Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce, and Science College, Ahmednagar (Autonomous)
(Affiliated to Savitribai Phule Pune University, Pune)

National Education Policy (NEP)
Choice Based Credit System (CBCS)

Programme Framework
M.Com. (IT)

Implemented from

Academic Year 2023-24

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's

New Arts, Commerce and Science College, Ahmednagar (Autonomous)

Board of studies in Commerce and Management

Sr. No.	Name	Designation
1.	Dr. S. B. Kalamkar	Chairman
2.	Dr. B. N. Murtadak	Member
3.	Dr. M.P. Waghmare	Member
4.	Dr. N. B. Goyal	Member
5.	Dr. V. R. Humbe	Academic Council Nominee
6.	Dr. M. M. Deshmukh	Academic Council Nominee
7.	Dr. P. V. Sahte	Vice- Chancellor Nominee
8.	Prof. M. N.Tapkire	Alumni
9.	Mrs. Vanita Shripat	Industry Expert
10.	Prof. S. A. Tarte	Member(co-opt)
11.	Prof. S.D. Bankar	Member(co-opt)
12.	Dr. N. L. Vikhe	Member(co-opt)
13.	Prof. S. S. Nimbalkar	Member(co-opt)

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar (Autonomous)

Board of studies in Costing, Accounting, taxation and Law

Sr. No.	Name	Designation
1.	Dr. B. N. Murtadak	Chairman
2.	Dr. S. B. Kalamkar	Member
3.	Dr. M.P. Waghmare	Member
4.	Dr. N. B. Goyal	Member
5.	Dr. H. B. Goyal	Academic Council Nominee
6.	Dr. S. D. Talekar	Academic Council Nominee
7.	Dr. M.D. Sayyed	Vice- Chancellor Nominee
8.	Mr. Tejas A. Joshi	Alumni
9.	CA Prasad Puranikt	Industry Expert
10.	Dr. A. V. Adsure	Member(co-opt)
11.	Prof. P. V. Kale	Member(co-opt)

1. **Prologue/ Introduction of the programme:**

With the vision "to nurture the young brains, to make them better employable and socially responsible citizens by encapsulating them with the right set of knowledge for a better tomorrow". The college focuses on building conviction with impartiality and modesty, creating an enabling environment for innovative thought processes and nurturing open-mindedness, equitability, and perseverance. The M.Com. (IT) program aims to provide:

- A conducive environment that holistically engages students through an all-encompassing knowledge impartation,
- Research orientation,
- Developing entrepreneurial skills,
- Develop and produce skilled computer professionals.
- Formulating business problems and providing innovative solutions, thus moulding them into future visionaries, and management leaders that are compassionate yet efficient.

The M.Com.(IT) course provides an extreme and rigorous base for computer professionals, research, and allied business administration. It serves the needs of academics and prepares students for research and to become IT professionals. The course is well received in the industry and for years they have been serving the needs of the IT professionals cadre in the IT and business industry. M.Com (IT) programme offers research in diverse areas of IT and Commerce discipline and has a large base of research contribution. The teaching pedagogy is adopted to ensure all-around learning for the students. The College aligns itself with the overall vision of the institution i.e. to touch the lives of every student by inculcating prudence, efficiency, creativity and compassion to work for the betterment of the marginalised sections of society. M.Com (IT) course attempts to kindle their sense of responsibility, honesty, conscience, justice and above all commitment to human values. M.Com (IT) students form the core of our existence as an institution and are geared up to be passionate about their dreams and make their families and society proud of their achievements.

With the rapid growth of the IT industry in India, the demand for computer professionals is increasing day by day. This increasing growth of the IT industry has

created a lot of opportunities for any graduate in the field of IT. The overall structure of the course has been changed to widen the scope and depth of the course and inclusion of research paradigms of commerce, IT, and management stream. Further, the overall structure has been improved to provide insight of IT research in commerce and interdisciplinary areas and to facilitate those students who are searching for an IT career.

