SHIVAJI UNIVERSITY, KOLHAPUR - 416004, MAHARASHTRA

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शिवाजी विद्यापीठ, कोल्हापूर - ४१६००४,महाराष्ट्र

दूरध्वनी - ईपीएबीएक्स - २६०९०००, अभ्यासमंडळे विभाग दुरध्वनी विभाग ०२३१—२६०९०९३/९४

Estd. 1962
"A++" Accredited by
NAAC(2021)
With CGPA 3.52

Ref../SU/BOS/Com & Mgmt./ 567   Date : 27/07/2023

To,

The Principal/Co-ordinator/Director
All Affiliated M. Com IT Colleges/Institutions,
Shivaji University, Kolhapur

Subject : Regarding Syllabi of M. Com. IT Part II(Sem III/IV) Choice Based Credit System (CBCS) degree programme under the Faculty of Commerce & Management as per National Education Policy, 2020
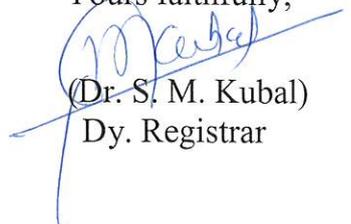
Sir/Madam,

With reference to the subject mentioned above, I am directed to inform you that the University authorities have accepted and granted approval to the revised Syllabi of **M. Com. IT (Information Technology) Part II (Sem III/IV) Choice Based Credit System (CBCS)** under the Faculty of Commerce & Management as per National Education Policy, 2020

This syllabi shall be implemented from the academic **year 2023-2024** onwards. A soft copy containing the syllabus is attached herewith and it is also available on university website www.unishivaji.ac.in (Online Syllabus).

You are therefore, requested to bring this to the notice of all Students and Teachers concerned.

Thanking you,

Yours faithfully,

(Dr. S. M. Kubal)
Dy. Registrar

Encl : As above
Copy to,

1.   Dean, Faculty of Commerce & Management
2.   Chairman,   Board of Studies   } for information

3.   Director, BOEE
4.   Appointment Section
5.   P. G. Admission Section
6.   O. E. 1 Section
7.   Affiliation Section (U.G./P.G.)   for information and necessary action.
8.   Computer Center/I.T.
9.   Eligibility Section
10.   Distance Education, SUK
11.   P.G. Seminer Section

SHIVAJI UNIVERSITY, KOLHAPUR

ESTD. 1962

NAAC A++ Grade

Faculty of Commerce and Management

Master of Commerce (M. Com.) Information Technology Part II

Under Choice Based Credit System (CBCS)

(Structure and Syllabus in accordance with **National Education Policy** to be implemented from Academic Year 2023-24)

Master of Commerce (M. Com.)

Under Choice Based Credit System (CBCS)

(Structure in accordance with **National Education Policy** to be implemented from Academic Year 2022-23)

Structure of M. Com. Part-II (Information Technology) (Semester-III & IV)

(From Academic Year 2023-24)

Semester	Discipline Specific Course (DSC)	Discipline Specific Electives (DSE)	Field Work/ Internship/ Apprenticeship	Skill Enhancement Course (Multi-disciplinary)	Credits required
Level-9					
III	DSC4 (4) DSC5 (4)	DSE5(4) DSE6 (4)	--	SEC-3 (2)	18
IV	DSC6 (4) DSC7 (4)	DSE7 (4) DSE8 (4)	--	SEC-4 (2)	18
					36

Semester- III

Sr. No.	Course Type	Teaching Scheme						Examination Scheme					
		Theory			Practical			Semester end Exam.			Internal Assessment		
		No. of L	Hours	Credits	No. of P	Hours	Credits	Paper Hours	Max.	Min.	IA	Max.	Mio.
1	DSC-4	04	04	04	-	-	-	03	80	32	IA	20	08
2	DSC-5	04	04	04	-	-	-	03	80	32	IA	20	08
3	DSE-V	04	04	04	-	-	-	03	80	32	IA	20	08
4	DSE-VI	04	04	04	-	-	-	03	80	32	IA	20	08
5	SEC-III	02	02	02	-	-	-	02	50	20	-	-	-
	Total	18	18	18	-	-	-		370			80	

Semester- IV

Sr. No.	Course Type	Teaching Scheme						Examination Scheme					
		Theory			Practical			Semester end Exam.			Internal Assessment		
		No. of L	Hours	Credits	No. of P	Hours	Credits	Paper Hours	Max.	Min.	IA	Max.	Mio.
1	DSC-6	04	04	04	-	-	-	03	80	32	IA	20	08
2	DSC-7	04	04	04	-	-	-	03	80	32	IA	20	08
3	DSE-VII	04	04	04	-	-	-	03	80	32	IA	20	08
4	DSE-VIII	04	04	04	-	-	-	03	80	32	IA	20	08
5	SEC-IV	02	02	02	-	-	-	02	50	20	-	-	-
	Total	14	14	14	-	-	-		370			80	

DSC- Discipline Specific Course, DSE- Discipline Specific Elective,

SEC- Skill Enhancement Course

IA- Internal Assessment, L- Lecture, P- Practical

Note:

1) For each course of 4 credits, requirement of hours for a semester will be 60 hours.

