Standards including Introduction of Ind AS (CA/CMA Final), Dr. D. S. Rawat (FCA) and CA Nozer Shroff, Taxmaan Publication (P.) Ltd., New Delhi

20) Students' Guide to Ind AS Converged IFRSs (CA/CMA Final), Dr. D. S. Rawat (FCA) and CA Pooja Patel, Taxmaan Publication (P.) Ltd., New Delhi

21) Taxmann's Accounting Standards (AS), Notified under Companies Act 2013, Taxmaan Publication (P.) Ltd., New Delhi

22) Taxmaan's Illustrated Guide to Indian Accounting Standards (Ind AS), CA B. D. Chatterjee and CA Jinender Jain, Taxmaan Publication (P.) Ltd., New Delhi.

23) Financial Accounting (For B. Com. and Foundation Course of CA, CS and CMA), S. N. Maheshwari, Suneel K. Maheswhari and Sharad Maheshwari, 3rd Edition, Vikas Publishing House Pvt. Ltd., New Delhi.

24) An Introduction to Accountancy, S. N. Maheshwari, Suneel K. Maheswhari and Sharad Maheshwari, Vikas Publishing House Pvt. Ltd., New Delhi.

25) Accountancy Volume-1 and 2, S. K. R. Paul, Central Educational Enterprises (P) Ltd., Kolkata.

26) Advanced Accountancy (Theory, Method and Application for Professional Competence Course), R. L. Gupta, M. Radhaswamy, Sultan Chand & Sons, New Delhi.

27) Advanced Accountancy Volume-I and II, S. N. Maheshwari, Suneel K. Maheswhari and Sharad Maheshwari, Vikas Publishing House Pvt. Ltd., New Delhi.

28) Advanced Accounts Volume-I and II, M. C. Shukla, T. S. Grewal, S. C. Gupta, S. Chand and Company Limited, New Delhi.

29) Accounting for Management, N.P. Srinivas and M. Shaktivel Murugan, S.

Chand Publication, New Delhi

30) Fundamental of Financial Management, Amit Singhal, S. Chand Publication, New Delhi

31) Accounting for Management, S. Ramanathan, Oxford University Press, New Delhi

32) Taxmann's Auditing & Corporate Governance for B.Com. (H) by Anil Kumar, Lovleen Gupta & Jyotsna Rajan Arora Edition Dec 2023

33) Auditing and Corporate Governance by C B Gupta (Author), Neha Singhal (Author), Scholar Tech Press

34) Auditing and Corporate Governance by Dr. T.R. Sharma, Dr. Gaurav Sankalp, Sahitya Bhawan Publications

35) Corporate Governance: Case study and Analysis by Irene Anne McLaughlin, GRIN Verlag

36) Auditing and Corporate Governance by Dr Preeti Rani Mittal, Dr. Anshika Bansal, Dr. R.C. Bhatia, Sultan Chand and Sons

37) Corporate Governance: Principles, Policies and Practices, Third Edition by A. C. Fernando, E. K. Satheesh, K. P. Muraleedharan, Pearson (2023)

38) Auditing and Corporate Governance by Dr. B. K. Mehta, Dr. Kumari Anamika, and Rachit Mittal, SBPD Publications

39) Commercial's Corporate Governance Board of Directors Duties and Functions by D P Mittal Edition 2022, Commercial Law Publishers (India) Pvt. Ltd.

40) Auditing and Corporate Governance by Dr. Biswas Mohana Jena, Himalaya Publishing House

41) Auditing and Assurance, Institute of Chartered Accountants of India

42) Audit and Assurance (2020), ACCA, UK

43) Audit and Assurance, Chartered Institute of Public Finance and Accountancy, UK

44) Handbook (2022) Published by International Auditing and Assurance Standards Board

45) Audit of Financial Statements by Pranav Jain, Taxmann's Publication, New Delhi

46) Principles and Practice of Auditing by Dinkar Pagare, Sultan Chand & Sons, New Delhi

47) Standards on Auditing: A Practitioner's Guide by CA Kamal Garg, Wolters Kluwer

48) Bharat's Standards on Auditing: A Practitioner's Guide by CA Kamal Garg

49) Foreign Trade and Export-Import Policy of India by Madhusudana H, Madhusudana H.S., Madhusudana H.S., Publisher: New Century Publications

50) The Digital Personal Data Protection Act 2023 by Yogesh V Nayyar, Whitesmann.

51) Taxmann's Digital Personal Data Protection Act 2023 with Digital

Personal Data Protection Rules 2025

- 52) The Digital Personal Data Protection Act: Implementing India's DPDP Act across cloud, SaaS, and enterprise systems by Ashish Kumar, Nisha Narasimhan and Amit Sachdev, Bpb Publications
- 53) Textbook on Arbitration and Conciliation Act with Mediation Law and ADR by M. C. Bhandari, WHYTES & CO.
- 54) Taxmann's Arbitration and Conciliation Act 1996 with Regulations – Bare Act
- 55) Central Law Publications' Arbitration & Conciliation Act, 1996 with Alternative Means of Settlement of Disputes by DR S.C TRIPATHI Edition 2021
- 56) Taxmann's Foreign Exchange Management Act 1999 with Rules – Bare Act
- 57) Lexis Nexis Commentary on The Foreign Exchange Management Act by S K Sarvaria and Apoorv Sarvaria
- 58) Taxmann's Insolvency and Bankruptcy Code with Rules and Regulations
- 59) Lexis Nexis's Mulla the Law of Insolvency in India by Dinshaw Fardunji Mulla and Aparna Ravi
- 60) Taxmann's Law Relating to Takeover Regulations: SEBI (Substantial Acquisition of Shares and Takeovers) Regulations 2011
- 61) SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 2011 (Law & Practice) by CS. Abha Jaiswal, Bharat Law House
- 62) Tirole, J. — The Theory of Industrial Organization
- 63) Milgrom, P. & Roberts, J. — Economics, Organization and Management
- 64) Hart, O. — Firms, Contracts, and Financial Structure
- 65) Coase, R. — "The Nature of the Firm," Economica (Classic foundational article)
- 66) Varian, H. — Intermediate Microeconomics (Advanced chapters on market power)
- 67) Pepall, Richards & Norman — Industrial Organization: Contemporary Theory and Practice
- 68) Belleflamme, P. & Peitz, M. — Industrial Organization: Markets and Strategies
- 69) Cabral, L. — Introduction to Industrial Organization
- 70) Kahneman, D. — Thinking, Fast and Slow
- 71) Camerer, C. — Behavioral Game Theory
- 72) Ariely, D. — Predictably Irrational
- 73) Glimcher, P. — Foundations of Neuroeconomic Analysis
- 74) Thaler, R. — Misbehaving: The Making of Behavioural Economics
- 75) Romer, D. (2019). Advanced Macroeconomics (5th ed.). McGraw-Hill Education.
- 76) Ljungqvist, L., & Sargent, T. J. (2018). Recursive Macroeconomic

Theory (4th ed.). MIT Press.

77) Gali, J. (2015). Monetary Policy, Inflation, and the Business Cycle (2nd ed.). Princeton University Press.

78) Blanchard, O., & Fischer, S. (1989). Lectures on Macroeconomics. MIT Press.

79) Woodford, M. (2003). Interest and Prices: Foundations of a Theory of Monetary Policy. Princeton University Press.

Evaluation Pattern

Sr. No.	Pattern	Marks Allocation
1	MCQ Test (Offline): Time: 45 Minutes 30 Questions x 1 Mark each	30
2	<p>Presentation on the Topic allotted by the Research Centre which has organized Ph.D. Course Work (Offline or Hybrid Mode):</p> <p>Instructions:</p> <p>a) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work.</p> <p>b) There shall be a Committee for evaluation of the Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor).</p> <p>c) Joint Evaluation of the presentation to be done by the Committee.</p> <p>d) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for his / her presentation of topic by the Committee.</p>	20
3	<p>Theory Examination (Offline): (Time: 2½ Hours)</p> <p>Instructions:</p> <p>a) Attempt any Three Questions from Q. No. 1 to 4.</p> <p>b) Question No. 5 is compulsory.</p> <p>Q. 1: Question on Unit-1 = 15 Marks Q. 2: Question on Unit-2 = 15 Marks Q. 3: Question on Unit-3 = 15 Marks Q. 4: Question on Unit-4 = 15 Marks Q. 5: Short Notes (Any 1 out of 4) = 05 Marks</p>	50
Total		100

Course Outcomes:

After completion of course, students will be able to:

- 1) Apply advanced theoretical and analytical competence in Accountancy, Taxation, Business Laws, Business Economics and Business Finance and contemporary issues relevant to businesses.
- 2) Evaluate business environments forces and assess their implications for business.
- 3) Understand and critique innovation systems, technological change, AI-driven markets, and entrepreneurial ecosystems using modern and contemporary aspects.
- 4) Analyse contemporary global challenges and design research-backed business and policy strategies.
- 5) Conduct high-quality academic research using theoretical, empirical, and interdisciplinary approaches in business, trade, commerce etc.

Syllabus

Course-3(B): Subject Specific Advanced Level Course – II

(Board of Studies Specific: Accountancy)

Title of Course: Accountancy and Taxation (Elective)

Credits: 04 (100 Marks)

Course Objectives:

- 1) To build advanced analytical competence in Accountancy, Auditing and Governance, Taxation Laws, and contemporary issues relevant to businesses.
- 2) To equip scholars with the ability to apply contemporary aspects and interdisciplinary insights to analyse complex business environments.
- 3) To develop critical and strategic thinking for decision-making in business world.
- 4) To encourage independent research, critical evaluation of literature, and application of contemporary aspects and insights to resolve real-world business problems.

Unit No.	Units and Contents	No. of Lectures
1	Evolution and Role of Accounting: Financial Accounting Cost Accounting Management Accounting Human Resource Accounting Environmental Accounting Inflation Accounting Carbon Credit Accounting Agile and Proactive Accounting	15
2	Auditing and Governance: Auditing Assurance Standards Auditing and Corporate Governance Environment, Social and Governance (ESG) Assurance Corporate Social Responsibility Accounting and Reporting Corporate Governance and Ethics Companies (Auditor's Report) Order, 2020 (CARO 2020)	15
3	Taxation Laws: Money Bill and Finance Bill Income Computation and Disclosure Standards (ICDS) International Taxation Goods and Services Tax	15

4	<p>Recent Developments:</p> <p>Forensic Accounting and Fraud Detection Investment Portfolio Management Foreign Trade Policy (FTP) Maintenance of Accounting Records through ERP or SAP</p>	15
<p>Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.</p>		
Reference Books		
<ol style="list-style-type: none"> 1) Management Accounting- Text, Problems and Cases, M.Y. Khan & P.K. Jain, Tata McGraw Hill Education Private Limited, New Delhi 2) Management Accounting, R.S.N. Pillai and Bagawati, S. Chand Publication, New Delhi 3) Advanced Management Accounting, Jawahar Lal, S. Chand Publication, New Delhi 4) Accounting for Management, N. P. Srinivas & M. Shaktivel Murugan, S. Chand Publication, New Delhi 5) Management Accounting, M.A. Sahaf, S. Chand Publication, New Delhi 6) Fundamental of Financial Management, Amit Singhal, S. Chand Publication, New Delhi 7) Management Accounting, Dr. S. K. Paul, New Century Book Agency (P) Ltd. 8) Accounting for Management, Dr. Suneel K. Maheshwari, CA Shard Maheshwari, Vikas Publishing House Pvt. Ltd. 9) Management Accounting and Financial Control, Dr. S.N. Maheshwari, Sultan Chand and Sons, New Delhi 10) Accounting for Management, S. Ramanathan, Oxford University Press, New Delhi 11) Advanced Cost and Management Accounting, V. K. Saxena & C. D. Vashist, Sultan Chand and Sons, New Delhi. 12) Cost and Management Accounting, Inamdar S.M., Everest Publishing House. 13) Study Materials of ICAI, ICSI, ICMA 14) Journal of Chartered Accountants, Journal of Cost and Management Accountants and Journal of Company Secretary 15) Direct Taxes Law and Practice (Professional Edition) by Dr. Vinod K. Singhania and Dr. Kapil Singhania, Taxmann Publication (P) Ltd., New Delhi 16) Constitution of India 17) A Textbook of Accounting for Management, 3rd Edition, S. N. Maheshwari, Suneel K. Maheshwari and Sharad Maheshwari, Vikas Publishing House Pvt. Ltd., New Delhi. 18) Financial Accounting for BBA, 3rd Edition, S. N. Maheshwari, Suneel K. Maheshwari and Sharad Maheshwari, Vikas Publishing House Pvt. Ltd., 		

New Delhi.