The two-year M.Com (IT) degree program is divided into four semesters and is designed as per the Choice Based Credit System (CBCS) model curriculum prescribed by UGC. It includes core papers, discipline-specific electives, generic electives, practicals and skill enhancement courses. Students are required to complete practical and add-on courses.

Objectives to be achieved:
- To introduce the concepts in various allied subjects
- To enrich student's knowledge in new trends in Information Technology
- To help the students to build professional and commercial approach in IT
- To inculcate the knowledge of Cyber Security
- To help students build-up a progressive and successful career.

Programme Outcomes (POs)

After successfully completing this course, the student should be able to:

1. Imparts advanced knowledge of a wide range of computer applications so that the students pursuing this course can easily face any kind of challenges and opportunities related to the IT industry.
2. This course will help students to explore the scope for career opportunity in the current business environment.
3. It will help to understand new and recent changes in the commercial IT industry for better and increased employability.
4. It will play the role of bridge to fill the gap between academic and practicability of the contents of the syllabus.
5. It will develop and produce skilled computer professionals with ethics for the industry.

6. It will enhance the ability of the students to face the diverse challenges and opportunities in the IT industry and build competence in a particular area of business.

7. It will inculcate the spirit of entrepreneurship and practical skills among the students.

5.2 Distribution of credits

Type of Courses	Total Credits	Credits/ Semester
Discipline-Specific Core Courses (DSC)	54	14 /12
Discipline Specific Elective Courses (DSE)	16	04
Research Methodology	04	Semester I only
On Job Training/ Internship	04	Semester II only
Project	10	Semesters III and IV only
Total	88	22

5.3 Master of Commerce (M.Com.) (IT) Course Distribution

Class	Semester	Subjects	Courses	DSC		DSE		RM/OJT/ Internship etc.		Project*	Total
				T	P*	T	P*	T	P*		
M. Com. I	I	01	06	04	00	01	00	00	01	00	06
M. Com. I	II	01	06	04	00	01	00	00	01	00	06
Exist Option: Award of PG Diploma with 44 credits											
M. Com. II	III	01	06	04	00	01	00	00	00	01	05
M. Com. II	IV	01	05	03	00	01	00	00	00	01	05

5.4. Master of Commerce (M. Com.) (IT) Credit Distribution

Class	Semester	Subjects	Courses	DSC		DSE		RM/OJT/ Internship etc.		Project*	Total Credits
				T	P*	T	P*	T	P*		
M. Com. I	I	01	06	14	00	04	00	04	00	00	22
M. Com. I	II	01	06	14	00	04	00	04	00	00	22
Exist Option: Award of PG Diploma with 44 credits											

M. Com. II	III	01	05	14	00	04	00	00	00	04	**22**
M. Com. II	IV	01	05	12	00	04	00	00	00	06	**22**
				54	**00**	**16**	**00**	**08**	**00**	**10**	**88**

* The Board of Studies as per requirement may add practical courses without changing credits distribution and the number of courses prescribed for the specific class

5.5 Master of Commerce (M. Com.) (IT) Distribution of Courses

Class	Semester	Course and their credits			
		DSC	**DSE**	**RM/OJT/ Internship etc.**	**Project ***
M. Com. I	I	DSC -01 (04)	DSE -01 (04)	RM (04)	NA
M. Com. I	I	DSC -02 (04)			
M. Com. I	I	DSC -03 (04)			
M. Com. I	I	DSC -04 (02)			
M. Com. I	II	DSC -05 (04)	DSE -02 (04)	OJT (04)	NA
M. Com. I	II	DSC -06 (04)			
M. Com. I	II	DSC -07 (04)			
M. Com. I	II	DSC -08 (02)			
M. Com. II	III	DSC-09 (04)	DSE -03 (04)	NA	Project (04)
M. Com. II	III	DSC-10 (04)			
M. Com. II	III	DSC-11 (04)			
M. Com. II	III	DSC-12 (02)			
M. Com. II	IV	DSC-13 (04)	DSE -04 (04)	NA	Project (06)
M. Com. II	IV	DSC-14 (04)			
M. Com. II	IV	DSC-15 (04)			