2) Internal Assessment will include internal test (10 marks) and assignment (10 marks) for all DSC and DSE courses.

Semester-III		Semester-IV	
Course Code	Course (Subject)	Course Code	Course (Subject)
DSC-4	Management Accounting -I	DSC-6	Management Accounting -II
DSC-5	Business Finance –I	DSC-7	Business Finance –II
DSE-V	Advance Database Technology	DSE-VII	Data Analytics
DSE-VI	Emerging Trends in Web Technology	DSE-VIII	Mobile Applications
SEC-III	Skill Enhancement Course-3	SEC-IV	Skill Enhancement Course-4

M.Com. ((CBCS)) Part-II (Information Technology) (Semester-III)

CC-C1: Management Accounting Paper I

4 Credits

60 hours Course	Course Content	Total 100Marks
Course Outcomes:	1. Understand the fundamentals of ManagementAccounting. 2. Explain the analysis and interpretation of financialstatements. 3. Demonstrate the estimation of working capitalrequirements. 4. Practice to analyze the changes in financial position.	(Marks: 80 for Examination & 20 Internal Evaluation)
	Course Content	
Unit-I:	**Introduction:**	**(10 hours)**
Theory	Meaning of Management Accounting, Scope and Functions of Management Accounting, Role of Management Accountant in Decision Making, Management Accounting vs. Financial Accounting, Tools and Techniques of Management Accounting	
Practical	Group discussion can be conducted in the classroom on the contents of Unit-I	
Unit-II:	**Analysis of Financial Statements:**	**(15 hours)**
Theory	Meaning and Types of Financial Statements, Analysis of financial statements: Comparative Statement Analysis, Common-size Statement Analysis, Trend Analysis and Ratio Analysis-Classification of Ratios, Advantages and Limitations of Accounting ratios.	
Practical	Download financial statements of any company and analyse it with any technique of financial analysis. Also write interpretation.	
Unit-III:	**Working Capital:**	**(15 hours)**
Theory	Meaning, Significance and Determinants of Working Capital, Operating Cycle, Types of Working Capital, Estimation of Working Capital Requirements	
Practical	Exercise for Simulation of estimation of working capital can be arranged in the classroom.	
Unit-IV:	**Funds flow Statement and Cash Flow Statement:**	**(20 hours)**
Theory	a) Meaning of Fund and Funds Flow Statement, Identifying Flow of Funds, Preparation of Funds Flow Statement, b) Meaning of Cash Flow Statement, Utility of Cash Flow Statement and Preparation of Cash Flow Statement(AS-3) c) Difference between Funds Flow Statement and Cash Flow Statement	
Practical	a) Prepare fund flow statement on hypothetical data and try to interpret it. b) Download cash flow statement of any company andinterpret it.	

(Note: The respective teacher will guide and help the students to do practical).

Reference Books:
1. Khan M.Y. and Jain P.K. Management accounting, Tata McGrow Hill,New Delhi
2. Charles T.Horngren, Introduction to management Accounting, Prentice Hall of India, New Delhi.
3. Horngren, Charles T. George Foster and Shrikant M. Daliar :
4. Cost Accounting : A Managerial Emphasis, Prentice Hall, Delhi
5. Pandey I. M.: Management Accounting, Vikas Publication, Delhi. '
6. Welsch Glenn A., Ronald W. Hilton and Paul N. Gordon :
7. Budgeting, Profit Planning and control, Prentice Hall, New Delhi.
8. Manmohan & Goyal : Principles of Management Accounting
9. Maheshwari: Principles of Management Accounting
10. Robet Anthony and Vijay Govindrajan - Management Control System

CC-C2: Management Accounting Paper-II(Management Control System)