- 19) Financial and Management Accounting, Dr. S. N. Maheshwari and Sharad Maheshwari, Sultan Chand & Sons (Educational Publishers), New Delhi.
- 20) Students Guide to Accounting Standards by D. S. Rawat, Taxmann Publication (P.) Ltd., New Delhi
- 21) Students' Guide to Accounting Standards including Introduction of Ind AS (CA/CMA Final), Dr. D. S. Rawat (FCA) and CA Nozer Shroff, Taxmaan Publication (P.) Ltd., New Delhi
- 22) Students' Guide to Ind AS Converged IFRSs (CA/CMA Final), Dr. D. S. Rawat (FCA) and CA Pooja Patel, Taxmaan Publication (P.) Ltd., New Delhi
- 23) Taxmann's Accounting Standards (AS), Notified under Companies Act 2013, Taxmaan Publication (P.) Ltd., New Delhi
- 24) Taxmaan's Illustrated Guide to Indian Accounting Standards (Ind AS), CA B. D. Chatterjee and CA Jinender Jain, Taxmaan Publication (P.) Ltd., New Delhi.
- 25) Financial Accounting (For B. Com. and Foundation Course of CA, CS and CMA), S. N. Maheshwari, Suneel K. Maheswhari and Sharad Maheshwari, 3rd Edition, Vikas Publishing House Pvt. Ltd., New Delhi.
- 26) An Introduction to Accountancy, S. N. Maheshwari, Suneel K. Maheswhari and Sharad Maheshwari, Vikas Publishing House Pvt. Ltd., New Delhi.
- 27) Accountancy Volume-1 & 2, S. KR. Paul, Central Educational Enterprises (P) Ltd., Kolkata.
- 28) Advanced Accountancy (Theory, Method and Application for Professional Competence Course), R. L. Gupta, M. Radhaswamy, Sultan Chand & Sons, New Delhi.
- 29) Advanced Accountancy Volume-I & II, S. N. Maheshwari, Suneel K. Maheswhari and Sharad Maheshwari, Vikas Publishing House Pvt. Ltd., New Delhi.
- 30) Advanced Accounts Volume-I & II, M. C. Shukla, T. S. Grewal, S. C. Gupta, S. Chand and Company Limited, New Delhi.
- 31) Accounting for Management, N.P. Srinivas & M. Shaktivel Murugan, S. Chand Publication, New Delhi
- 32) Fundamental of Financial Management, Amit Singhal, S. Chand Publication, New Delhi
- 33) Accounting for Management, S. Ramanathan, Oxford University Press, New Delhi
- 34) Students' Guide to Income Tax including GST by Dr. Vinod K. Singhania and Dr. Monica Singhania, Taxmann Publication (P) Ltd., New Delhi
- 35) GST Acts with Rules/Forms and Notifications, Taxmann Publication (P) Ltd., New Delhi
- 36) Indirect Tax (GST) by Dr. V. S. Datey, Taxmann Publication (P) Ltd., New

Delhi

- 37) Taxmann's Auditing & Corporate Governance for B.Com. (H) by Anil Kumar, Lovleen Gupta & Jyotsna Rajan Arora Edition Dec 2023
- 38) Auditing and Corporate Governance by C B Gupta (Author), Neha Singhal (Author), Scholar Tech Press
- 39) Auditing and Corporate Governance by Dr. T.R. Sharma, Dr. Gaurav Sankalp, Sahitya Bhawan Publications
- 40) Corporate Governance: Case study and Analysis by Irene Anne McLaughlin, GRIN Verlag
- 41) Auditing and Corporate Governance by Dr Preeti Rani Mittal, Dr. Anshika Bansal, Dr. R.C. Bhatia, Sultan Chand and Sons
- 42) Corporate Governance: Principles, Policies and Practices, Third Edition by A. C. Fernando, E. K. Satheesh, K. P. Muraleedharan, Pearson (2023)
- 43) Auditing and Corporate Governance by Dr. B. K. Mehta, Dr. Kumari Anamika, and Rachit Mittal, SBPD Publications
- 44) Commercial's Corporate Governance Board of Directors Duties and Functions by D P Mittal Edition 2022, Commercial Law Publishers (India) Pvt. Ltd.
- 45) Auditing and Corporate Governance by Dr. Biswas Mohana Jena, Himalaya Publishing House
- 46) Auditing and Assurance, Institute of Chartered Accountants of India
- 47) Audit and Assurance (2020), ACCA, UK
- 48) Audit and Assurance, Chartered Institute of Public Finance and Accountancy, UK
- 49) Handbook (2022) Published by International Auditing and Assurance Standards Board
- 50) Audit of Financial Statements by Pranav Jain, Taxmann's Publication, New Delhi
- 51) Principles and Practice of Auditing by Dinkar Pagare, Sultan Chand & Sons, New Delhi
- 52) Standards on Auditing: A Practitioner's Guide by CA Kamal Garg, Wolters Kluwer
- 53) Bharat's Standards on Auditing: A Practitioner's Guide by CA Kamal Garg
- 54) Taxmann's International Taxation Ready Recknor by CA Daksha Bakshi and Adv. Surajkumar Shetty
- 55) Bharat's Guide to International Taxation by KAMAL GARG
- 56) Taxmann's X CTC's International Taxation: A Compendium – Authoritative Guide on Global Taxation
- 57) Bharat's Law & Practice of Transfer Pricing (Domestic & International Transactions) by Divakar Vijayasarathy Edition 2024
- 58) Forensic Accounting and Fraud Examination, Mary-Jo Kranacher, Richard Riley, John Wiley & Sons, 2023
- 59) Forensic Accounting and Fraud Examination, Jay Leiner, Instructor, Prof

George Richard Young, William Hopwood, Professor, McGraw-Hill Education, 2011

60) Bharat's Forensic Accounting & Corporate Fraud Investigation- 2025 Edition by CA. Arvind Tuli, Bharat Law House

61) Financial Investigation and Forensic Accounting by George A. Manning, Routledge Publisher

62) Forensic Accounting and Financial Statement Fraud, Volume I: Fundamentals of Forensic Accounting: 1 by Zabihollah Rezaee, Business Expert Press

63) Forensic Accounting and Financial Statement Fraud, Volume II: Forensic Accounting Performance: 2 by Zabihollah Rezaee, Business Expert Press

64) Red Flags Compendium Practical Case Studies in Forensic Accounting & Corporate Fraud Investigation by CA. Kamal Garg, Bharat Law House Pvt. Ltd.

65) Forensic Accounting, Fraud Investigation And Fraud Analytics by Adil Khan, Adil Khan Publisher

66) Foreign Trade and Export-Import Policy of India by Madhusudana H, Madhusudana H.S., Madhusudana H.S., Publisher: New Century Publications

67) Final Course Study Material Group-II, Indirect Tax Laws: Part-II: Module-4, New Delhi

68) Commentary on the Customs Act, 1962 (In 3 Volumes) by Ramamurthy S, Bloomsbury Professional India

69) Taxmann's Customs Law & Practice with Foreign Trade Policy 2024 by V. S. Datey

70) Customs Tariff of India by R.K. Jain, Centax Publication

71) Commentary on The Customs Act 1962 by T.P. Mukherjee, Delhi Law House

72) BDP's Customs Law Manual with CD by ANAND GARG

73) Taxmann's Students' Guide to GST & Customs Law by Dr. Vinod K. Singhania

74) Customs Act with Rules & Regulations Book by Taxmann

75) R.K. Jain's Customs Tariff, IGST and Foreign Trade Policy Rate Recknor, Centax

Evaluation Pattern

Sr. No.	Pattern	Marks Allocation
1	MCQ Test (Offline): Time: 45 Minutes 30 Questions x 1 Mark each	30
2	Presentation on the Topic allotted by the Research Centre which has organized Ph.D. Course Work (Offline or Hybrid Mode): Instructions:	20

	<p>a) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work.</p> <p>b) There shall be a Committee for evaluation of the Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor).</p> <p>c) Joint Evaluation of the presentation to be done by the Committee.</p> <p>d) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for his / her presentation of topic by the Committee.</p>	
3	<p>Theory Examination (Offline): (Time: 2½ Hours)</p> <p>Instructions:</p> <p>a) Attempt any Three Questions from Q. No. 1 to 4.</p> <p>b) Question No. 5 is compulsory.</p> <p>Q. 1: Theory Question on Unit-1 = 15 Marks Q. 2: Theory Question on Unit-2 = 15 Marks Q. 3: Theory Question on Unit-3 = 15 Marks Q. 4: Theory Question on Unit-4 = 15 Marks Q. 5: Short Notes (Any 1 out of 4) = 05 Marks</p>	50
	Total	100

Course Outcomes:

After completion of course, students will be able to:

- 1) Apply advanced theoretical and analytical competence in Accountancy, Taxation Laws, Auditing and Governance relevant to businesses.
- 2) Evaluate business environments forces and assess their implications for business.
- 3) Analyse contemporary global challenges and design research-backed business and policy strategies.
- 4) Conduct high-quality academic research using theoretical, empirical, and interdisciplinary approaches in business, trade, commerce etc.

Syllabus

Course-3(B): Subject Specific Advanced Level Course – II
(Board of Studies Specific: Cost and Works Accounting)
Title of Course: Cost and Management Accounting (Elective)
Credits: 04 (100 Marks)

Course Objectives:

- 1) To deepen the learner's ability to critically analyse and integrate advanced costing frameworks, including contemporary global practices, for strategic cost leadership.
- 2) To apply modern cost management techniques such as Activity-Based Costing, Lean Costing, Target Costing, Sustainability Costing, and ERP-based cost systems in complex organisational environments.
- 3) To evaluate cost structures using advanced analytical tools (AI-driven costing models, predictive analytics, big data applications) for strategic decision-making and performance optimisation.
- 4) To design and assess digitalised costing systems, incorporating automation, real-time dashboards, MIS, cloud ERP, and Industry 4.0 technologies across manufacturing and service sectors.
- 5) To develop capability for research-led examination of cost behaviour, cost drivers, value chains, and emerging trends such as environmental costing, carbon accounting, and global supply chain costing.
- 6) To prepare and interpret advanced managerial and cost audit reports, integrating regulatory compliance, governance norms, and sustainability reporting frameworks (IFRS, GRI, Integrated Reporting).

Unit No.	Units and Contents	No. of Lectures
1	Advanced Cost Frameworks, Cost Structures and Digital Cost Systems: 1.1 Contemporary Cost Accounting Frameworks: 1.1.1 Cost transformation and cost leadership strategies 1.1.2 Strategic cost management: global models 1.1.3 Value chain analysis and cost competitiveness 1.1.4 Structural, executional, and digital-era cost drivers 1.2 Cost Structures in Modern Business Landscapes: 1.2.1 Cost structures in high-automation and smart manufacturing industries 1.2.2 Cost behavior in start-up and digital platform business models	15

	<p>1.2.3 Subscription economy and platform economy costing</p> <p>1.2.4 Sustainability-driven and circular economy cost structures</p> <p>1.3 Digitalization of Cost Systems:</p> <p>1.3.1 ERP-integrated cost accounting (SAP S/4HANA, Oracle, Tally Prime ERP)</p> <p>1.3.2 AI-driven cost allocation and predictive cost models</p> <p>1.3.3 Machine learning for cost forecasting</p> <p>1.3.4 IOT-enabled real-time cost tracking and dashboards</p> <p>1.3.5 Cost implications of Industry 4.0, automation, robotics, and smart factories</p> <p>1.4 Regulatory and Governance Perspectives:</p> <p>1.4.1 Cost records and cost audit rules under the latest Companies Act provisions</p> <p>1.4.2 SEBI and MCA cost-related compliance</p> <p>1.4.3 Integrated Reporting (IR) and cost implications</p> <p>1.4.4 Global frameworks: IFRS, IAS 2, GRI sustainability standards</p>	
2	<p>2.1 Advanced Process Costing and Hybrid Costing:</p> <p>2.1.1 Costing in modern process industries (chemical, pharma, FMCG)</p> <p>2.1.2 Hybrid costing models in automated manufacturing</p> <p>2.1.3 Real-time cost monitoring using digital systems</p> <p>2.1.4 Research issues in inter-process profits and equivalent units</p> <p>2.2 Strategic Application of ABC and ABM:</p> <p>2.2.1 Time-driven ABC (TDABC)</p> <p>2.2.2 Activity cost pools in advanced service-oriented and digital industries</p> <p>2.2.3 ABM for process optimisation and cost rationalisation</p> <p>2.2.4 Global case studies (Toyota, GE, Tata Group, Infosys)</p> <p>2.3 Advanced Service Sector Costing:</p> <p>2.3.1 Costing in IT and cloud computing services</p> <p>2.3.2 Costing in healthcare and education sectors</p> <p>2.3.3 Costing in logistics, warehousing, and multimodal</p>	15

	<p>transport</p> <p>2.3.4 Public sector and PPP model costing</p> <p>2.4 Global Costing Practices:</p> <p>2.4.1 Japanese cost management (Kaizen, JIT, Genka Keisan)</p> <p>2.4.2 German Grenz Plan Kostenrechnung (GPK) system</p> <p>2.4.3 U.S. and European strategic cost management practices</p> <p>2.4.4 Relevance and adaptations for Indian organisations</p>	
3	<p>Strategic Cost Management, Analytics and Decision Frameworks:</p> <p>3.1 Strategic Cost Management (SCM):</p> <p>3.1.1 SCM frameworks and links with corporate strategy</p> <p>3.1.2 Benchmarking and competitive cost analysis</p> <p>3.1.3 Cost of Quality (COQ) and Six Sigma costing</p> <p>3.1.4 Strategic pricing and global pricing decisions</p> <p>3.2 Data Analytics & Predictive Cost Modelling:</p> <p>3.2.1 Cost analytics using big data</p> <p>3.2.2 Predictive modelling for cost forecasting</p> <p>3.2.3 Sensitivity analysis and scenario planning</p> <p>3.2.4 Statistical tools for cost optimisation</p> <p>3.3 Advanced Marginal Costing and Decision Models:</p> <p>3.3.1 Complex decision-making: shutdown, outsourcing, expansion</p> <p>3.3.2 CVP analysis for digital-first and subscription-based companies</p> <p>3.3.3 Contribution analysis under multi-constraint environments</p> <p>3.3.4 Simulation-based cost and decision modelling</p> <p>3.4 Budgeting and Performance Measurement Systems:</p> <p>3.4.1 Beyond budgeting models</p> <p>3.4.2 Balanced Scorecard and strategic performance measurement</p> <p>3.4.3 Responsibility accounting in matrix/networked structures</p> <p>3.4.4 Rolling budgets and real-time performance dashboards</p>	15
4	<p>Cost Audit, Sustainability Accounting and Emerging Frontiers:</p> <p>4.1 Advanced Cost Audit & Compliance:</p>	15

<ul style="list-style-type: none"> 4.1.1 Digital cost audit tools and techniques 4.1.2 Governance, transparency, and ethical cost reporting 4.1.3 Contemporary issues in cost audit practices 4.1.4 Cost audit in large Indian corporates and PSUs 	<p>4.2 Sustainability Costing and Green Accounting:</p> <ul style="list-style-type: none"> 4.2.1 Environmental cost accounting 4.2.2 Carbon accounting and emission-based cost measurement 4.2.3 Circular economy costing and waste minimisation 4.2.4 ESG reporting, SDG-based costing, and GRI standards <p>4.3 Contemporary Costing Approaches in Research:</p> <ul style="list-style-type: none"> 4.3.1 Life cycle costing in global industries 4.3.2 Target costing in automotive and electronics sectors 4.3.3 Lean accounting and its impact on operational profitability 4.3.4 Integration of social and environmental costs in cost structures <p>4.4 Emerging Areas for Research in Cost Accounting:</p> <ul style="list-style-type: none"> 4.4.1 Digital twin costing 4.4.2 Blockchain for cost traceability 4.4.3 Cybersecurity cost management 4.4.4 Costing in global supply chain disruptions 4.4.5 AI-driven real-time cost optimisation models 	
<p>Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.</p>		
Reference Books		
<ol style="list-style-type: none"> 1) Arora, M. N. (2023). <i>A Textbook of Cost and Management Accounting</i>. Vikas Publishing House. This book provides comprehensive coverage of the entire cost accounting discipline and remains foundational for advanced learners. 2) Arora, M. N. (2022). <i>Cost Accounting: Principles and Practice</i>. Vikas Publishing House. This widely used text covers advanced costing methods, overheads, process costing, and is extremely useful for deep conceptual clarity. 3) Saxena, V. K., & Vashist, C. D. (2024). <i>Advanced Cost and Management Accounting</i>. Sultan Chand & Sons. A detailed Indian reference covering contemporary approaches, managerial applications, and analytical costing tools. 		