Programme Framework (Courses and Credits): M.COM. (IT)

Sr. No.	Year	Semester	Level	Course Type	Course Code	Title	Credits
1.	I	I	6.0	DSC-01	MCOMIT-111 T	Management Accounting	04
2.	I	I	6.0	DSC-02	MCOMIT-112 T	Organisation Behaviour and Human Resource	04
3.	I	I	6.0	DSC-03	MCOMIT-113 P	Advanced Excel	04
4.	I	I	6.0	DSC-04	MCOMIT-114 T	Fundamentals of IT and Office Automation	02
5.	I	I	6.0	DSE-01	MCOMIT-115 T	A. Business Statistics B. Operation Management	04
6.	I	I	6.0	RM-01	MCOMIT-116 T	Research Methodology	04
7.	I	II	6.0	DSC-05	MCOMIT-211 T	Financial Analysis and Control	04
8.	I	II	6.0	DSC-06	MCOMIT-212 T	DBMS and RDBMS	04
9.	I	II	6.0	DSC-07	MCOMIT-213 P	DBMS and RDBMS Practical	04
10.	I	II	6.0	DSC-08	MCOMIT-214 T	Business Finance	02
11.	I	II	6.0	DSE-02	MCOMIT-215 T	A. Business System Analysis & Design B. Management Information System	04
12.	I	II	6.0	OJT-01	MCOMIT-216 P	On Job Training/Internship	04
13.	II	III	5.0	DSC-09	MCOMIT-311 T	Customer Relationship Management	04
14.	II	III	5.0	DSC-10	MCOMIT-312 T	Python	04
15.	II	III	5.0	DSC-11	MCOMIT-313 P	Python and SAP Practical	04
16.	II	III	5.0	DSC-12	MCOMIT-314 T	ERP- Advanced Business Application.	02

17.	II	III	5.0	DSE-03	MCOMIT-315 T	A. Data warehousing and Data Mining B. Blockchain Technology	04
18.	II	III	5.0	RP-01	MCOMIT-316 PR	Project	04
19.	II	IV	5.5	DSC-13	MCOMIT-411 T	Information System Audit	04
20.	II	IV	5.5	DSC-14	MCOMIT-412 T	AI in Business	04
21.	II	IV	5.5	DSC-15	MCOMIT-413 P	Software Quality Assurance-Software Testing	04
22.	II	IV	5.5	DSE-04	MCOMIT-414 T	A. Digital Marketing B. E-Business and Financial Modeling	04
23.	II	IV	5.5	RP-02	MCOMIT-415 PR	Project	06

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: Management Accounting								
Year: I				Semester: I				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSC-1	MCOMIT-111 T	04	00	04	60	30	70	100

Course Outcomes (Cos)

1. It will enhance the abilities of learners to develop the concept of management accounting and its significance in the business.
2. It will develop the abilities of learners to analyse financial statements.
3. It will enable the learners to understand, develop and apply the techniques of management accounting in the financial decision-making in the business corporations.
4. It will make the students develop competence with their usage in managerial decision-making and control.
5. It will help to understand the concept of budget and budgetary control, types of budgets, and preparation of functional budgets in an organisation.
6. It will create an understanding of the concept of Capital Management, determination of working capital, components of working capital, and accounts receivable and inventory management.

Detailed Syllabus:

Unit I: Accounting for Emerging Sectors (15)
1. Limitations of conventional Financial Accounting
2. The emergence of Management Accounting and Cost Accounting
3. Advantages of Management Accounting and Cost Accounting
4. The distinction between Management Accounting and Cost Accounting
5. Management Accounting as a decision making tool.