		4 Credits
60 hours Course	**Course Content**	**Total 100 Marks**
Course Outcomes:	1. Understand the fundamentals of Management Control System and Reporting. 2. Explain the marginal costing and cost-volume-profit analysis and practice decision making based thereon. 3. Simulate the budgetary control system and demonstrate the budgeting. 4. Practice to analyze the cost variances.	(Marks: 80 for Examination & 20 Internal Evaluation)
Unit - I:	**Management Control System:**	**(10 hours)**
Theory	a) Meaning, Need, Importance and Scope of ManagementControl System, Management Control Process; b) Strategic Planning-Meaning, Difference between Strategic Planning and Management Control and c) Reporting to Management- Types of Reports and Characteristics of good report.	
Practical	Group discussion can be conducted in the classroom on the contents of Unit-I.	
Unit - II:	**Marginal Costing and CVP Analysis:**	**(15 hours)**
Theory	Meaning and Application of Marginal Costing, Break-Even Analysis, Cost-Volume- Profit (CVP)Analysis, Decision Making through Marginal Costing- Make or Buy Decision, Shut Down or Continue Decision, CVP Analysis in Multi-product Decision, Alternative Course of Action.	
Practical	a) Exercise for Simulation of computing break-even point and margin of safety and interpret the situations. b) Draw break-even charts on graph paper considering hypothetical data and compare output of graphical method with algebraic method.	Students
Unit - III:	**Budgetary Control:**	**(20 hours)**
Theory	Meaning of Budget and Budgetary Control, Objectives, Advantages and Limitations; Types of Budgets – Production, Sales, Cash, Master Budget, Fixedand Flexible Budget; Capital Expenditure Budgeting (Note: Problems will be asked on Cash Budget, Flexible Budget and Capital Budget only)	
Practical	Role Play can be arranged to know the working of budget committee works in budgetary control system or Visit any organization which has well established budgetary control system and discuss with budget officer regarding it.	
Unit - IV:	**Standard Costing and Variance Analysis:**	**(15 hours)**
Theory	a) Meaning of Standard Cost and Standard Costing, Setting a System of Standard Costing, Advantages and Limitations; b) Variance Analysis- Material Cost Variances, Labour Cost Variances and Overhead Variances	
Practical	a) Compute variances on the basis of hypothetical data and interpret it. b) Analyse variances for such any organization which has well established budgetary control system and discuss with budget officer regarding it.	

(Note: The respective teacher will guide and help the students to do practical).

Reference Books:
1. Khan M.Y. and Jain P.K. Management accounting, Tata McGrow Hill,New Delhi
2. Charles T.Horngren, Introduction to management Accounting, Prentice Hall of India, New Delhi.
3. Horngren, Charles T. George Foster and Shrikant M. Daliar :
4. Cost Accounting : A Managerial Emphasis, Prentice Hall, Delhi
5. Pandey I. M.: Management Accounting, Vikas Publication, Delhi. '
6. Welsch Glenn A., Ronald W. Hilton and Paul N. Gordon :
7. Budgeting, Profit Planning and control, Prentice Hall, New Delhi.
8. Manmohan & Goyal : Principles of Management Accounting
9. Maheshwari: Principles of Management Accounting
10. Robet Anthony and Vijay Govindrajan - Management Control System

Nature of Question Paper
M.Com. ((CBCS)) Part-II(Semester-IV)
Management Accounting Paper I and II

Instructions:
1. Question No.1, Q. No. 2 and Q. No.3 are Compulsory.
2. Attempt any Two Questions from Q. No.4 to 6.

Q. No.1.	a) Choose correct Alternative	10 Marks
	b) State True or False	6 Marks
Q. No.2.	(A) Broad Question	8 Marks
	(B) Broad Question	8 Marks
	Or	
	Short Notes (any four out of six)	16 marks
Q. No.3.	Case Study	16 Marks
Q. No.4.	Problem	16 Marks
Q. No.5.	Problem	16 Marks
Q. No.6.	Problem	16 Marks

4 Credits

60 Hours Course	Course Content	Total 100 Marks
Course Outcomes	1) Apply fundamental concepts of business finance and examine various finance decisions 2) Compare different types of capital structure 3) Compare and appraise various long-term and short-term sources of finance 4) Illustrate various components of Working Capital Management	
Skills to be acquired	Professional skills required for handling the finance related activities of business entities and corporate enterprises and making finance decisions	
Unit-I	**Environment of Business Finance:**	**(15 Marks)**
Theory	(a) **Business Finance:** Concept, scope and significance of Business Finance (b) **Financial Goal:** Profit Maximization Vs Wealth Maximization, Relationship of finance with other areas of management (c) **Finance Decisions:** Investment decision, Finance decision, Dividend decision and Liquidity decision (d) **Capitalization:** Concept and Theories of Capitalization- **Over-capitalization and Under-capitalization:** Concept, symptoms, causes, effects and remedies	
Practical	Visit to any nearby organization, interact with finance controller and understand various financial functions/ decisions	
Unit-II	**Capital Structure:**	**(15 Marks)**
Theory	(a) **Capital Structure:** Meaning, Importance- **Cardinal Principles of Capital Structure:** Cost, Risk, Control, Flexibility and Timing (b) **Factors** influencing the capital structure (c) **Cost of Capital:** Meaning, Significance and Weighted Average Cost of Capital (WACC)	
Practical	Obtain financial reports of any listed company available on websites and prepare capital structure chart taking figures from their financial statements and also work out cost of capital	
Unit-III	**Sources of Finance:**	**(15 Marks)**
Theory	(a) **Shares:** Equity Shares, Equity Shares with differential rights, Preference Shares, Sweat Shares, Employee's Stock Option (ESOP)---Meaning, Characteristics, Advantages and Limitations (b) **Debentures and Term Loans:** Meaning, characteristics, merits, demerits (c) **Venture Capital:** Concept, process, merits and demerits (d) **Lease Finance:** Concept, parties, mechanism and types of lease finance	
Practical	Prepare and present comparative analytical chart of all sources of finance and make choices of appropriates sources of finance	
Unit-IV	**Working Capital Management:**	**(15 Marks)**
Theory	(a) **Working Capital:** Concept, types and significance- Factors	