- 4) Saxena, V. K., & Vashist, C. D. (2022). *Cost Accounting: Theory and Practice*. Sultan Chand & Sons. Often prescribed in postgraduate programmes, this text includes cost audit, budgeting, and emerging costing trends.
- 5) Shukla, M. C., Grewal, T. S., & Gupta, M. P. (2020). *Cost Accounting: Text and Problems*. S. Chand & Company. A classic reference trusted across generations for its breadth of numerical problems and theoretical depth.
- 6) Drury, Colin (2020). *Management and Cost Accounting*. Cengage Learning. A global standard textbook emphasising modern cost management, ABC, and decision-making analytics.
- 7) Horngren, Charles T., Datar, S. M., & Rajan, M. V. (2018). *Cost Accounting: A Managerial Emphasis*. Pearson Education. Considered the most authoritative book internationally, especially on ABC, cost behaviour, and strategy-linked costing.
- 8) Kinney, M. R., & Raiborn, C. A. (2017). *Cost Accounting: Foundations and Evolutions*. Cengage. This text offers a modern, evolving view of cost accounting with a strong emphasis on global practices.
- 9) Kaplan, Robert S., & Atkinson, Anthony A. (2015). *Advanced Management Accounting*. Pearson. A classic for advanced strategic cost management, ABM, and strategic performance systems.
- 10) Kaplan, Robert S., & Anderson, S. R. (2007). *Time-Driven Activity-Based Costing*. Harvard Business School Press. This is essential reading for advanced ABC and ABM research.
- 11) Blocher, Edward J., Stout, David E., & Cokins, Gary (2019). *Cost Management: A Strategic Emphasis*. McGraw-Hill. A strategic and analytics-driven resource on modern cost management.
- 12) Cokins, Gary (2021). *Performance Management: Integrating Strategy Execution, Analytics, Costing, and Risk*. Wiley. Widely used in advanced research for integrating costing with analytics.
- 13) Maheshwari, S. N., & Mittal, S. N. (2022). *Cost Accounting*. Sultan Chand & Sons. Strong Indian perspective with extensive illustrations and modern costing techniques.
- 14) Maheshwari, S. N., & Pandey, S. (2023). *Advanced Cost Accounting*. Sultan Chand & Sons. Useful for topics like inter-firm comparison, cost audit, and decision models.
- 15) Periasamy, P. (2018). *A Textbook of Financial, Cost and Management Accounting*. Himalaya Publishing House. A broad, versatile text for covering intersections across three domains.
- 16) Kishore, Ravi M. (2020). *Cost Accounting and Financial Management*. Taxmann. A highly practical approach integrating Indian corporate examples.
- 17) J. K. Mitra (2023). *Cost Accounting – I*. Oxford University Press. This book gives structured clarity with conceptual depth, even though foundational.

18)Tulsian, P. C. (2021). *Cost Accounting*. S. Chand & Company. Widely used by PG students for problem-solving and clarity in costing methods.

19)Bhattacharyya, Asish K. (2016). *Management Accounting*. Pearson Education India. Useful for advanced managerial costing concepts at Ph.D level.

20)Bhattacharyya, A. K. (2020). *Cost Accounting for Business Managers*. Pearson. An advanced analytical text suitable for research-oriented learners.

21)Hansen, Don R., & Mowen, Maryanne M. (2019). *Cornerstones of Cost Management*. Cengage Learning. Strong conceptual approach with updated examples.

22)Anthony, Robert N., & Govindarajan, Vijay (2011). *Management Control Systems*. McGraw-Hill. Essential book for understanding cost control and responsibility centres.

23)Merchant, Kenneth, & Van der Stede, Wim (2017). *Management Control Systems*. Pearson. Useful for linking cost systems with governance, performance, and strategy.

24)Atkinson, Anthony A., Kaplan, R. S., & Young, S. Mark (2011). *Management Accounting*. Pearson. Bridges advanced cost concepts with management control.

25)Shank, John K., & Govindarajan, V. (1993). *Strategic Cost Management*. Free Press. A pioneer book linking strategy and costing — essential for Unit 3.

26)Cooper, Robin, & Kaplan, Robert S. (1999). *The Design of Cost Management Systems*. Prentice Hall. A foundational book for strategic cost systems.

27)Porter, Michael E. (1985). *Competitive Advantage: Creating and Sustaining Superior Performance*. Free Press. Required reading for value chain analysis and strategic cost positioning.

28)Ittner, Christopher D., & Larcker, David F. (2001). *Financial and Nonfinancial Performance*. Harvard Business Review. Useful for balanced scorecard and strategic costing.

29)Simons, Robert (1995). *Levers of Control*. Harvard Business School Press. Influential in understanding performance measurement and cost system design.

30)Garrison, Ray H., Noreen, Eric, & Brewer, Peter (2021). *Managerial Accounting*. McGraw-Hill. Strong for CVP analysis and decision models, even at advanced level.

31)Bhimani, Alnoor (2012). *Management Accounting: European Perspectives*. Oxford University Press. Useful for understanding European cost practices such as GPK.

32)Dransfield, Don R. (2017). *Cost & Management Accounting for Modern Business*. CIMA Publishing. Strong practitioner-focused resource.

33)CIMA (2022). *Official Study Texts for Cost Management & Performance Management*. Chartered Institute of Management Accountants. Highly authoritative.

34)ICAI (2023). *Cost and Management Accounting Study Material*. Institute of Cost Accountants of India. Updated for Indian regulatory environment.

35)ICAI (2022). *Cost Audit and Records*. Institute of Cost Accountants of India. Essential for Unit 4.

36)CIMA (2019). *Strategic Management Accounting*. CIMA Publishing. Required for advanced research and strategic applications.

37)Blocher, E. J., & Chen, K. H. (2018). *Contemporary Issues in Cost Accounting*. McGraw-Hill. Modern topics for Ph.D students.

38)Bhimani, A., Horngren, T., Datar, S. M., & Rajan, M. (2018). *Management and Cost Accounting* (European edition). Pearson. Provides international perspective.

39)Tayles, Mike, & Drury, Colin (2016). *Costing for Service Industries*. CIMA. Specialized for Unit 2.

40)Hansen, Stephen C. (2009). *Activity-Based Costing and Management*. CIMA. A research-oriented ABC/ABM text.

41)Cooper, Robin (1990). *Implementing ABC Systems*. Harvard Business School Press. A foundational reference for ABC development.

42)Lapsley, Irvine (2020). *Public Sector Costing and Financial Management*. Routledge. Useful for PPP costing and government sector studies.

43)Khan, M. Y., & Jain, P. K. (2019). *Management Accounting*. Tata McGraw-Hill. Good for linking cost behaviour and financial strategy.

44)Muthupandian, P. (2018). *Cost Control and Reduction Techniques*. Himalaya Publications. Useful for Unit 3 on cost reduction frameworks.

45)Hergert, Michael (1989). *Cost Analysis of the Value Chain*. Management Review. Important for value chain cost research.

46)Hansen, R., & Mowen, M. M. (2017). *Cost Management: Accounting and Control*. Cengage. Excellent for control systems.

47)Richardson, Alan (2015). *Cost Accounting in the Digital Age*. Wiley. Essential for modern digital systems.

48)O'Guin, Michael (1991). *The Complete Guide to Activity-Based Costing*. Prentice Hall. ABC foundations.

49>Solomons, David (1991). *Divisional Performance Measurement*. Prentice Hall. A classic on responsibility accounting.

50)Shapiro, Alan (2007). *Capital Budgeting and Cost Management*. Wiley. Useful for investment-cost linkages.

51)Bromwich, Michael (1990). *Cost Accounting and Strategy*. Oxford. Highly relevant for strategic cost management.

52)Gunasekaran, A. (2000). *Costing in Supply Chains*. Elsevier. Important for advanced supply-chain cost analysis.

53)Kumar, Satish (2019). *Sustainability Accounting & Costing*. Routledge

India. For Unit 4 sustainability costing.

54) Schaltegger, Stefan (2017). *Environmental Management Accounting*. Springer. Essential for ESG, SDG-based costing.

55) Hansen, J. (2018). *Lean Accounting*. Productivity Press. For lean, kaizen, and continuous improvement costing.

Evaluation Pattern												
Sr. No.	Pattern	Marks Allocation										
1	<p>MCQ Test (Offline): Time: 45 Minutes 30 Questions x 1 Mark each</p>	30										
2	<p>Presentation on the Topic allotted by the Research Centre which has organized Ph.D. Course Work (Offline or Hybrid Mode):</p> <p>Instructions:</p> <ul style="list-style-type: none"> a) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work. b) There shall be a Committee for evaluation of the Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor). c) Joint Evaluation of the presentation to be done by the Committee. d) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for his / her presentation of topic by the Committee. 	20										
3	<p>Theory Examination (Offline): (Time: 2½ Hours)</p> <p>Instructions:</p> <ul style="list-style-type: none"> a) Attempt any Three Questions from Q. No. 1 to 4. b) Question No. 5 is compulsory. <table> <tr> <td>Q. 1: Question on Unit-1</td> <td>= 15 Marks</td> </tr> <tr> <td>Q. 2: Question on Unit-2</td> <td>= 15 Marks</td> </tr> <tr> <td>Q. 3: Question on Unit-3</td> <td>= 15 Marks</td> </tr> <tr> <td>Q. 4: Question on Unit-4</td> <td>= 15 Marks</td> </tr> <tr> <td>Q. 5: Short Notes (Any 1 out of 4)</td> <td>= 05 Marks</td> </tr> </table>	Q. 1: Question on Unit-1	= 15 Marks	Q. 2: Question on Unit-2	= 15 Marks	Q. 3: Question on Unit-3	= 15 Marks	Q. 4: Question on Unit-4	= 15 Marks	Q. 5: Short Notes (Any 1 out of 4)	= 05 Marks	50
Q. 1: Question on Unit-1	= 15 Marks											
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Q. 3: Question on Unit-3	= 15 Marks											
Q. 4: Question on Unit-4	= 15 Marks											
Q. 5: Short Notes (Any 1 out of 4)	= 05 Marks											
Total		100										

Course Outcomes:

After completion of course, students will be able to:

- 1) Critically analyse complex cost structures and apply contemporary cost accounting frameworks to address strategic, operational, and research-level problems.
- 2) Design and implement advanced costing systems such as Time-Driven ABC, Lean Costing, Target Costing, and Digital ERP-based costing models appropriate for modern industries.
- 3) Evaluate cost behaviour using advanced analytical tools, including predictive modelling, big data analytics, and AI-driven cost forecasting techniques.
- 4) Conduct high-level decision-making using marginal costing, CVP analysis, simulation modelling, and scenario planning in complex business environments.
- 5) Prepare, interpret, and assess advanced cost reports and audit documents, ensuring compliance with regulatory, environmental, and governance standards.
- 6) Critically examine global trends in cost and management accounting and compare international costing practices such as GPK, Kaizen, and Genka Keisan.
- 7) Apply strategic cost management principles for improving organisational efficiency, competitive positioning, and long-term sustainability.
- 8) Formulate research insights and contribute scholarly work in emerging areas such as sustainability costing, carbon accounting, digital costing tools, blockchain cost traceability, and Industry 4.0-enabled cost systems.

Syllabus

Course-3(B): Subject Specific Advanced Level Course – II

(Board of Studies Specific: Business Administration)

Title of Course: Business Administration (Elective)

Credits: 04 (100 Marks)

Course Objectives:

- 1) To understand investment decisions, methods of calculation NPV and IRR and their implications, methods of calculation of component cost of capital, treatment of inflation in capital budgeting, impact of inflation, relationship between utility theory and capital budgeting decisions, and linkage between corporate strategy and investment decisions.
- 2) To analyse the combined effect of financial and operating leverage, relationship between capital structure and the value of the firm, relationship between leverage, beta and the cost of capital, and dividend theory and policy.
- 3) To understand the insights of development in the stock markets, valuation of rights shares, methods for evaluating a lease, and development of venture capital in India.
- 4) To illustrate the methodology for valuing mergers and acquisitions, use of future and forward contracts for hedging risk, and international capital budgeting decisions.

Unit No.	Units and Contents	No. of Lectures
1	Investment Decision: Capital budgeting decisions Cost of capital Determining cash flows for investment analysis Complex investment decisions Risk analysis in capital budgeting Real options, investment strategy and process	15
2	Financing and Dividend Decisions: Financial and operating leverage Capital structure: Theory and policy Valuation and financing Dividend theory Dividend policy	15
3	Long-Term Financing: Capital market efficiency and capital markets in India Long-term finance shares, debentures and term loans	15

	Asset-based: Lease, hire Purchase and project financing Venture capital financing	
4	Managing Value and Risk: Corporate restructuring, merger and acquisitions Derivatives for managing financial risk International financial management Shareholder value and corporate governance	15
Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.		
Reference Books		
<p>Financial Management by I. M. Pandey, Vikas Publication</p> <p>Financial Management by M. Y. Khan and P. K. Jain (Tata Mcgraw Hill)</p> <p>Financial Management by Prasanna Chnadra (Tata Mcgraw Hill)</p> <p>Financial Management by P. V. Kulkarni (Himalaya Publishing House)</p> <p>Financial Management by Prasanna Chnadra (Tata Mcgraw Hill)</p> <p>The Indian Financial System by Bharati Pathak (Dorling Kindersley Pvt. Ltd.)</p> <p>Financial Policy and Management Accountant by Bhabatosh Banerjee (PHI Learning Pvt. Ltd.)</p> <p>Introduction to Lease Financing by Rajas Parchure, N. Ashok (Time Research Foundation)</p> <p>Credit Management by Herbert Edwards (Coles Publishing Co. Ltd.)</p>		
Evaluation Pattern		
Sr. No.	Pattern	Marks Allocation
1	MCQ Test (Offline): Time: 45 Minutes 30 Questions x 1 Mark each	30
2	Presentation on the Topic allotted by the Research Centre which has organized Ph.D. Course Work (Offline or Hybrid Mode): Instructions: a) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work. b) There shall be a Committee for evaluation of the Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor). c) Joint Evaluation of the presentation to be done by the Committee.	20

	d) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for his / her presentation of topic by the Committee.	
3	<p>Theory Examination (Offline): (Time: 2 Hours)</p> <p>Instructions:</p> <p>c) Attempt any Three Questions from Q. No. 1 to 4.</p> <p>d) Question No. 5 is compulsory.</p> <p>Q. 1: Question on Unit-1 = 15 Marks Q. 2: Question on Unit-2 = 15 Marks Q. 3: Question on Unit-3 = 15 Marks Q. 4: Question on Unit-4 = 15 Marks Q. 5: Short Notes (Any 1 out of 4) = 05 Marks</p>	50

Course Outcomes:

After completion of course, students will be able to:

- 1) Apply investment decisions, methods of calculation NPV and IRR and their implications, methods of calculation of component cost of capital, treatment of inflation in capital budgeting, impact of inflation, relationship between utility theory and capital budgeting decisions, and linkage between corporate strategy and investment decisions.
- 2) Evaluate the combined effect of financial and operating leverage, relationship between capital structure and the value of the firm, relationship between leverage, beta and the cost of capital, and dividend theory and policy.
- 3) Understand the insights of development in the stock markets, valuation of rights shares, methods for evaluating a lease, and development of venture capital in India.
- 4) Apply the methodology for valuing mergers and acquisitions, use of future and forward contracts for hedging risk, and international capital budgeting decisions.