Unit II: Application of Management Accounting Techniques (15)
1. Marginal Costing and Cost-Volume-Profit (CVP) Analysis, Key Factors
2. Decision Making through Managerial Cost Accounting (Make or Buy Decision) Purchasing and Leasing
3. Techniques and Managerial Cost Accounting
4. Standardisation of Accounting System
   a. Fixed and Variable Cost Analysis

    b. Application of Fixed and Variable Cost Analysis technique in decision making process

Unit III: Capital Budgeting Decision   (15)

Meaning, Definition of Capital Budgeting, Time value of money.Tools of evaluation of the project based on traditional techniques and modern techniques - ARR, Payback Period, Discounted Payback Period, NPV, PI & IRR

Unit IV: Working Capital Management   (15)

1. Concept and definition of working capital,
2. Determination of Working capital, Assessment of Working Capital needs
3. Study of components of working capital such as cash management
4. Accounts receivable management and inventory management.
5. Assessment of Working Capital Needs (Practical Problem)

Suggested Readings :

1. Management Accounting ,P.C. Tulsian,Tata McGraw Hill Publishing Company New Delhi
2. Management Accounting A.Mukherjee & M. Hanif,Tata McGraw Hill Publishing Company, New Delhi
3. Management Accounting,S. N. Maheshwari & S.K. Maheshwari,Vikas Publishing House Pvt. Ltd. New Delhi
4. Advanced Accounting M. C. Shukla & S.P. Grewal S. Chand and Co. Ltd. New Delhi
5. Advanced Accountancy S.P. Jain & K.N. Narang Kalyani Publishers New Delhi
6. Advanced Accountancy R.L. Gupta & M. Radhaswamy S. Chand and Co. Ltd. New Delhi
7. Advanced Accounting Dr. Sadashiv Sirgave Success Publications Pune
8. Principles of Management Accounting, S. N. Maheshwari Vikas Publishing House Pvt. Ltd. New Delhi
9. Management Accounting, I.M. Pandey Vikas Publishing House Pvt. Ltd. New Delhi
10. Advanced Management Accounting ,Ravi Kishore Taxman New Delhi
11. Management Accounting, Dr Arun Gaikwad Success Publications Pune
12. Management Accounting, Dr Yashodhan Mithare Success Publications Pune

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: Organization Behaviour and Human Resource Management								
Year: I				Semester: I				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSC-2	MCOMIT-112 T	04	00	04	60	30	70	100

Course Outcomes (Cos)

1. It will help to understand the theoretical development of organisational behaviour and its importance in managing people at the workplace.
2. It will help to understand different types of organisational structures, and organisational climate and to know the importance of organisational culture apart from learning how to deal with change and stress.
3. It will help students to understand the concept of Human Resource Management and recent developments in HRM.
4. It will help to understand various job evaluation techniques.

Detailed Syllabus:

Unit 1. Understanding organisations and Organization Behaviour:- (15)

1. Definition, and Features; Models of Organisational Behaviour.
2. Ability; Learning; Attitudes; Personality and Values.
3. Perception & Individual Decision making.
4. Motivation- Definition, Nature of Motivation, Theories of Motivation

Unit 2. Group Behaviour and Conflict Management (15)

1. Defining and Classifying Groups.
2. Stages of Group Development.
3. Team and Team Building- Purpose, Types and Creating Effective Teams.
4. The Communication Process, Interpersonal and Organisational Communication.
5. The traditional View, The Human Relation View, Conflict Process, Negotiation-Bargaining strategies.

Unit 3. Human Resource Management and Development (15)

1. Introduction, Functions, Scope, Policies & Roles, Recent developments in HRM.
2. Job Analysis- Job Description, Job Specification, Human Resource Planning.