	determining working capital requirement (b) **Sources of Working Capital:** Accruals, trade-credit, commercial banks, public deposits, inter-corporate- deposits, short-term loans from financial institutions, commercial paper (CP) and factoring (c) **Working Capital Management:** Cash Management, Liquidity Management, Receivables Management and Inventory Management (Only concepts and techniques)	
Practical	Obtain financial report of any public limited company and calculate working capital and identify sources of financing working capital	

Books Recommended:

1. Corporation Finance- S.C. Kuchhal
2. Financial Management Taxmann-Ravi M. Kishore, Allied Services Pvt. Ltd. New Delhi
3. Financial Management –Prassanna Chandra,TMH, New Delhi
4. Financial Management-Rajiv Shrivastava and Anil Misra, Oxford University Press,New Delhi
5. Financial Management- Dr. Anil Kumar Dhagat, Kognet Learning Solutions Inc. Dreamtech Press, New Delhi
6. Finance Finance-Finance for Non-finance Executives, Prasanna Chandra, Tata McGrawHill Education Pvt. Ltd., New Delhi
7. Essentials of Business Finance- Dr. R.M. Shrivastav
8. Financial Management- Pandey, I.M. - Vikas Publications, Delhi.
9. Corporate Finance Policy- Guthmann and Dougall
10. Readings in Indian Financial Services- Digvijay
11. Corporate Finance- Brealey, Richard A. & Steward C Myers
12. Fundamentals of Financial Management, Van Horne, J.C. and J.M Wachowicz Jr- Prentice – Hall, Delhi
13. Financial Management- Text & Cases: - Briham & Ehrhardt-CENGAGE Learning India (P) Ltd., New Delhi

   (Note: Recent editions of the above books may be referred)

4 Credits

60 Hours Course	Course Content	Total 100 Marks
Course Outcomes	1) Become familiar with practical trading techniques in Indian stock market 2) Understand how to build and evaluate the portfolio and different facets of portfolio management 3) Acquire conceptual understanding of Corporate Restructuring 4) Become aware of recent trends in business finance scenario with specific reference to Startup Funding, Angel Financing and FinTech services	
Skills to be acquired	Professional skills required for making judicious finance decisions for business firms	
Unit-I	**Indian Capital Markets:**	**(15 Marks)**
Theory	**(a) Primary Capital Market:** Meaning, Functions, Methods of selling corporate securities in primary capital market-Underwriting of Securities and Greenshoe Option, IPO V/s FPO **(b) Secondary Capital Market (Stock Exchange):** Meaning, Functions of stock exchange. Online trading procedure on a stock exchange, Role of SEBI in regulating capital markets in India **(c) Credit Rating and Depository Services:** **Credit Rating:** Meaning, need, credit rating agencies in India, Credit rating methodology **Depository Services:** Meaning and benefits of depositories (NSDL & CDSL) **(d) Mutual Funds:** Concept, Importance, Types, Objectives of AMFI	
Practical	Visit to any share broker/mutual fund brokers' office and observe share trading activities and watch Zee Business News Channel and understand the stock exchange activities	
Unit-II	**Portfolio Management , Financial Inclusion and Micro Finance:**	**(15 Marks)**
Theory	**(a) Portfolio Management:** Meaning, importance, objectives-Portfolio risk & return, Portfolio Construction, Portfolio Revision and Portfolio Evaluation **(b) Financial Inclusion:** Meaning, Need and Financial Inclusion Schemes **(c) Micro-Finance:** Concept, Characteristics, Need, Leading micro finance providers in India	
Practical	Discuss about portfolio construction and evaluation with Financial Adviser and prepare a report and also visit microfinance banks near you	
Unit-III	**Corporate Restructuring:**	**(15 Marks)**
Theory	**(a) Corporate Failure:** Meaning, causes and remedies, major corporate failures in India **(b) Corporate Restructuring:** Meaning, Benefits, **Forms of Corporate Restructuring:** Mergers, Amalgamation, Acquisitions/Take-over, Joint Ventures, Demergers, Divesture, Buy-Outs, Strategic alliances, Buy-Back of Shares	