Syllabus

Course-3(B): Subject Specific Advanced Level Course – II
(Board of Studies Specific: Marketing)
Title of Course: Marketing (Elective)
Credits: 04 (100 Marks)

Course Objectives:

- 1) To develop an advanced and critical understanding of contemporary marketing theories, including consumer culture theory, strategic marketing frameworks, digital ecosystems, and data-driven decision models.
- 2) To analyse and evaluate dynamic market environments using advanced tools such as marketing analytics, big data insights, AI-driven segmentation, and predictive modelling for strategic advantage.
- 3) To design and assess innovative marketing strategies incorporating omnichannel approaches, customer experience design, value co-creation, and global branding practices.
- 4) To integrate technological advancements—including digital marketing automation, AI, neuromarketing, and marketing intelligence dashboards—into strategic marketing planning and execution.
- 5) To critically examine global trends in marketing such as sustainability marketing, green consumerism, ethical marketing, and inclusive marketing from a strategic and research perspective.
- 6) To foster the ability to conduct high-level marketing research by applying qualitative, quantitative, and mixed-method approaches to investigate complex consumer and marketplace phenomena.

Unit No.	Units and Contents	No. of Lectures
1	Advanced Marketing Foundations and Strategic Frameworks: 1.1 Contemporary Marketing Thought: 1.1.1 Evolution of marketing philosophy: from transactional to experiential to digital ecosystems 1.1.2 Customer value, customer experience (CX), and value co-creation models 1.1.3 Societal, sustainable, and transformative marketing frameworks 1.1.4 Marketing as a strategic, cross-functional organizational process 1.2 Strategic Marketing Management:	15

	<p>1.2.1 Strategic marketing planning and the role of marketing in corporate strategy</p> <p>1.2.2 Competitive advantage, differentiation, and blue ocean strategy</p> <p>1.2.3 Portfolio analysis: BCG, GE Matrix, and advanced strategic tools</p> <p>1.2.4 Strategic brand architecture and brand equity management</p> <p>1.3 Advanced Market Environment Analysis:</p> <p>1.3.1 Environmental scanning using PESTLE and competitive intelligence</p> <p>1.3.2 Consumer culture theory (CCT) and sociological perspectives</p> <p>1.3.3 Behavioural economics and heuristics in marketing decisions</p> <p>1.3.4 Globalization, emerging markets, and cross-cultural marketing</p> <p>1.4 Ethics, Governance and Regulatory Aspects:</p> <p>1.4.1 Ethical marketing practices and consumer protection</p> <p>1.4.2 Marketing governance, transparency, and responsible advertising</p> <p>1.4.3 Data privacy regulations: GDPR, India's DPDP Act</p> <p>1.4.4 Greenwashing, dark patterns, and regulatory responses</p>	
2	<p>Advanced Consumer Behaviour and Market Insights:</p> <p>2.1 Contemporary Consumer Behaviour Models:</p> <p>2.1.1 Psychological, social, and cultural influences in a digital era</p> <p>2.1.2 Motivation, perception, learning, and behavioural conditioning</p> <p>2.1.3 Customer decision journey and omnichannel behaviour</p> <p>2.1.4 Co-creation behaviour and prosumer dynamics in digital markets</p> <p>2.2 Neuromarketing and Advanced Behavioural Research:</p> <p>2.2.1 Neuroscience tools: EEG, fMRI, eye-tracking, facial coding</p> <p>2.2.2 Emotional engagement and subconscious decision drivers</p> <p>2.2.3 Ethical considerations in neuromarketing</p> <p>2.2.4 Applications in advertising, product design, and</p>	15

	<p>retail experience</p> <p>2.3 Market Research and Analytics:</p> <p>2.3.1 Big data-driven marketing insights</p> <p>2.3.2 Qualitative and quantitative research for advanced marketing studies</p> <p>2.3.3 Predictive analytics, machine learning models, and segmentation analytics</p> <p>2.3.4 Social media listening, sentiment analysis, and digital ethnography</p> <p>2.4 Customer Value and Relationship Management:</p> <p>2.4.1 Customer lifetime value (CLV) and customer equity</p> <p>2.4.2 CRM, CXM, and AI-enabled customer engagement</p> <p>2.4.3 Personalisation, recommender systems, and automation</p> <p>2.4.4 Service quality models (SERVQUAL, e-SERVQUAL, technology readiness)</p>	
3	<p>Strategic Marketing Mix in the Digital Age:</p> <p>3.1 Product & Innovation Strategy:</p> <p>3.1.1 New product development (NPD) and innovation funnels</p> <p>3.1.2 Design thinking and customer-driven innovation</p> <p>3.1.3 Branding strategies, brand communities, and brand storytelling</p> <p>3.1.4 Sustainable and circular product strategies</p> <p>3.2 Pricing Strategy and Revenue Models:</p> <p>3.2.1 Strategic pricing decisions and behavioural pricing</p> <p>3.2.2 Yield management, dynamic pricing, and algorithmic pricing</p> <p>3.2.3 Subscription, freemium, and platform-based pricing</p> <p>3.2.4 International pricing strategies and global pricing issues</p> <p>3.3 Distribution and Channel Management:</p> <p>3.3.1 Omnichannel marketing and hybrid retailing</p> <p>3.3.2 Supply chain integration, CRM-SCM alignment</p> <p>3.3.3 E-commerce logistics, last-mile delivery, and digital retail platforms</p> <p>3.3.4 Franchising, channel power, and conflict management</p> <p>3.4 Promotion and Digital Communication:</p> <p>3.4.1 IMC in the digital-first world</p> <p>3.4.2 Content marketing, influencer ecosystems, and viral strategies</p>	15

	3.4.3 Programmatic advertising and marketing automation 3.4.4 AI-driven communication: chatbots, personalisation, and generative AI	
4	<p>Emerging Frontiers in Marketing and Future Trends:</p> <p>4.1 Digital and Technology-Driven Marketing:</p> <p>4.1.1 Artificial intelligence, machine learning, and marketing automation 4.1.2 Blockchain applications in marketing (trust, traceability, loyalty) 4.1.3 Metaverse, VR/AR marketing, and immersive experiences 4.1.4 IOT-enabled marketing and smart product ecosystems</p> <p>4.2 Sustainable, Ethical and Inclusive Marketing:</p> <p>4.2.1 Green marketing, eco-labels, and carbon-neutral branding 4.2.2 Ethical consumerism and fair-trade marketing 4.2.3 Inclusive marketing and representation ethics 4.2.4 Sustainable supply chains and responsible sourcing</p> <p>4.3 Global Marketing and International Competitiveness:</p> <p>4.3.1 Global market entry strategies and cross-border branding 4.3.2 Globalisation strategies and emerging market adaptations 4.3.3 Geopolitics, global risks, and international consumer behaviour 4.3.4 International retailing and global digital commerce</p> <p>4.4 Research Trends and Future Directions in Marketing:</p> <p>4.4.1 Marketing analytics research and big data challenges 4.4.2 Future of consumer behaviour in AI-driven environments 4.4.3 Purpose-driven marketing and societal change 4.4.4 Research opportunities in transformative and digital-first marketing</p>	15
<p>Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.</p>		

Reference Books

- 1) Kotler, Philip, Keller, Kevin Lane, and Chernev, Alexander (2024). *Marketing Management*. Pearson. This is the most authoritative global reference for strategic and advanced marketing thought and serves as a foundational resource for modern marketing frameworks.
- 2) Kotler, Philip & Armstrong, Gary (2023). *Principles of Marketing*. Pearson. A comprehensive text covering the evolution and contemporary practices of marketing in global contexts.
- 3) Kotler, Philip, Burton, S., Deans, K., Brown, L., & Armstrong, G. (2022). *Marketing: An Introduction*. Pearson Australia. Important for understanding fundamental and emerging marketing concepts.
- 4) Keller, Kevin Lane (2013). *Strategic Brand Management*. Pearson. A gold-standard text on advanced brand equity, brand valuation, and global brand leadership.
- 5) Keller, Kevin Lane & Swaminathan, Vanitha (2020). *Strategic Brand Management: Global Edition*. Pearson. Extends brand strategy to digital, global, and experiential contexts.
- 6) Kotler, Philip & Kartajaya, Hermawan & Setiawan, Iwan (2017). *Marketing 4.0: Moving from Traditional to Digital*. Wiley. A seminal work connecting digital transformation with marketing strategy and customer pathways.
- 7) Kotler, Philip & Setiawan, Iwan (2021). *Marketing 5.0: Technology for Humanity*. Wiley. Relevant for AI-based marketing, robotics, and data-driven decision-making.
- 8) Kotler, Philip, Kartajaya, Hermawan, & Setiawan, Iwan (2010). *Marketing 3.0: From Products to Customers to the Human Spirit*. Wiley. Important for understanding human-centric, value-driven marketing.
- 9) Lamb, Charles W., Hair, Joseph F., & McDaniel, Carl (2021). *Marketing*. Cengage Learning. Offers a managerial perspective on contemporary marketing issues.
- 10) Pride, William M., & Ferrell, O. C. (2022). *Marketing*. Cengage Learning. Widely used global text with strong strategy and ethics orientation.
- 11) David Aaker (2014). *Aaker on Branding*. Morgan James Publishing. An essential text on advanced concepts of brand relevance and brand architecture.
- 12) Aaker, David (2008). *Strategic Market Management*. Wiley. Provides analytical and strategic tools for market leadership.
- 13) Aaker, David A., Kumar, V., & Leone, Robert (2012). *Marketing Research*. Wiley. A high-level research text useful for Ph.D-level marketing studies.
- 14) Malhotra, Naresh K. & Dash, Satyabhushan (2020). *Marketing Research: An Applied Orientation*. Pearson India. The most widely used research-focused marketing reference in India.
- 15) Malhotra, Naresh K. (2015). *Essentials of Marketing Research*. Pearson. Useful for advanced quantitative and qualitative research approaches.

16) Hair, Joseph F., Wolfinbarger, M., Money, A., Samouel, P., & Page, M. (2020). *Essentials of Business Research Methods*. Routledge. A necessary resource for marketing analytics and research design.

17) Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2018). *Multivariate Data Analysis*. Pearson. Critical for advanced marketing analytics and modelling.

18) Punj, Girish (2021). *Consumer Behavior and Analytics*. Springer. Important for AI-driven segmentation and predictive modelling.

19) Hoyer, Wayne D., MacInnis, Deborah J., & Pieters, Rik (2018). *Consumer Behavior*. Cengage. A leading scholarly text providing behavioural and psychological insights.

20) Solomon, Michael (2020). *Consumer Behavior: Buying, Having, and Being*. Pearson. Critical for CCT and sociological perspectives in marketing.

21) Schiffman, Leon, Wisenblit, Joseph (2019). *Consumer Behavior*. Pearson. Integrates digital consumer insights and behavioural theories.

22) Saren, Michael, et al. (2010). *Marketing Theory*. Sage. Essential for understanding the philosophical and theoretical foundations of marketing.

23) Arnould, Eric J. & Thompson, Craig J. (2018). *Consumer Culture Theory*. Sage. Fundamental for advanced behavioural and cultural research.

24) Zaltman, Gerald (2003). *How Customers Think*. Harvard Business School Press. Important for subconscious, metaphor-based consumer insights.

25) Lindstrom, Martin (2008). *Buyology*. Doubleday. A popular yet insightful book on neuromarketing.

26) Ariely, Dan (2008). *Predictably Irrational*. HarperCollins. Crucial for behavioural economics in marketing.

27) Kahneman, Daniel (2011). *Thinking, Fast and Slow*. Farrar, Straus and Giroux. A cornerstone reference for decision-making psychology.

28) Cialdini, Robert (2016). *Influence: The Psychology of Persuasion*. Harper Business. A classic text explaining persuasion and behaviour.

29) Cialdini, Robert (2016). *Pre-Suasion*. Simon & Schuster. Relevant for advanced communication strategies.

30) Rust, Roland, Lemon, Katherine, & Zeithaml, Valarie (2000). *Driving Customer Equity*. Free Press. Essential for CLV and CRM strategies.

31) Peppers, Don & Rogers, Martha (2016). *Managing Customer Relationships*. Wiley. Key reference for CRM and relationship marketing.

32) Zeithaml, Valarie, Bitner, Mary J., & Gremler, Dwayne (2018). *Services Marketing*. McGraw-Hill. The global standard for service quality and CXM.

33) Lovelock, Christopher, & Wirtz, Jochen (2022). *Services Marketing*. Pearson. In-depth conceptual and strategic treatment of service frameworks.

34) Wirtz, Jochen (2021). *Services Marketing: People, Technology, Strategy*. World Scientific. Updated for digital transformation in services.

35) Baines, Paul, Fill, Chris, & Page, Kelly (2020). *Marketing*. Oxford University Press. Strong integration of theory and practice.

36) Hollensen, Svend (2020). *Global Marketing*. Pearson. A leading text for international marketing strategy.

37) Cateora, Philip & Graham, John (2021). *International Marketing*. McGraw-Hill. Widely referenced for cross-border marketing.