3. Recruitment, Selection, Induction, Placement,.
4. Human Resource Development-Training, Executive Development, Internal Mobility, Career & Succession Planning, Separation, HRD Interventions

Unit 4. Job Evaluation   (15)

1. Performance & Potential Appraisal, Compensation Administration.
2. Incentives & Employee Benefits, Employee Health, Safety & Welfare, Grievance Discipline, Social Security
3.Personnel Records, HR Accounting, Audit & Research
4. Stress Management

Teaching methodology:-

1. Traditional Lecture Method
2. PPT
3. Guest Lecture,
4. Presentation of the students
5. Lectures are available on YouTube
6. Group Discussion

Suggested Readings:

1. Hegar, Kathryn W. (2011). Modern Human Relations at work, International Edition. Cengage (Chapter 9 for Unit IV - fundamentals of leadership)

2. Hersey, Paul, Dewey, E. Johnson, and Kenneth, H. Blanchard (2013). Management of Organisational Behaviour, PHI, (Chapter 4, 8 for Unit IV-Leadership)

3. Pareek, U. & Khanna, S. Understanding Organisational Behaviour. Oxford University Press.
4. Schermerhorn, Osborn Uhl-Bien & Hunt (2011). Organisational Behaviour. Int Student Version.Wiley.

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: Advanced Excel								
Year: I				Semester: I				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSC-3	MCOMIT-113 P	00	04	04	60	30	70	100

Practical 2 Hours Each

PRACTICAL NO	TOPIC	ASSIGNMENTS
1	Charts	Format Charts,Chart Design,Richer Data Labels,Leader Lines,New Functions
2	Data Analysis-1	Instant Data Analysis, Sorting Data by Color, Slicers, Flash Fill
3	Data Analysis-2	Lookup & Ref functions- VLookup, Hlookup, Indirect match, Index, and offset.
4	Pivot Tables 1	Creating Pivot Tables, Format pivot tables, Create a PivotTable to analyze external data.
5	Pivot Tables 2	Inserting Slicers, Multi-Select Option in Slicers,
6	Pivot Tables 3	PivotTable Enhancements, Working with Pivot Tables, Inserting Pivot Charts.
7	Pivot Tables 4	Connect to a new external data source., Using the Field List option.
8	Auditing Worksheets 1	Tracing Precedents, Tracing Dependents, remove precedent and dependent arrows,
9	Auditing Worksheets 2	Showing Formulas, Check for errors frequently found in formulas, Working with Multiple Worksheets and Workbooks:.
10	Auditing Worksheets 3	Use Links and External References, use 3-D References, Consolidate Data
11	Data Model 1	Explore Data Using PivotTable Create Relationship between Tables
12	Data Model 2	Power Pivot
13	Data Model 3	Data Model using Calculated Columns Goal Seek
14	Worksheet Security	Protecting Worksheets and Workbooks, Password Protecting a Workbook, Password Protecting a Worksheet, Password Protecting Ranges in a Worksheet, Marking a Workbook as Final

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: Fundamentals of IT and Office Automation								
Year: I				Semester: I				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSC-4	MCOMIT-114 T	02	00	02	30	15	35	50

Course Outcomes (Cos)

1. Analyze the significance of computers and define what a computer is and Differentiate between Hardware and Software.
2. Explain the working of important application software and their use to perform any engineering activity.
3. Demonstrate the use of Various Operating system commands and shell script.
4. Understand the use the computer for basic purposes of preparing his personnel/business letters, viewing information on Internet (the web), sending mails, using internet banking services etc.

Unit I Introduction to Computers   08
   1.1.   Introduction
   1.2.   Characteristics of Computers
   1.3.   Generations of Computer
   1.4.   Block diagram of computer
   1.5.   Concept of Hardware and Software – Hardware, Software , Application Software , Systems software
   1.6.   Types of computers and features – Mini, Micro, Mainframe, Super
   1.7.   Types of Programming Languages – Machine, Assembly, High Level
   1.8.   Computer Memory- RAM, ROM, PROM,EPROM
   1.9.   Storage Devices (FD, CD, HD, Pen drive), DVD, Blue Ray Disk, Flash Memory
            1.9.1.I/O Devices –
            1.9.2.Input Devices - Keyboard, Mouse, Scanners,
            1.9.3.Output Devices- Monitor, Digitizers, Plotters. Printer,