Practical	Watch latest news on corporate world and give presentation on latest 2 cases of corporate restructuring.	
Unit-IV	**Recent trends in Business Finance:**	**(15 Marks)**
Theory	**(a) Startups Funding**: Fund raising norms for startups- Schemes Available for new startups by Government in the form of Finances , SEBI regulations on startup listing and fund raising, Venture Capital V/s Private Equity **(b) Angel funding:** Origin of angel funding, SEBI regulations on angel funding– **(c) Financial Technology (FinTech):** Meaning, Application of Fin-Tech to different areas of finance, Fintech companies in India	
Practical	Visit Startups near you and collect information about their funding	

Books Recommended:

1) Investment and Securities Market in India- V.A. Avdhani

2) Security Analysis and Portfolio Management- Sasidharan/ Mathews

3) Security Analysis and Portfolio Management- Punithavathy Pandian

4) Finance Sense ---Finance for Non-finance Executives, Prasanna Chandra, Tata McGraw Hill Education Pvt. Ltd., New Delhi

5) Stock Exchange and Investment- Raghunathan

6) Stock Exchange Trading in India- Gupta L.C.

7) Portfolio Management Handbook- Robert A. Strong

8) Investment Analysis and Portfolio Management- Frank K. Reilly & Keith C. Brown

9) Understanding Micro Finance: Pamda D. K. , Wiley India, New Delhi

10) Mergers And Acquisitions- P Mohan Rao, Deep & Deep Publications

11) Corporate Mergers, Amalgamations & Take Over- Verma J.C.

12) Corporate Restructuring and Indian Perspective- Mattoo P.K

13) Funding Your Startups: Druv Nath, Penguin Books India PVT, Limited(2020)

14) FinTech Future: Sanjay Phadake, SAGE Publishing India(2020)

15) Financial Technology (Fin Tech) and Digital Banking in India: Jaspal Singh-New Century Publications (2022)

16) Angel Financing: How to find and invest in Private Equity : Gerald Benjaminn, John Wiley and Sons (1999)

 (Note: Recent editions of the above books may be referred)

Nature of Question paper for I and II

(For Semester III and IV)

Total Marks: 80:   **Duration** 3 hours

Instructions: 1) Q. No. 1, 2 and 3 are Compulsory
2) Attempt any three questions from Q. No. 4 to 6
3) Figures to the right indicate Full Marks

Que. No.	Nature of Question	Marks
1	A) Multiple Choice Questions	10
	B)State 'True' OR 'False'	6
2	Case Study/ Problem	16
3	Write Short Notes (Any FOUR out of SIX)	16
4	Long Answer Question	16
5	Long Answer Question	16
6	Write Short Notes (Any Two out of Three) a) b)	8 8

M.Com. Part-II (Information Technology)
Semester- III
Paper No: DSE-V Advance Database Technology

Course Outcomes:

The students of this course will be able to:

1. Identify the nature of data and need of database for an organization.
2. Design relational database to store organizational data properly.
3. Examine the different emerging database models in an organization.
4. Compare and select appropriate database model for an organization.

Marks: 80	Hours of Teaching: 60	Theory: 40	Practical: 20	
Unit I **a)Theory**	**RELATIONALDATABASESANDADVANCEDSQL** The relational database model: tables, keys, integrity constraints, operators, primary key selection and functional dependencies, ER Modeling: Types of Entities, Relationships, Developing an ER Diagram. Advanced SQL: SQL functions, cursors, triggers, stored procedures, Embedded SQL. Indexing and Query Optimization			**10**
b)Practical	Case study based on Payroll system for preparing ER Diagram including database design and practical assignments based on cursor and trigger.			**05**
Unit II **a)Theory**	**OBJECT ORIENTED DATABASES** The extended entity relationship (EER) model: generalization, specialization, Concepts for Object Oriented Databases: Object Identity, Object structure, Type Constructors, Encapsulation of Operations, Inheritance, Object Database Standards, Languages and Design: ODMG Model, ODL, OQL.			**10**
b)Practical	Case study based on College Admission System for preparing EER diagram including designing of Object oriented database for the same			**05**
Unit III **a)Theory**	**NoSQL Database** Introduction to NoSQL Introduction to NoSQL database, Types of NoSQL database, NoSQL data modeling, Benefits of NoSQL database, Comparison between SQL and NoSQL database system, NoSQL using MaongoDB. Basic data types, Running the MongoDB shell, MongoDB Client, ,Basic operations with MongoDB shell, Arrays, querying with MongoDB			**10**
b)Practical	Case study based on MongoDB database system for Inventory System of any manufacturing organization.			**05**
Unit IV **a)Theory**	**XMLANDEMERGINGDATABASEMODELS** XML Databases: Structured unstructured and semi structured data, XML hierarchical Data Model, XML Document DTD and XML Schema, XMLQuery.EmergingDatabaseModel:MultimediaDatabase,TemporalDatabases,Datbase on the World Wide Web, GIS Data Operations, Digital Libraries.			**10**
b)Practical	Case study based on usage of xml database by hotel price comparison web Sites (TripAdvisor, Trivago etc.)			**05**