38) Keegan, Warren J. & Green, Mark C. (2016). *Global Marketing*. Pearson. Excellent for global strategy and emerging markets.

39) Kotabe, Masaaki & Helsen, Kristiaan (2020). *Global Marketing Management*. Wiley. Combines global marketing theory with analytics.

40) Ries, Al & Trout, Jack (1981). *Positioning: The Battle for Your Mind*. McGraw-Hill. A foundational book on brand positioning strategy.

41) Trout, Jack & Rivkin, Steve (1996). *The New Positioning*. McGraw-Hill. Modern interpretation of positioning concepts.

42) Godin, Seth (2003). *Purple Cow*. Penguin. Influential for innovative marketing thinking.

43) Grant, Robert M. (2022). *Contemporary Strategy Analysis*. Wiley. Useful cross-functional text linking marketing with competitive strategy.

44) Porter, Michael E. (1985). *Competitive Advantage*. Free Press. Fundamental for value chain and competitive strategy.

45) Sharp, Byron (2010). *How Brands Grow*. Oxford University Press. A highly influential empirical marketing science book.

46) Ehrenberg, A. S. C. (2000). *Repeat Buying*. Arnold. A classic text in marketing science.

47) Kotler, Philip & Caslione, John A. (2009). *Chaosics: The Business of Managing and Marketing in the Age of Turbulence*. AMACOM. Relevant for modern turbulence and market risk.

48) Chaffey, Dave & Ellis-Chadwick, Fiona (2022). *Digital Marketing*. Pearson. A leading textbook for digital marketing strategies.

49) Ryan, Damian (2017). *Understanding Digital Marketing*. Kogan Page. Essential for digital tools, platforms, metrics.

50) Kingsnorth, Simon (2019). *Digital Marketing Strategy*. Kogan Page. Strong on strategic applications.

51) Fish, Jonathan (2021). *The Future of Marketing*. Kogan Page. Useful for emerging technologies and markets.

52) Strauss, Judy & Frost, Raymond (2014). *E-Marketing*. Pearson. Good for foundational digital concepts.

53) Hanna, Richard (2011). *Social Media Marketing*. Cengage. Useful for social media strategy and analytics.

54) Tiago, Maria T. P. M. (2020). *Digital and Social Media Marketing*. Routledge. Academic insights into social platforms.

55) Kaplan, Andreas & Haenlein, Michael (2010). *Users of the World, Unite!* Business Horizons. Foundational article for social media theory.

56) Kumar, V. (2015). *Customer Relationship Management*. Springer. A data-driven CRM reference.

57) Sawhney, Mohanbir (2001). *Innovation Management*. Sage. Strong connection to product innovation and customer-centred strategy.

58) Schindler, Robert M. (2021). *Pricing Strategies: A Marketing Approach*. Sage. Authoritative for pricing behaviour.

59) Tellis, Gerard (2016). *Effective Advertising*. Sage. Links persuasion, branding, messaging, and consumer psychology.

Evaluation Pattern

Sr. No.	Pattern	Marks Allocation										
1	MCQ Test (Offline): Time: 45 Minutes 30 Questions x 1 Mark each	30										
2	<p>Presentation on the Topic allotted by the Research Centre which has organized Ph.D. Course Work (Offline or Hybrid Mode):</p> <p>Instructions:</p> <p>a) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work.</p> <p>b) There shall be a Committee for evaluation of the Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor).</p> <p>c) Joint Evaluation of the presentation to be done by the Committee.</p> <p>d) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for his / her presentation of topic by the Committee.</p>	20										
3	<p>Theory Examination (Offline): (Time: 2½ Hours)</p> <p>Instructions:</p> <p>e) Attempt any Three Questions from Q. No. 1 to 4.</p> <p>f) Question No. 5 is compulsory.</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Q. 1: Question on Unit-1</td> <td style="width: 40%; text-align: right;">= 15 Marks</td> </tr> <tr> <td>Q. 2: Question on Unit-2</td> <td style="text-align: right;">= 15 Marks</td> </tr> <tr> <td>Q. 3: Question on Unit-3</td> <td style="text-align: right;">= 15 Marks</td> </tr> <tr> <td>Q. 4: Question on Unit-4</td> <td style="text-align: right;">= 15 Marks</td> </tr> <tr> <td>Q. 5: Short Notes (Any 1 out of 4)</td> <td style="text-align: right;">= 05 Marks</td> </tr> </table>	Q. 1: Question on Unit-1	= 15 Marks	Q. 2: Question on Unit-2	= 15 Marks	Q. 3: Question on Unit-3	= 15 Marks	Q. 4: Question on Unit-4	= 15 Marks	Q. 5: Short Notes (Any 1 out of 4)	= 05 Marks	50
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Q. 4: Question on Unit-4	= 15 Marks											
Q. 5: Short Notes (Any 1 out of 4)	= 05 Marks											
	Total	100										

Course Outcomes:

After completion of course, students will be able to:

- 1) Critically evaluate contemporary marketing theories and strategic frameworks to analyse complex and dynamic market environments at local, national, and global levels.
- 2) Apply advanced consumer behaviour models, neuromarketing insights, and behavioural economics principles to understand, predict, and influence customer decision-making.
- 3) Use marketing analytics, big data tools, and AI-enabled techniques to generate actionable market insights, develop segmentation strategies, and support evidence-based marketing decisions.
- 4) Design and evaluate innovative marketing strategies incorporating omnichannel approaches, product innovation, brand building, strategic pricing, and integrated communication.
- 5) Integrate digital technologies and emerging tools such as marketing automation, AI-driven communication, immersive media, and blockchain into marketing strategy and execution.
- 6) Examine global marketing challenges and opportunities by analysing cultural dynamics, international consumer trends, and global competitive forces.
- 7) Assess ethical, social, and sustainability dimensions of marketing practices to formulate responsible, inclusive, and environmentally aligned marketing strategies.
- 8) Conduct advanced marketing research using qualitative, quantitative, and mixed-method research designs to contribute original insights and scholarly work in the field of marketing.

Syllabus

Course-3(B): Subject Specific Advanced Level Course – II

(Board of Studies Specific: Business Practices)

Title of Course: Business Practices and Co-operation

(Elective)

Credits: 04 (100 Marks)

Course Objectives:

- 1) To understand the insights of entrepreneurship scenario in India.
- 2) To acquaint with role of Government Institutions for development of entrepreneurship in India.
- 3) To evaluate the Institutional Support to Entrepreneurs.
- 4) To integrate with legal framework and governance of cooperation.

Unit No.	Units and Contents	No. of Lectures
1	Entrepreneurship Scenario in India: 1.1 Government Initiatives to Foster Entrepreneurship: 1.1.1 Make in India and its Key Areas 1.1.2 Stand up India and its Key Elements 1.1.3 Startup India: Benefits of Startup India and Vital Points pertaining to Startup India 1.1.4 Skill India: National Skill Development Corporation 1.1.4.1 Schemes and initiatives under Skill India 1.1.4.1.1 Pradhan Mantri Kaushal Kendra 1.1.4.1.2 International Skill Training: 1.1.4.1.2.1 National Policy on Skill Development and Entrepreneurship 2015: Vision, Mission, Objectives 1.1.4.1.2.2 Pre-Departure Orientation Training (PDOT) 1.1.4.1.2.3 Technical Intern Training Program 1.2 Investment in Physical Infrastructure 1.3 Need for Entrepreneurship in India 1.4 Bottlenecks in Entrepreneurial Growth	15
2	Government Institutions in India: 2.1 NITI Aayog: 2.1.1 Objectives, Features, Functions, and 7 Pillars of NITI Aayog 2.1.2 Verticals of NITI Aayog: Sustainable Development Goal Vertical (SDG): Vision, Mission, Core Functions, and other Different Verticals of NITI	15

	<p>Aayog</p> <p>2.1.3 Achievements of Project Sath-E</p> <p>2.2 Ministry of Corporate Affairs: Affiliated Offices of Ministry of Corporate Affairs: Serious Fraud Investigation Office, Competition Commission of India and Indian Institute of Corporate Affairs</p> <p>2.3 Securities and Exchange Board of India: Functions and Powers of SEBI</p> <p>2.4 Reserve Bank of India: Main Functions of RBI</p> <p>2.5 Insolvency and Bankruptcy Board of India</p>	
3	<p>Institutional Support to Entrepreneurs:</p> <p>3.1 Need for Institutional Support</p> <p>3.2 Institutional Support to Small Entrepreneurs:</p> <p>3.2.1 National Small Industries Corporation Limited (NSIC)</p> <p>3.2.2 Small Industries Development Organisation (SIDO)</p> <p>3.2.3 Small Scale Industries Board (SSIB)</p> <p>3.2.4 State Small Industries Development Corporations (SSID)</p> <p>3.2.5 Small Industries Service Institutes (SISIs)</p> <p>3.2.6 District Industries Centres (DICs)</p> <p>3.2.7 Industrial Estates: Types and Objectives</p> <p>3.2.8 Specialised Institutions: Central Institutes of Tool Design-Hyderabad, Central Room Training Centres, Central Institute of Hand Tool-Jalandhar, Institute for Design of Electrical Measuring Instruments (IDEM-Mumbai, National Institute of Entrepreneurship and Small Business Development (NIESBUD)-Noida, National Institute of Small Industries Extension Training (NISIET)-Hyderabad etc.</p> <p>3.2.9 Technical Consultancy Organisations (TCOs)</p>	15
4	<p>Co-operative Laws and Governance:</p> <p>4.1 Cooperative Credit Societies Act, 1904</p> <p>4.2 Cooperative Societies Act, 1912</p> <p>4.3 Maclagen Committee on Cooperation (1914)</p> <p>4.4 Government of India Act, 1919</p> <p>4.5 Multi-Unit Cooperative Societies Act, 1942</p> <p>4.6 Cooperative Planning Committee (1945)</p> <p>4.7 All India Rural Credit Survey Committee (1951)</p> <p>4.8 Multi-State Cooperative Societies Act, 1984</p> <p>4.9 Model Cooperatives Act, 1990</p> <p>4.10 Multi-State Cooperative Societies Act, 2002</p>	15

	4.11 National Cooperative Policy (2002) 4.12 National Cooperative Policy (2025) 4.13 Ministry of Cooperation, Government of India's Initiatives in the Cooperative Sector	
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Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.

Reference Books

1. Entrepreneurial Development (Revised Edition), Dr. S. S. Khanna, S. Chand Publication, New Delhi.
2. Entrepreneurship Development, CA Dr. Abha Mathur, Taxmann's Allied Service (P) Ltd., New Delhi
3. Entrepreneurship Development by Ranbir Singh, S.K. Kataria & Sons Educational Publisher
4. Entrepreneurship: Development and Management, Dr. Vasant Desai and Dr. Kulveen Kaur, Himalaya Publishing House, New Delhi
5. Entrepreneurship, Robert D. Hisrich, Michael P. Peters, Dean A. Shepherd, Sabyasachi Sinha by McGraw Hill
6. Entrepreneurship Development: A Systematic Approach, Dr. M. K. Sehgal by Udh Publicaiton
7. Entrepreneurship and New Venture Planning, CA Dr. Abha Mathur, Taxmann's Allied Service (P) Ltd., New Delhi
8. Fundamentals of Entrepreneurship, International Journal of Entrepreneurship Vol. 6 No. 1 (2022), AJPO Journals and Books Publishers
9. Entrepreneurship: Development and Management, Dr. R. K. Singal, Katson Books Publication
10. Innovation and Entrepreneurship, Peter F. Drucker, Harper Business Publication
11. Entrepreneurship Development, Sangeeta Sharama, PHI Learning Publication
12. Business Environment, Francis Cherunilam, Himalaya Publishing House, New Delhi.
13. Entrepreneurship Development, Gupta, Shrinivasan, S. Chand, New Delhi
14. Textbook on Entrepreneurship Development and Management in Extension by Dr S Janani Dr T N Sujeetha Dr M Asokhan M Priyadharshini, Write & Print Publications
15. Dynamics of Entrepreneurship, Desai Vasant, Himalaya Publishing House, New Delhi
16. Indian Economy, Datt and Sundharam's, S. Chand Publication, New Delhi
17. Udyog, Udyog Sanchalaya, Mumbai-7
18. Entrepreneurship Development, Gupta, Shrinivasan, S. Chand, New

Delhi

19. Study Material of Economic and Business Environment for CS Foundation by the Institute of Company Secretary of India, New Delhi
20. T.N. Hajela, "Co-operation: Principles, Problems and Practices" 8th Edition) Ane's Books Pvt. Ltd. New Delhi.
21. Vaikunthlal Mehta "The Indian Co-operative Movement" by (1947)
22. K. R. Shinde "The Co-operative Movement in India" (1985)
23. D. R. Gadgil "Co-operation in India" (1951)
24. Charles Gide "The Principles of Co-operation" (1904)
25. George Jacob Holyoake "A History of the Co-operative Movement" (1893)
26. Charles Gide "The Co-operative Movement and Education" (1904)
27. B B Goel, Cooperative Legislation – Trends and Dimensions, Deep and Deep Publications.
28. Rish Pal Nainta, Laws Relating to Cooperative Societies – A Commentary, 2004.
29. Sunil Dighe, "Maharashtra Co-Operative Societies Act, 1960 and Rules, 1961", Snow White.
30. S Desai, Commentary on Co-operative Housing Societies, Snow White Publications, 2009.
31. V. V. Ghanekar, Co-Operative Movement in India, Institute of Rural Development & Education, 2004.
32. A K Gupte and S D Dighe, Maharashtra Co-operative Societies Act 1960 with Rules 1961. Hind Law House, 2008.
33. M C Jain and H M Bhatt, Maharashtra Co-Operative Societies Act, 1960, Law Times.
34. A E Karmali, Maharashtra Co-operative Societies Act, 1960 and Rules, 1961, Snow White Publications, 1997.
35. R K Pillai, Maharashtra Co-Operative Societies Act, 1960
36. A M Shah, Maharashtra Co-Operative Societies Act, 1960, Snow White Publications, 2004.
37. "Co-operative Training and Education" by Indian Institute of Management (IIM) Ahmedabad (1975)
38. "The Types of Co-operatives" by National Co-operative Union of India (NCUI) (2015)

Evaluation Pattern

Sr. No.	Pattern	Marks Allocation
1	MCQ Test (Offline): Time: 45 Minutes 30 Questions x 1 Mark each	30
2	Presentation on the Topic allotted by the Research Centre which has organized Ph.D. Course Work (Offline or Hybrid Mode): Instructions:	20

	<p>a) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work.</p> <p>b) There shall be a Committee for evaluation of the Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor).</p> <p>c) Joint Evaluation of the presentation to be done by the Committee.</p> <p>d) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for his / her presentation of topic by the Committee.</p>	
3	<p>Theory Examination (Offline): (Time: 2½ Hours)</p> <p>Instructions:</p> <p>g) Attempt any Three Questions from Q. No. 1 to 4.</p> <p>h) Question No. 5 is compulsory.</p> <p>Q. 1: Question on Unit-1 = 15 Marks Q. 2: Question on Unit-2 = 15 Marks Q. 3: Question on Unit-3 = 15 Marks Q. 4: Question on Unit-4 = 15 Marks Q. 5: Short Notes (Any 1 out of 4) = 05 Marks</p>	50
	Total	100

Course Outcomes:

After completion of course, students will be able to:

- 1) Examine the insights of entrepreneurship scenario in India.
- 2) Understand the role of Government Institutions for development of entrepreneurship in India.
- 3) Examine the Institutional Support to Entrepreneurs.
- 4) Integrate with legal framework and governance of cooperation.

Syllabus

Course-3(B): Subject Specific Advanced Level Course – II

(Board of Studies Specific: Business Laws)

Title of Course: Business and Mercantile Laws (Elective)

Credits: 04 (100 Marks)

Course Objectives:

- 1) To understand the role of mercantile laws.
- 2) To learn company law and other law.
- 3) To acquaint with the Intellectual property rights.
- 4) To examine Industrial Relations Code.

Unit No.	Units and Contents	No. of Lectures
1	Mercantile Laws: 1.1 Indian Contract Act 1872 1.2 Sale of Goods Act 1930 1.3 Consumer Protection Act 2019 1.4 Information Technology (IT) Act, 2000	15
2	Company Law and Other Laws: 2.1 Companies Act 2013 2.2 Maharashtra Co-Operative Societies Act 2013 2.3 Insurance Laws (Amendment) Act, 2015	15
3	Intellectual Property Rights: 3.1 Designs Act, 2000 3.2 Trade Marks Act, 1999 3.3 Copyright Act, 1957 3.4 Patents (Amendment) Act, 2005 3.5 Geographical Indications of Goods (Registration and Protection) Act, 1999 3.6 Protection of Plant Variety and Farmers' Rights Act, 2001 3.7 Semiconductor Integrated Circuits Layout-Design Act, 2000	20
4	Industrial Relations Code and Other Acts: 4.1 The Industrial Relations Code, 2020 4.2 Competition (Amendment) Act, 2023 4.3 Prevention of Money Laundering Act, 2002	10
Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.		

Reference Books

- 1) Business Law by N. D. Kapoor, Sultan Chand and Sons
- 2) Business Law including Companies (Amendment) Act, 2019 by N. D. Kapoor, Sultan Chand and Sons
- 3) Elements of Mercantile Law by N. D. Kapoor, Sultan Chand and Sons
- 4) Law of Contract By Rajni Malhotra Dhingra, Taxmann Publication
- 5) Indian Contract Act 1872 – Bare Act with Section Notes by By Taxmann's Editorial Board
- 6) Elements of Company Law' by N.D. Kapoor, Sultan Chand and Sons
- 7) Corporate Laws by N.D. Kapoor, Sultan Chand and Sons
- 8) Companies Act with Rules by Taxmann's Editorial Board
- 9) Taxmann's Company Law & Practice, A Comprehensive Text Book on Companies Act 2013 by Dr. G. K. Kapoor and Dr. Sanjay Dhamija
- 10) Snowwhite's The Maharashtra Cooperative Societies Act, 1960 and Rules, 1961, 2025 Edition with Case law and Relevant Appendices, Adv Sunil Dighe
- 11) Bare Act on The Maharashtra Co-Operative Societies Act, 1960 As Amended by Maharashtra Act No. XIX of 2024, Hind Law Publication
- 12) Bare Act on Multi-State Co-operative Societies Act, 2002 Professional Book Publishers
- 13) A. K. Gupte's The Maharashtra Co-operative Societies Act, 1960 with Rules 1961, Adv. Gaurav Sethi and Adv. Jatin Sethi
- 14) Bharat's Law of Consumer Protection by Dr. V. K. Agarwal
- 15) Consumer Protection Law & Practice by Taxmann's Editorial Board
- 16) Text Book on Consumer Protection Act 2019: along with Rules, Regulations and Latest Case Laws by Dr. Sangeeta Taak, Dr. Manjit Kaur Bhatia, Mr. G. K. Dhir, Satyam Law International.
- 17) Consumer Protection: Law and Policy in India (Hardcover, Mohammed Kamalun Nabi, Mohammed Irshadun Nabi)
- 18) Law of Insurance (Amendment) Act 2015 by Dr. S. R. Myneni by Asia Law House
- 19) Insurance Laws by Gaurav Varshney, Lexis Nexis
- 20) Bare Act on The Information Technology Act, 2000 by Universals
- 21) Bharat's Cyber Laws, Information Technology and Artificial Intelligence by Dr. Jyoti Rattan
- 22) Commentary on The Information Technology Act 2000 by Justice R. H. Pandey
- 23) Taxmann's Copyright Act 1957 with Rules [Bare Act with Section Notes] – Comprehensive by Taxmann
- 24) Law Relating to Intellectual Property, 2011 by Dr. B. L. Wadehra, Universal Law Publishing
- 25) Law of Intellectual Property by Dr. S.R. Myneni, Asia Law House
- 26) Intellectual Property Rights Law and Practice by Arun Joshi, Nation Press

27) Intellectual Property and Cyber Law by Avinash Kumar Babu, Tanya Singh, BLOOMSBURY

28) Bare Act on The Designs Act, 2000 by Commercial Law Publishers (India) Pvt. Ltd

29) Bare Act on Designs Act 2000 with Rules by Taxmann's Editorial Board

30) Bare Act on Trade Marks Act 1999 with Rules by Taxmann

31) Commentary on Trade Marks Act by Iyengar, Lexis Nexis

32) Bare Act on Commercial's The Geographical Indications of Goods (Registration and Protection) Act, 1999

33) A Handbook on Geographical Indications in India Hardcover – 26 December 2021 by Prof (DR.) Raju K. D., Thomson Reuters

34) Law of Plant Varieties Protection by Elizabeth Verkey

35) Protection of Plant Varieties and Farmers Rights by R. R. Hanchinal and Raj Ganesh

36) The Protection of Plant Varieties and Farmer's Rights Act (PPVFR) in India: A Crucial Legal Framework for Plant Variety Protection: An Academic Article

37) Law and Justice Publishing Co's Bare Act on Semiconductor Integrated Circuits Layout-Design Act 2000

38) Taxmann's Industrial Relations Code 2020 [Bare Act without Comments]

39) The Industrial Relations Code, 2020: A guide from Bharat Law House

40) Taxmann's Competition Laws Manual with Case Laws Digest

41) Competition Act 2002 Principles and Practices by Prof. (Dr.) V. K. Agarwal, Bharat Law House

42) Treatise on Prevention of Money Laundering Act, 2002 by Dilip K Sheth

43) Money Laundering Law Manual by Taxmann's Editorial Board

44) Commentary on The Prevention of Money Laundering Act by S K Sarvaria

45) Law on Prevention of Money Laundering in India by Dr M C Mehanathan

46) A Critique of the Prevention of Money Laundering Act, 2002 by Abhimanyu Bhandari and Kartika Sharma

Evaluation Pattern

Sr. No.	Pattern	Marks Allocation
1	MCQ Test (Offline): Time: 45 Minutes 30 Questions x 1 Mark each	30
2	Presentation on the Topic allotted by the Research Centre which has organized Ph.D. Course Work (Offline or Hybrid Mode): Instructions: <ul style="list-style-type: none"> a) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work. b) There shall be a Committee for evaluation of the 	20

	<p>Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor).</p> <p>c) Joint Evaluation of the presentation to be done by the Committee.</p> <p>d) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for presentation for his / her presentation of topic by the Committee.</p>	
3	<p>Theory Examination (Offline): (Time: 2½ Hours)</p> <p>Instructions:</p> <p>a) Attempt any Three Questions from Q. No. 1 to 4.</p> <p>b) Question No. 5 is compulsory.</p> <p>Q. 1: Theory Question on Unit-1 = 15 Marks Q. 2: Theory Question on Unit-2 = 15 Marks Q. 3: Theory Question on Unit-3 = 15 Marks Q. 4: Theory Question on Unit-4 = 15 Marks Q. 5: Short Notes (Any 1 out of 4) = 05 Marks</p>	50
	Total	100

Course Outcomes:

After completion of course, students will be able to:

- 1) Assess the role of mercantile laws.
- 2) Apply company law and other law.
- 3) Analys the Intellectual property rights.
- 4) Understand Industrial Relations Code.

Syllabus

Course-3(b): Subject Specific Advanced Level Course – II

(Board of Studies Specific)

Title of Course: Banking, Finance and Insurance (Elective)

Credits: 04 (100 Marks)

Course Objectives:

- 1) To understand advanced theories and structures of Indian and global banking.
- 2) To develop analytical skills in corporate finance and financial markets.
- 3) To gain expertise in insurance, risk management, and regulatory frameworks.
- 4) To study global banking, finance, and insurance systems and their interactions.
- 5) To build research skills in empirical analysis, financial modelling, and policy evaluation.
- 6) To develop critical thinking and original research in BFSI.

Unit No.	Units and Contents	No. of Lectures
1	Advanced Banking Theory and Practices: 1.1 Banking System and Structure: 1.1.1 Evolution of Indian and global banking systems 1.1.2 Commercial banks, Cooperative banks, Development banks 1.1.3 RBI functions, monetary policy transmission, supervisory mechanisms 1.2 Banking Markets and Operations: 1.2.1 Liability and asset management 1.2.2 Risk-based supervision and Basel norms (Basel II, III, IV updates) 1.2.3 Capital adequacy, liquidity management, NPA management 1.3 Contemporary Banking Issues: 1.3.1 Digital banking, neo-banks, fin-tech disruptions 1.3.2 Payment systems: UPI, RTGS, CBDC, block-chain in banking 1.3.3 Financial inclusion, priority sector lending, ESG banking 1.4 Research Themes: 1.4.1 Efficiency analysis of banks	10

	1.4.2 Banking risk modelling 1.4.3 Performance analysis and regulatory impacts	
2	<p>Advanced Corporate Finance and Financial Markets:</p> <p>2.1 Financial Theory:</p> <p>2.2.1 Capital structure theories (MM, Trade-off, Pecking order, Market timing)</p> <p>2.2.2 Dividend decisions & pay out theories</p> <p>2.2.3 Agency theory, corporate governance</p> <p>2.2 Financial Markets:</p> <p>2.2.1 Money market, capital market, derivatives market</p> <p>2.2.2 Market efficiency, behavioural finance, asset pricing anomalies</p> <p>2.2.3 Portfolio theory: CAPM, APT, Factor models</p> <p>2.3 Quantitative Finance:</p> <p>2.3.1 Time series modelling (ARIMA, GARCH, VAR)</p> <p>2.3.2 Stochastic processes, random walks, volatility modelling</p> <p>2.3.3 Valuation of derivatives (options, futures, swaps)</p> <p>2.4 Research Themes:</p> <p>2.4.1 Market microstructure</p> <p>2.4.2 Predictive analytics in finance</p> <p>2.4.3 Corporate financial behaviour</p>	15
3	<p>Insurance and Risk Management:</p> <p>3.1 Principles of Insurance:</p> <p>3.1.1 Life and general insurance fundamentals</p> <p>3.1.2 Pricing, underwriting, claims management</p> <p>3.1.3 Solvency, reinsurance, actuarial principles</p> <p>3.2 Risk Analytics:</p> <p>3.2.1 Types of risks: market, credit, operational, liquidity, insurance risk</p> <p>3.2.2 Enterprise Risk Management (ERM) frameworks</p> <p>3.2.3 Value-at-Risk (VaR), Expected Shortfall, stress testing</p> <p>3.3 Regulatory Framework:</p> <p>3.3.1 IRDAI regulations</p> <p>3.3.2 Product design and micro-insurance</p> <p>3.3.3 Emerging risks: cyber risk, climate risk, health insurance trends</p> <p>3.4 Research Themes:</p> <p>3.4.1 Insurance market efficiency</p> <p>3.4.2 Risk pricing models</p> <p>3.4.3 Behavioural aspects of insurance demand</p>	15
4	Global Banking, Finance and Insurance Perspectives:	20