Reference Books-

1. Database system concept: Korth, Silberschatz and Sudarshan, MGH,5th edition

2. SQL/PLSQL For Oracle11G, Black Book, Dr. Deshpande, Wiley Dreamtech 2012

3. SQL,PL/SQL the programming language of Oracle, Ivan Bayross, BPB

4. Professional NoSQL, Shashank Tiwari, 2011, Wiley

5. Teach yourself NoSQL with MongoDB in 24 Hours, Brad Dayley, Sams

6. Beginning XML Databases, Gavin Powell, Wliey Publishing, 1st Edition

7. Designing XML Databases -Paperback, by Mark Graves Prentice Hall PTR, 2001

Web Resources

https://www.slideshare.net/Jasour/advanced-database-lecture-nores

https://edutechlearners.com/advance-database-management-system-notes/

http://ecomputernotes.com/database-system/adv-database

M.Com. Part-II (Information Technology)
Semester-IV
Paper No: DSE-VII Data Analytics

Course Outcomes:

The students of this course will be able to:

1. Identify the importance and different types of data analytics required for organizations.
2. Analyze the different techniques of Text Analysis.
3. Evaluate the role of different data mining techniques used for Data Analytics
4. Apply different advanced tools available in Excel for Data Analytics

Marks: 80	Hours of Teaching: 60	Theory:40	Practical: 20	
Unit I **a)Theory**	**Data Analytics Basics:** Definition of analytics, Evolution of analytics, Need of Analytics, Data analytics vs data analysis, Data Analytics vs Data Science, Introduction to Data Analyst, Types of Data Analytics, Tools for Data Analytics. Importance of data analytics, Differences between data, information and knowledge and data maturity.			10
b)Practical	Case study based on different types of Data Analytics with their importance in share trading.			05
Unit II **a)Theory**	**Data Mining:** Types of Data, Introduction to data mining - Definition and functionalities, Classification and Prediction - Issues Regarding Classification and Prediction – Classification by Decision Tree, Mining Frequent Patterns, Association Rules, Machine Learning Algorithms" Supervised and Unsupervised learning, Cluster Analysis: Types of Data in Cluster Analysis, K-Means Analysis.			10
b)Practical	Case study based on any one of the data mining techniques for market analysis.			05
Unit III **a)Theory**	**Advanced Data Analytics** **Text Analytics:** Natural language basics, Processing and understanding text, Text Summarization, Text similarity and Clustering, Text classification, Semantic and Sentiment analysis. **Image Analytics:** Introduction to image classification and analysis, Image features, Image segmentation, Applications of Image analysis, Introduction to softwares for image processing.			10
b)Practical	Case study based on Text Analysis using Semantic analysis for identifying market potentials for organizations			05
Unit IV **a)Theory**	**Advanced Excel for Data Analytics:** Sort and filter, Charts: Skewness, kurtosis, Box Plot, Conditional formatting, Importing data and text to columns, Functions: Mathematical, String functions, IF, AND, OR, Searching: match, search, vlookup, Dates, Misc, Pivot tables			10
b)Practical	Case study based on Data presentation for sales data analysis (Year, Region and product wise) using pivot table.			05

Reference Books-

1. Data Analytics: Principles, Tools and Practices: Dr. Gourav Aroraa, bpb publications
2. Data Analytics: Anil Maheshwari, McGraw Hill Publications.
3. Data Mining Techniques: Arun K. Pujari, The Orient Blackswan
4. Machine Learning for beginners: Aldrich Hill, Notion Press
5. Advanced Excel with VBA Macros: Swaroop Das, Blue Rose Publications, 1st edition 2020

Web Resources

1. https://www.simplilearn.com/what-does-a-data-analyst-do-article
2. https://www.investopedia.com/terms/d/data-analytics.asp
3. https://www.mastersindatascience.org/learning/what-is-data-analytics/
4. https://developers.google.com/machine-learning/crash-course
5. https://www.tutorialspoint.com/advanced_excel/index.htm

M.Com. Part-II (Information Technology)
Semester-III
Paper No: DSE-VI Emerging Trends in Web Technology

Course Outcomes:

The students of this course will be able to:

1. Identify web application development technique through the framework of Web 2.0.

2. Design and develop a modern web application solution using Rich Internet Applications

3. Compare the benefits of jQuery over traditional web techniques.

4. Analyze emerging web technologies and applications through Semantic Web.

Marks: 80		Hours of Teaching: 60	Theory: 40	Practical: 20	
Unit I **a)Theory**	**Introduction to Web 2.0** Introduction to Web 2.0, Characteristics of Web 2.0 Technologies, Differentiating Web 1.0 and Web 2.0, Web 2.0 Technologies: Blog, Wiki, Social Bookmarking, Social Networking. Application Domains of Web 2.0: Business Applications, Educational Applications, Medical and Health Applications, Merits and demerits of Web 2.0.				**10**
b)Practical	Case study on Educational Applications based on Web2.0 technology				**05**
Unit II **a)Theory**	**Rich Internet Application** Introduction to Rich Internet Application, Features of Rich Internet Application, Framework of Rich Internet Application, Advanced Technologies used in Rich Internet Application: AJAX, JSON, AngularJS. Benefits of Rich Internet Application, Limitations of Rich Internet Application.				**10**
b)Practical	Case study based on benefits of Rich Internet Application for Manufacturing Organization				**05**
Unit III **a)Theory**	**Introduction to jQuery** JQuery Introduction, jQuery Syntax, jQuery Selectors, jQuery Events, jQuery Effects, jQuery and HTML contents, jQuery and CSS Classes, Working with jQuery and AJAX.				**10**
b)Practical	Case study based on usage of jQuery by Microsoft in its different products				**05**
Unit IV **a)Theory**	**Semantic Web** Introduction to Semantic Web: semantic web approach, benefits of semantic web, Characteristics of Semantic Web, building blocks of Semantic Web, Semantic Modeling, Resource Description Framework (RDF), Semantic Web Applications.				**10**
b)Practical	Case study on E-Commerce applications based on Semantic Web.				**05**

Reference Books-

1. Web 2.0 Architectures, James Governor, Dion Hinchcliffe, Duane Nickull, O'Reilly

2. Web 2.0 Mash-ups and the New Aggregators, O'Reilly

3. Professional Rich Internet Applications: AJAX and Beyond, Dana Moore, Wrox

4. Learning from jQuery: Building on Core Skills, 2013, Callum Macrae, O'Reilly

5. Developing Enterprise Web Services: An Architect's Guide, Sandeep Chatterjee, James Webber, Prentice Hall

6. The Semantic Web: A Guide to the Future of XML, Web Services, and Knowledge Management , Michael C. Daconta, Leo J. Obrst, Kevin T. Smith, Wiley

Suggested Additional Reading:

1. Richardson, Will (2010). Blogs, Wikis, Podcasts, and Other Powerful Web Tools for Classrooms. Corwin Press. p. 171. ISBN 978-1-4129-7747-0

2. Pal, Surendra Kumar. "Learn More About Web 2.0". academia.edu.

3. O'Reilly, T., 2005. What is Web 2.0. Design Patterns and Business Models for the Next Generation of Software, p. 30

4. Berners-Lee, Tim; James Hendler; OraLassila (May 17, 2001). "The Semantic Web" (PDF). Scientific American. 410 (6832): 1023–4.

M.Com. Part-II (Information Technology)
Semester-IV
Paper No: DSE-VIII Mobile Applications

Course Outcomes:

The students of this course will be able to:

1. Understand the building blocks of Mobile Operating Systems
2. Identify various components of Android architecture for mobile Applications.
3. Apply Android Application Framework for developing mobile Applications.
4. Analyze different security threats for android mobile applications.

Marks: 80	Hours of Teaching: 60	Theory: 40	Practical: 20	
Unit I a)Theory	**Mobile Operating System** Introduction to Mobile operating System, Mobile operating system structure, Constraints and Restrictions, Features: Multitasking Scheduling, Memory Allocation, File System Interface, Keypad Interface, I/O Interface, Multimedia features, Characteristics of Mobile Applications. Comparison between Android, Windows and IoS.			**10**
b)Practical	Case study on identifying characteristics of Mobile Applications			**05**
Unit II a)Theory	**Android Architecture and Framework** Android versions and its features, Architecture & Environment: SDK, Android Development Tools, Android Virtual Devices, Emulators, Dalvik Virtual Machine, Android Directory Structure. UI components: TextView, Buttons, Check Boxes and Radio Groups, Spinner, DatePicker, TimePicker. Android Menu: Option Menu, Context Menu, Popup Menu.			**10**
b)Practical	Case study based on analyzing different UI components used in different Mobile Applications.			**05**
Unit III a)Theory	**Android Framework** Activity: Activity Lifecycle, Activity Example, View: GridView, WebView, ScrollView. Layout Manager: Relative Layout, Linear Layout, Table Layout, Grid Layout. Intent: Overview, Implicit Intents, Explicit Intents, Intents with Activities. Location API: Location API Fundamental, Example of Android Location API, Working with Google Maps.			**10**
b)Practical	Case study on Mobile applications based on usage of Location API and Google Maps.			**05**
Unit IV a)Theory	**Android Security** Mobile application threats: Working of mobile applications, Client-side vulnerabilities, Server-side vulnerabilities, Mobile application threats, Risks for users. Android Security: System Level Security, Application Security, Application Security measures, Application Security Scans			**10**
b)Practical	Case study based on identifying mobile application vulnerabilities and suggesting security measures.			**05**