	<p>4.1 Global Banking Systems:</p> <p>4.1.1 Evolution of global banking architecture</p> <p>4.1.2 Comparative analysis of banking systems: US, EU, UK, Japan, China</p> <p>4.1.3 Global financial centres: London, New York, Singapore, Hong Kong</p> <p>4.1.4 Global Systemically Important Banks (G-SIBs): criteria, supervision, resolution</p> <p>4.1.5 International banking regulations: Basel II/III/IV, macro-prudential frameworks</p> <p>4.1.6 Cross-border banking: correspondent banking, global payment networks</p> <p>4.1.7 Financial contagion and crisis dynamics (Global Financial Crisis 2008, Eurozone crisis, COVID-19 shock)</p> <p>4.2 Global Financial Markets and Institutions:</p> <p>4.2.1 International financial architecture: IMF, World Bank, BIS, FSB</p> <p>4.2.2 Global capital markets: equity, debt, derivatives, FX markets</p> <p>4.2.3 Exchange rate mechanisms and global currency regimes</p> <p>4.2.4 International capital flows: FDI, FPI, remittances, sovereign wealth funds</p> <p>4.2.5 Sovereign debt markets and credit rating agencies</p> <p>4.2.6 Financial liberalization, globalization, and emerging markets</p> <p>4.2.7 Global fin-tech innovations: digital currencies, CBDCs, cross-border digital payments</p> <p>4.3 Global Insurance and Risk Management:</p> <p>4.3.1 Structure of global insurance markets: life, non-life, reinsurance</p> <p>4.3.2 International regulation of insurance: IAIS, Solvency II, ICS</p> <p>4.3.3 Global reinsurance hubs: Switzerland, Germany, UK, Bermuda</p> <p>4.3.4 Catastrophe risk modelling: global natural disasters, climate risk</p> <p>4.3.5 International health insurance and pension systems</p> <p>4.3.6 Micro insurance and inclusive global insurance models</p> <p>4.3.7 Climate change, geopolitical risk, and global risk transfer mechanisms</p>	
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	<p>4.4 International Standards, Compliance and Best Practices:</p> <p>4.4.1 Global regulatory standards: FATF, IOSCO, IAIS, Basel Committee</p> <p>4.4.2 Anti-money laundering (AML) and counter-terrorist financing (CFT) frameworks</p> <p>4.4.3 Cross-border compliance challenges: KYC, data privacy (GDPR), ESG compliance</p> <p>4.4.4 Crisis management and resolution frameworks (TLAC, MREL)</p> <p>4.4.5 Global corporate governance codes in banking and financial institution</p> <p>4.5 Contemporary Issues in Global BFSI:</p> <p>4.5.1 Global monetary policy spill overs</p> <p>4.5.2 CBDCs and the future of global financial integration</p> <p>4.5.3 Geopolitics and finance: sanctions regime, trade wars, international capital controls</p> <p>4.5.4 Green finance, sustainable banking, and global ESG standards</p> <p>4.5.5 Digital financial inclusion across developed and emerging economies</p> <p>4.5.6 Cybersecurity risks in global BFSI</p>	
<p>Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.</p>		
<p align="center">Reference Books</p> <ol style="list-style-type: none"> 1) RBI – Annual Reports, Financial Stability Reports, Banking Statistics 2) S. Sankaran – <i>Indian Economy and Banking</i> 3) H.R. Machiraju – <i>Indian Financial System</i> 4) Vasant Desai – <i>Banking and Financial System</i> 5) K.C. Shekhar and Lekshmy Shekhar – <i>Banking Theory and Practice</i> 6) N. S. Shetty – <i>Banking Sector Reforms in India</i> 7) Frederic S. Mishkin – <i>The Economics of Money, Banking and Financial Markets</i> 8) Anthony Saunders and Marcia Cornett – <i>Financial Markets and Institutions</i> 9) Peter S. Rose – <i>Commercial Bank Management</i> 10) Borio and Drehmann (BIS Papers) – Banking supervision and macroprudential research 11) Basel Committee Documents – Basel II, III, IV guidelines 12) Prasanna Chandra – <i>Financial Management, Investment Analysis and Portfolio Management</i> 13) R. P. Rustagi – <i>Financial Management</i> 		

14) L.M. Bhole and Jitendra Mahakud – *Financial Institutions and Markets: Structure, Growth and Innovations*

15) ICAI/ICSI publications – Corporate finance and governance guidelines

16) Ajay Shah, Ila Patnaik, Vijay Kelkar – Research papers on Indian financial markets

17) Richard Brealey, Stewart Myers and Franklin Allen – *Principles of Corporate Finance*

18) Zvi Bodie, Alex Kane, Alan Marcus – *Investments*

19) Berk and DeMarzo – *Corporate Finance*

20) William F. Sharpe – Works on portfolio theory

21) Fama and French papers – Asset pricing and factor models

22) John Hull – *Options, Futures and Other Derivatives*

23) Robert Shiller – *Irrational Exuberance*

24) Campbell, Lo and MacKinlay – *The Econometrics of Financial Markets*

25) Tsay, Ruey S. – *Analysis of Financial Time Series*

26) Engle and Bollerslev papers – ARCH/GARCH models

27) IRDAI — Annual Reports, regulations, consultation papers

28) P. K. Gupta – *Insurance and Risk Management*

29) M.N. Mishra and S.B. Mishra – *Modern Concepts of Insurance*

30) T.S. Ramanathan – *Insurance Principles and Practice*

31) S. Arunachalam and M. Suresh – Research on Indian insurance sector

32) George E. Rejda and Michael McNamara – *Principles of Risk Management and Insurance*

33) Skipper and Kwon – *Risk Management and Insurance: Perspectives in a Global Economy*

34) Harrington and Niehaus – *Risk Management and Insurance*

35) Klugman, Panjer and Willmot – *Loss Models: From Data to Decisions*

36) Dorfman, Mark S. – *Introduction to Risk Management and Insurance*

37) Kothari and Garg – *Research Methodology*

38) C.R. Kothari – *Quantitative Techniques*

39) Uma Sekaran and Roger Bougie – *Research Methods for Business*

40) Judea Pearl – *Causality*

41) Creswell – *Research Design*

42) Gujarati and Porter – *Econometrics*

43) Wooldridge, Jeffrey – *Econometric Analysis of Cross Section and Panel Data*

44) Enders, Walter – *Applied Econometric Time Series*

45) Greene, William – *Econometric Analysis*

46) Brooks, Chris – *Introductory Econometrics for Finance*

47) James, Witten, Hastie and Tibshirani – *An Introduction to Statistical Learning*

48) Shmueli et al. – *Data Mining for Business Intelligence*

49) Hastie, Tibshirani and Friedman – *Elements of Statistical Learning*

50) Sebastián Raschka – *Python Machine Learning*
 51) Tsay and Chen – *Nonlinear Time Series Analysis*
 52) Frederic S. Mishkin – *The Economics of Money, Banking and Financial Markets*
 53) Xavier Freixas and Jean-Charles Rochet – *Microeconomics of Banking*
 54) Saunders and Cornett – *Financial Institutions Management*
 55) Barry Eichengreen – *Globalizing Capital: A History of the International Monetary System*
 56) Jeff Madura – *International Financial Management*
 57) Krugman, Obstfeld and Melitz – *International Economics: Finance*
 58) Obstfeld and Rogoff – *Foundations of International Macroeconomics*
 59) Skipper and Kwon – *Risk Management and Insurance: Global Perspectives*
 60) Rejda and McNamara – *Principles of Risk Management and Insurance*
 61) Swiss Re – SIGMA Reports (*Latest editions*)
 62) BIS – Annual Economic Report (*Latest edition*)
 63) IMF – Global Financial Stability Report (GFSR)
 64) World Bank – Global Financial Development Report (GFDR)
 65) Basel Committee (BCBS) – *Basel III and Basel IV Framework*
 66) Financial Stability Board (FSB) – *G-SIBs Assessment Reports*
 67) Reinhart and Rogoff – “Banking Crises: An Equal-Opportunity Menace”
 68) Allen and Gale – “Financial Contagion”
 69) Laeven and Valencia – *IMF Systemic Banking Crises Database*
 70) Fama (1970) – “Efficient Capital Markets: A Review of Theory and Empirical Work”
 71) World Economic Forum – *Global Risks Report*

Evaluation Pattern

Sr. No.	Pattern	Marks Allocation
1	MCQ Test (Offline): Time: 45 Minutes 30 Questions x 1 Mark each	30
2	Presentation on the Topic allotted by the Research Centre which has organized Ph.D. Course Work (Offline or Hybrid Mode): Instructions: <ul style="list-style-type: none"> a) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work. b) There shall be a Committee for evaluation of the Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor). 	20

	c) Joint Evaluation of the presentation to be done by the Committee. d) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for presentation for his / her presentation of topic by the Committee.	
3	Theory Examination (Offline): (Time: 2½ Hours) Instructions: a) Attempt any Three Questions from Q. No. 1 to 4. b) Question No. 5 is compulsory. Q. 1: Theory Question on Unit-1 = 15 Marks Q. 2: Theory Question on Unit-2 = 15 Marks Q. 3: Theory Question on Unit-3 = 15 Marks Q. 4: Theory Question on Unit-4 = 15 Marks Q. 5: Short Notes (Any 1 out of 4) = 05 Marks	50
	Total	100

Course Outcomes:

After completion of course, students will be able to:

- 1) Demonstrate advanced knowledge of banking, finance, and insurance concepts.
- 2) Analyse financial institutions and markets using quantitative and risk management tools.
- 3) Evaluate regulatory and compliance frameworks in BFSI.
- 4) Assess global financial systems, cross-border risks, and international insurance mechanisms.
- 5) Conduct rigorous research with hypothesis formulation, data analysis, and empirical testing.
- 6) Apply critical thinking to solve practical and policy issues in BFSI.
- 7) Uphold research ethics and professional standards.
- 8) Communicate research findings effectively through scholarly writing.

Syllabus

Course-3(B): Subject Specific Advanced Level Course – II

(BOS Specific: Statistics & Computer Applications)

Title of Course: Applied Advanced Statistics & Modern Computing (Elective)

Credits: 04 (100 Marks)

Course Objectives:

1. To develop advanced understanding of applied statistical methods and modelling techniques relevant to research and real-world industrial applications.
2. To equip Ph.D. scholars with modern computational tools such as Python, R, SQL, and visualization platforms for advanced data analysis.
3. To enable learners to design, implement, and validate predictive, forecasting, and optimization models suitable for decision-making in diverse industries.
4. To strengthen capabilities in handling large datasets, building analytical pipelines, and performing machine learning tasks relevant to current professional practice.
5. To cultivate skills in ethical data usage, data-driven storytelling, scientific reporting, and communication of research findings in a clear and impactful manner.
6. To prepare scholars to independently execute a research-oriented, industry-focused data analytics project demonstrating advanced statistical and computational competencies.

Unit No.	Units and Contents	No. of Lectures
1	Applied Statistics: 1.1 Real-life applications of statistics in business, industry, healthcare, finance, and social sciences 1.2 Applied probability and stochastic modelling 1.3 Statistical decision-making in uncertain environments 1.4 Risk analysis and scenario modelling 1.5 Quality improvement methods and Six Sigma fundamentals	8
2	Advanced Modelling Techniques: 2.1 Generalized Linear Models (GLM) 2.2 Survival analysis (Kaplan–Meier, Cox regression) 2.3 Mixed effects models for longitudinal data	7

	2.4 Multilevel models in organizational and social research 2.5 Reliability and life-testing models 2.6 Bayesian decision models	
3	Data Science and Machine Learning Applications: 3.1 Data pre-processing for industry datasets 3.2 Predictive modelling pipelines 3.3 Regression and classification models 3.4 Forecasting using machine learning: Prophet, hybrid ARIMA-ML models 3.5 Business analytics with ML (churn, credit scoring, fraud detection) 3.6 Model deployment basics (APIs, dashboards)	8
4	Industry-Oriented Computational Tools: 4.1 Python for business and industrial analytics 4.2 pandas, SciPy, Scikit-learn, statsmodels 4.3 R for applied statistics and visualization 4.4 tidyverse, caret, mlr3 4.5 Power BI / Tableau for decision dashboards 4.6 SQL for analytics 4.7 Introduction to cloud environments (AWS/Azure/Google Cloud) 4.8 Basics of automation with Git, scripting, and APIs	7
5	Optimization, Simulation & Operations Analytics: 5.1 Linear and nonlinear optimization 5.2 Scheduling, transportation, assignment problems 5.3 Heuristics and metaheuristics (GA, PSO, ACO) 5.4 Simulation modelling using Python/R 5.5 Discrete-event simulation 5.6 Inventory and supply chain analytics 5.7 Financial simulations (Monte Carlo, VaR models)	8
6	Big Data Analytics and Industry Use Cases: 6.1 Basics of Big Data: Hadoop, Spark concepts 6.2 Stream processing and real-time analytics 6.3 Industry case studies: 6.3.1 Retail and marketing analytics 6.3.2 Healthcare analytics 6.3.3 Manufacturing analytics (Industry 4.0) 6.3.4 Banking and financial analytics 6.4 Ethics, privacy, and responsible AI	7
7	Research Communication and Practical Reporting: 7.1 Writing high-impact research papers with statistical rigor	8

	7.2 Industry-style analytical reporting 7.3 Visualization standards and storytelling with data 7.4 Preparing dashboards for decision-makers 7.5 Reproducibility and documentation: Jupyter, R Markdown, LaTeX 7.6 Research dissemination and review process	
8	Project Component: 8.1 Each scholar must perform an industry-focused research project involving: 8.1.1 A real dataset from industry/social sector 8.1.2 Data preparation and modelling 8.1.3 Application of ML/statistical techniques 8.1.4 Development of dashboard or deployment prototype 8.2 Final report + viva	7
Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.		
Reference Books		
<ol style="list-style-type: none"> 1. Montgomery, D.C., Runger, G.C. – Applied Statistics and Probability for Engineers 2. Kutner, Nachtsheim, Neter – Applied Linear Statistical Models 3. Hosmer, Lemeshow – Applied Logistic Regression 4. Gelman, Carlin, Stern, Rubin – Bayesian Data Analysis 5. Kleinbaum, Klein – Survival Analysis: A Self-Learning Text 6. James, Witten, Hastie, Tibshirani – An Introduction to Statistical Learning (ISL) 7. Hastie, Tibshirani, Friedman – The Elements of Statistical Learning (ESL) 8. Gareth James et al. – ISL with Applications in R 9. Aurélien Géron – Hands-On Machine Learning with Scikit-Learn, Keras and Tensor Flow 10. Bishop, C. – Pattern Recognition and Machine Learning 11. Wooldridge, J.M. – Introductory Econometrics: A Modern Approach 12. Gujarati, Porter – Basic Econometrics 13. Wes McKinney – Python for Data Analysis 14. Hadley Wickham – R for Data Science 15. Jure Leskovec, Anand Rajaraman – Mining of Massive Datasets 16. Tom White – Hadoop: The Definitive Guide 17. Hillier & Lieberman – Introduction to Operations Research 18. Winston, W.L. – Operations Research: Applications and Algorithms 19. Law & Kelton – Simulation Modelling and Analysis 		

Evaluation Pattern																		
Sr. No.	Pattern	Marks Allocation																
1	MCQ Test (Offline): Time: 45 Minutes 30 Questions x 1 Mark each	30																
2	<p>Presentation on the Topic allotted by the Research Centre which has organized Ph.D. Course Work (Offline or Hybrid Mode):</p> <p>Instructions:</p> <p>a) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work.</p> <p>b) There shall be a Committee for evaluation of the Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor).</p> <p>c) Joint Evaluation of the presentation to be done by the Committee.</p> <p>d) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for presentation for his / her presentation of topic by the Committee.</p>	20																
3	<p>Theory Examination (Offline): (Time: 2½ Hours)</p> <p>Instructions:</p> <p>a) Attempt any Five Questions from Q. No. 1 to 8.</p> <table> <tr> <td>Q. 1: Question on Unit-1</td> <td>= 10 Marks</td> </tr> <tr> <td>Q. 2: Question on Unit-2</td> <td>= 10 Marks</td> </tr> <tr> <td>Q. 3: Question on Unit-3</td> <td>= 10 Marks</td> </tr> <tr> <td>Q. 4: Question on Unit-4</td> <td>= 10 Marks</td> </tr> <tr> <td>Q. 5: Question on Unit-5</td> <td>= 10 Marks</td> </tr> <tr> <td>Q. 6: Question on Unit-6</td> <td>= 10 Marks</td> </tr> <tr> <td>Q. 7: Question on Unit-7</td> <td>= 10 Marks</td> </tr> <tr> <td>Q. 8: Question on Unit-8</td> <td>= 10 Marks</td> </tr> </table>	Q. 1: Question on Unit-1	= 10 Marks	Q. 2: Question on Unit-2	= 10 Marks	Q. 3: Question on Unit-3	= 10 Marks	Q. 4: Question on Unit-4	= 10 Marks	Q. 5: Question on Unit-5	= 10 Marks	Q. 6: Question on Unit-6	= 10 Marks	Q. 7: Question on Unit-7	= 10 Marks	Q. 8: Question on Unit-8	= 10 Marks	50
Q. 1: Question on Unit-1	= 10 Marks																	
Q. 2: Question on Unit-2	= 10 Marks																	
Q. 3: Question on Unit-3	= 10 Marks																	
Q. 4: Question on Unit-4	= 10 Marks																	
Q. 5: Question on Unit-5	= 10 Marks																	
Q. 6: Question on Unit-6	= 10 Marks																	
Q. 7: Question on Unit-7	= 10 Marks																	
Q. 8: Question on Unit-8	= 10 Marks																	
Total		100																

Course Outcomes:

After completion of course, students will be able to:

1. Apply advanced statistical and probabilistic techniques to solve real-world industrial and research problems.
2. Use modern computing environments (Python, R, SQL, Power BI/Tableau) to perform complex data processing, modelling, and visualization tasks.

3. Construct and evaluate predictive, classification, and forecasting models using machine learning and statistical methods.
4. Design and implement optimization, simulation, and operations analytics models for decision-making in business, finance, supply chain, and related domains.
5. Handle, process, and analyse large datasets using modern data engineering concepts and cloud-based tools.
6. Interpret model outputs accurately and prepare high-quality analytical reports, dashboards, and research manuscripts suitable for publication.
7. Demonstrate ethical awareness in data usage, model deployment, and reporting, ensuring integrity and reproducibility in research.
8. Independently execute an industry-oriented research project using real-world datasets and present the outcomes through a professional viva and written report.

Syllabus

Course-3(B): Subject Specific Advanced Level Course – II
(Board of Studies Specific-Business Economics)
Title of Course: Business Economics (Elective)
Credits: 04 (100 Marks)

Course Objectives:

- 1) To build advanced theoretical and analytical competence in microeconomics, macroeconomics, innovation economics, and contemporary economic issues relevant to businesses.
- 2) To equip scholars with the ability to use economic models, empirical tools, and interdisciplinary insights to analyse complex business environments.
- 3) To develop strategic thinking for decision-making in firms, markets, and policy contexts.
- 4) To encourage independent research, critical evaluation of literature, and application of economic principles to real-world business problems.

Unit No.	Units and Contents	No. of Lectures
1	Advanced Microeconomic Analysis in Business: 1.1 Theory of the Firm: Production Decisions, Cost Structures, and Organizational Design. 1.2 Strategic Pricing in Markets with Imperfect Competition. 1.3 Game-Theoretic Approaches to Competitive Business Strategy (Static and Dynamic Models). 1.4 Information Asymmetry in Markets: Screening, Signaling, and Contracting Mechanisms. 1.5 Behavioral Insights and Neuro-economic Perspectives in Business Decision-Making. 1.6 Platform-Based Markets and Principles of Modern Market Design.	15
2	Advanced Macroeconomic Analysis in Business: 2.1 Business Cycles, Growth Models and Global Economic Trends. 2.2 Inflation, Interest Rates and Corporate Decisions. 2.3 Monetary and Fiscal Policy Transmission Channels. 2.4 Exchange Rates, International Trade and Competitiveness. 2.5 Emerging Market Dynamics and Global Supply Chains.	15

3	Innovation, Technology and Entrepreneurship Economics <ul style="list-style-type: none"> 3.1 Capitalism, Socialism, and Democracy. 3.2 Startup Ecosystems and Venture Capital Economics. 3.3 Digital Transformation and AI Economics. 3.4 Knowledge Spillovers, Clusters and Open Innovation. 3.5 Business Model Innovation and Scalability Economics. 	15
4	Contemporary Issues in Business Economics: <ul style="list-style-type: none"> 4.1 Globalization vs. De-globalization Trends. 4.2 Economic Policy Uncertainty & Geopolitical Risks. 4.3 Climate Economy and Corporate Transition Strategies. 4.4 Ethical Business, Inclusive Growth & Public-Private Partnerships. 4.5 Sectoral Case Studies (Finance, Healthcare, E-commerce, Energy). 4.6 De-dollarization 4.7 International Trade and Tariff Policy 	15
Note: The Research Centre which has organized Ph.D. Course Work shall allocate up to 20 per cent lectures duration of the total lectures' duration to Research Scholars for library access and work.		
Reference Books <ul style="list-style-type: none"> 1) Tirole, J., The Theory of Industrial Organization 2) Milgrom, P. and Roberts, J., Economics, Organization and Management 3) Hart, O., Firms, Contracts, and Financial Structure 4) Coase, R., "The Nature of the Firm," <i>Economica</i> (Classic foundational article) 5) Varian, H., Intermediate Microeconomics (Advanced chapters on market power) 6) Pepall, Richards and Norman, <i>Industrial Organization: Contemporary Theory and Practice</i> 7) Belleflamme, P., and Peitz, M., <i>Industrial Organization: Markets and Strategies</i> 8) Cabral, L., <i>Introduction to Industrial Organization</i> 9) Kahneman, D., <i>Thinking, Fast and Slow</i> 10) Camerer, C., <i>Behavioural Game Theory</i> 11) Ariely, D., <i>Predictably Irrational</i> 12) Glimcher, P., <i>Foundations of Neuroeconomic Analysis</i> 13) Thaler, R., <i>Misbehaving: The Making of Behavioural Economics</i> 14) Romer, D., (2019). <i>Advanced Macroeconomics</i> (5th ed.). McGraw-Hill Edu. 		

15) Ljungqvist, L., and Sargent, T. J. (2018). Recursive Macroeconomic Theory (4th ed.), MIT Press.

16) Gali, J. (2015). Monetary Policy, Inflation, and the Business Cycle (2nd ed.). Princeton University Press.

17) Blanchard, O., and Fischer, S. (1989). Lectures on Macroeconomics. MIT Press.

18) Woodford, M. (2003). Interest and Prices: Foundations of a Theory of Monetary Policy, Princeton University Press.

Evaluation Pattern

Sr. No.	Pattern	Marks Allocation										
1	<p>MCQ Test (Offline): Time: 45 Minutes 30 Questions x 1 Mark each</p>	30										
2	<p>Presentation on the Topic allotted by the Research Centre which has organized Ph.D. Course Work (Offline or Hybrid Mode):</p> <p>Instructions:</p> <ul style="list-style-type: none"> a) The presentation schedule to be announced by the Research Centre which has organized Ph.D. Course Work. b) There shall be a Committee for evaluation of the Presentation which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor). c) Joint Evaluation of the presentation to be done by the Committee. d) At least 7 to 10 minutes time to be allotted to each Ph.D. Research Scholar for presentation for his / her presentation of topic by the Committee. 	20										
3	<p>Theory Examination (Offline): (Time: 2½ Hours)</p> <p>Instructions:</p> <ul style="list-style-type: none"> a) Attempt any Three Questions from Q. No. 1 to 4. b) Question No. 5 is compulsory. <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 60%;">Q. 1: Theory Question on Unit-1</td> <td style="width: 40%; text-align: right;">= 15 Marks</td> </tr> <tr> <td>Q. 2: Theory Question on Unit-2</td> <td style="text-align: right;">= 15 Marks</td> </tr> <tr> <td>Q. 3: Theory Question on Unit-3</td> <td style="text-align: right;">= 15 Marks</td> </tr> <tr> <td>Q. 4: Theory Question on Unit-4</td> <td style="text-align: right;">= 15 Marks</td> </tr> <tr> <td>Q. 5: Short Notes (Any 1 out of 4)</td> <td style="text-align: right;">= 05 Marks</td> </tr> </table>	Q. 1: Theory Question on Unit-1	= 15 Marks	Q. 2: Theory Question on Unit-2	= 15 Marks	Q. 3: Theory Question on Unit-3	= 15 Marks	Q. 4: Theory Question on Unit-4	= 15 Marks	Q. 5: Short Notes (Any 1 out of 4)	= 05 Marks	50
Q. 1: Theory Question on Unit-1	= 15 Marks											
Q. 2: Theory Question on Unit-2	= 15 Marks											
Q. 3: Theory Question on Unit-3	= 15 Marks											
Q. 4: Theory Question on Unit-4	= 15 Marks											
Q. 5: Short Notes (Any 1 out of 4)	= 05 Marks											
	Total	100										

Course Outcomes:

After completion of course, students will be able to:

- 1) Apply advanced microeconomic and game-theoretic frameworks to analyse firm behaviour, market strategy, and organizational design.
- 2) Evaluate macroeconomic forces—including monetary policy, interest rates, trade flows, and global shocks—and assess their implications for corporate and financial decisions.
- 3) Understand and critique innovation systems, technological change, AI-driven markets, and entrepreneurial ecosystems using modern economic theory.
- 4) Analyse contemporary global challenges (climate economy, geopolitical risks, de-globalization, etc.) and design research-backed business and policy strategies.
- 5) Conduct high-quality academic research using theoretical, empirical, and interdisciplinary approaches in business economics.

Syllabus

Course-4: Research and Publication Ethics

Credits: 02 (50 Marks)

Research and Publication Ethics Course:

A two-credit mandatory course entitled “Research and Publication Ethics” (RPE) for all registered Ph.D. Research Scholar for pre-registration course work. The Centre for Publication Ethics (CPE) of the Savitribai Phule Pune University will organize this course work frequently. Ph.D. Research Scholar has to apply and register independently for this course work as per the circular to be issued time to time by the Centre for Publication Ethics of the Savitribai Phule Pune University, Pune and submit the course work completion certificate to the Research Centre which has organized Ph.D. Course Work.

Overview of Course Structure:

This course has total six units focusing on basics of philosophy of science and ethics, research integrity, publication ethics. Hands-on-sessions are designed to identify research misconduct and predatory publications. Indexing and citation databases, open access publications, research metrics (citations, h-index, Impact Factor, etc.) and plagiarism tools will be introduced in this course.

Course structure, course material, Moodle link will be made available to registered Ph.D. Research Scholar by the Centre for Publication Ethics (CPE) of the Savitribai Phule Pune University after registration.

Pedagogy:

This course work to be conducted through class room teaching, guest lectures, group discussion, and practical sessions.

Evaluation:

Continuous assessment will be done through tutorials, assignments, quizzes, and group discussions. Weightage will be given for active participation. Final online examination will be conducted at the end of the course as per the university rules and regulations.

Course Structure:

The course comprises of six modules listed in the table below. Each module has 4-5 units.

Modules	Unit Title	Teaching Hours
Theory		
RPE 01	Philosophy Ethics	4
RPE 02	Scientific Conduct	4
RPE 03	Publication Ethics	7
Practice		
RPE 04	Open Access Publishing	4
RPE 05	Publication Misconduct	4
RPE 06	Databases and Research Metrix	7
Total		30

Syllabus - Theory Module (RPE 01): Philosophy Ethics (3 Hours)

Sr. No.	Contents
1	Introduction to philosophy: definition, nature and scope, concept, branches
2	Ethics: definition, moral philosophy, nature of moral judgements and reactions

Syllabus - Theory Module (RPE 02): Scientific Conduct (5 Hours)

Sr. No.	Contents
1	Ethics with respect to science and research
2	Intellectual honesty and research integrity
3	Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
4	Redundant Publications: duplicate and overlapping publications, salami slicing
5	Selective reporting and misrepresentation of data

Syllabus - Theory Module (RPE 03): Publication Ethics (7 Hours)

Sr. No.	Contents
1	Publication Ethics: Definition, Introduction, and Importance
2	Best Practices / standards setting initiatives and guidelines: COPE, WAME etc.
3	Conflicts of interest
4	Publication Misconduct: Definition, Concept, Problems that lead to unethical behaviour and vice versa, types
5	Violation of publication ethics, authorship, and contributorship
6	Identification of publication misconduct, complaints and appeals
7	Predatory publishers and journals

Syllabus - Practice Module (RPE 04): Open Access Publishing (4 Hours)

Sr. No.	Contents
1	Open access publication and initiatives
2	SHERPA/RoMEO online resource to check publisher copyright and self-archiving policies
3	Software tool to identify predatory publications developed by SPPU
4	Journal finder / Journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

Syllabus - Practice Module (RPE 05): Publication Misconduct (4 Hours)

Sr. No.	Contents
A)	Group Discussion: 02 Hours
1	Subject specific ethical issues, FFP, authorship
2	Conflicts of interest
3	Complaints and appeals: examples and frauds from India and abroad
B)	Software tools: 02 Hours
1	Use of plagiarism software like Turnitin, Urkund and other open-source software tools

Syllabus - Practice Module (RPE 06): Databases and Research Metrics (7 Hours)

Sr. No.	Contents
A)	Databases: 04 Hours
1	Indexing databases
2	Citation databases: Web of Science, Scopus etc.
B)	Research Metrics: 03 Hours
1	Impact factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
2	Metrics: h-index, g-index, i10 index, altmetrics

Syllabus

Course-5: Industrial Cum Field Visit Report

Credits: 01 (25 Marks)

The Research Centre which has organized Ph.D. Course Work will organize Industrial Cum Field Visit during Ph.D. Course Work and it will be mandatory on every Ph.D. Research Scholar. The expenses of Industrial Cum Field Visit to be borne by the Ph.D. Research Scholar separately.

Every Ph.D. Research Scholar has to prepare Industrial Cum Field Visit Report with Coordinator of Ph.D. Course Work within 07 days as per the guidelines to be framed by the Research Centre which has organized Ph.D. Course Work.

There shall be a Committee for evaluation of the Industrial Cum Field Visit Report which includes Course Work Coordinator (He / She should be Ph.D. Research Supervisor) of the Ph.D. Course Work as an Internal Expert and one External Expert (He / She should be Ph.D. Research Supervisor). Joint Evaluation of the Industrial Cum Field Visit Report to be done by the Committee.