Reference Books–

1. Android, P.K. Dixit, Vikas Publication
2. Android Application Development – Black Book Pradip Kotari, Dreamtech
3. Composing Mobile Apps Learn, Explorer, Apply using Android Anubhav Pradhan, Anil Deshpande, Wiley. 4. Android Wireless Application Development By Lauren Darcey, Pearson Education, 2nd Edition.
5. Unlocking Android Developer's Guide By Frank Ableson and Charlie Collins and Robi Sen, Manning Publication Co.
6. Android Security Internals: An In-Depth Guide to Android's Security Architecture 1st Edition, Elenkov Nikolay, No Starch Press

Web Resources

https://www.ibm.com/topics/mobile-application-development
https://www.netsolutions.com/hub/mobile-app-development
https://developer.android.com/courses/android-basics-compose/course
https://medium.com/@amritlalsahu5/how-to-develop-a-secure-android-app-b4ec103ece8c

Nature of Question paper for DSE-V, VI, VII and VIII

(For Semester III and IV)

Total Marks: 80:   **Duration** 3 hours

Instructions: 1) Q. No. 1, 2 and 3 are Compulsory
                     2) Attempt any three questions from Q. No. 4 to 6
                     3) Figures to the right indicate Full Marks

Que. No.	Nature of Question	Marks
1	A) Multiple Choice Questions	10
	B)State 'True' OR 'False'	6
2	Case Study/ Problem	16
3	Write Short Notes (Any FOUR out of SIX)	16
4	Long Answer Question	16
5	Long Answer Question	16
6	Write Short Answers (Any Two out of Three) a) b) c)	16 (8 marks for each)

Shivaji University, Kolhapur

Syllabus of M.Com.
Faculty of Commerce and Management
Syllabus in accordance with NEP-2020
Introduced from academic year 2023-24
M.Com. Part-II (Semester-III)
SKILL ENHANCEMENT COURSE (SEC-3)
(Self Study Mode)
Title of the Paper : E-filing of Income Tax Return

30 Hours   **2 Credits**

	Course Content
Course Outcomes	After studying this course students shall be able To know the different income tax return To know the procedure of e filing tax return and payment of tax
Skills to be acquired	Acquire ability to apply such knowledge to e filling of income tax return
Unit-I	**Return of Income**
Theory	Permanent Account Number (PAN), different forms of income tax return , compulsory and voluntary filling of income tax return ,fees and interest for default in filling return, return of loss, belated return , revised return, defective return, persons authorized to verify return of income
Unit-II	**E payment of tax and E filling of income tax return**
Theory	Online payment of taxes , steps of e payment of tax , Login of e filling portal procedure of online filling and verification of return

Books Recommended:

1. Singhania V.K. & Monica signghania : Students' guide to Income tax , Taxman publication
2. Manoharan T.N. Direct taxes : Snow white publication, New Delhi
3. The Institute of Chartered Accountants of India study material for CA Inter
4. Website : https://eportal.incometax.gov.in

Shivaji University, Kolhapur
Syllabus of M.Com.
Faculty of Commerce and Management
Syllabus in accordance with NEP-2020
Introduced from academic year 2023-24
M.Com. Part-II (Semester-IV)
SKILL ENHANCEMENT COURSE (SEC- 4)
(Self-Study Mode)
Title of the Paper : Research Ethics

30 Hours   **2 Credits**

	Course Content
Course Outcomes	**1. Provide students with the fundamental knowledge of basic research ethics** **2. Create awareness among students about misconduct of ethics in research**
Skills to be acquired	**Consent for original work, respect for confidentiality, distinguishing between right and wrong, avoiding misinterpretation of research data, promoting truth, minimising errors**
Unit-I	**Introduction to Research Ethics**
Theory	Meaning, Definition, Principles of research ethics, Objectives, Advantages, Disadvantages, Responsibilities for Research ethics.
Unit-II	**Publication Ethics**
Theory	Publication Ethics meaning, Scientific Misconducts: Nature, fasciation fabrication and plagiarism Publication Misconduct: Introduction, Importance. Violation of publication ethics : Inappropriate authorship, multiple submission, overlapping publication, salami publication, inappropriate authorship, intended omission of negative results, data dredging Corrective measures taken by UGC to control misconduct in publication.

Books Recommended:

1. Bora Pransal , (2023). Research Methodology and Research Publication Ethics. Notion Press.
2. Datta Dilip, (2021) Good Practices and Ethics in research publication, Ane Books Pvt. Ltd.
3. Ray Partha (2022) A Guide to Research and publication Ethics, New Delhi Publisher.

(Note – Recent editions of the above books may be referred)