Unit II   Working of CPU   08
   2.1. Evolution and Development of Microprocessor
   2.2 Working of 8088 Microprocessor
   2.3 Components of Motherboard

2.4 Cabinet, Power Supply & UPS

Unit III   Operating System and Services in O.S.   **12**
    3.1. Evaluation of OS
    3.2 Types of O.S.
    3.3 Comparison of DOS and Windows
    3.4 Switching Between DOS and Windows
    3.5 Basic DOS Commands
        3.5.1 File/Directory Manipulations
        3.5.2 Copying of files and Disks
        3.5.3 Delete/Undelete
        3.5.4 Formatting a floppy
        3.5.5 Data Organization – Drives, Files, Directories
    3.6 Windows Operating Environment
        3.6.1 Features of MS – Windows- Control Panel,
        3.6.2 Taskbar, Desktop, Windows Application, Icons

Unit IV Office Automation   **12**
    4.1. **MS-Word**
Introduction to desktop publishing. Word Processing Basics; Opening and Closing of documents; Text creation and Manipulation; Formatting of text; Table handling; Spell check, language setting and thesaurus; Printing of word document.
    4.2. **MS-Excel**
Basics of Spreadsheet; Manipulation of cells; Formulas and Functions; Editing of Spread Sheet, printing of Spread Sheet
    4.3. **MS-Access**
Create, Update, Delete and various applications on Database.
    4.4. **MS –PowerPoin**t
Basics of presentation software; Creating Presentation; Preparation and Presentation of Slides; Slide Show; Taking printouts of presentation / handouts.

Reading References:

1) Fundamental of Computers – By V. Rajaraman B.P.B. Publications

2) Fundamental of Computers – By P. K. Sinha

3) MS- Office 2000(For Windows) – By Steve Sagman

4) Computer Networks – By Tennenbum Tata MacGrow Hill Publication

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: Business Statistics								
Year: I				Semester: I				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSE-1	**MCOMIT-115 T (A)**	04	00	04	60	30	70	100

Course Outcomes (Cos)

Upon successful completion of this course, student will be able to

1) Understand the role and importance of statistics in various business situations 2.
2) To develop skills related with basic statistical technique
3) Develop right understanding regarding regression, correlation and data interpretation

4) Enhance the knowledge of attributes and index number

Detailed Syllabus:

Unit - I		Exploratory Data Analysis Methods	15L
	1.1.	**Types of data**: Scaling methods: i)Attributes: Nominal scale, ordinal scale, Likert's scale ii)Variables: Interval scale, ratio scale, Discrete and continuous variables, the difference between linear scale and circular scale, Review of Types of data such as Primary data, Secondary data, Cross-sectional data, time series data, directional data, panel data.	
	1.2	Review of graphical and diagrammatic techniques such as Graphs & Diagram- Histogram, frequency polygon and frequency curve, Ogive curve, Pie chart , Bar Diagram, Multiple bar Diagram, Sub-divided bar diagram	
	1.3	Review of Types of Measure of Central Tendency: Arithmetic Mean, Median, Mode for discrete and Continuous frequency distribution, Combined Mean, trimmed arithmetic mean, partition values.	

		Review of Types of Measure of Dispersion- Absolute & Relative Measure dispersion Range, Semi-interquartile range (Quartile deviation), Mean deviation(about mean, mode and median), Variance and standard deviation, coefficient of range, coefficient of quartile deviation and coefficient of mean deviation, coefficient of variation(C.V.)	
Unit - II		**Correlation, Regression and Time Series Analysis**	**15L**
	2.1	Correlation: Bivariate data, Scatter diagram and interpretation. Concept of correlation between two variables, positive correlation, negative correlation, no correlation. Covariance between two variables, Karl Pearson's coefficient of correlation (r): Definition, computation for ungrouped data and interpretation, Properties. Spearman's rank correlation coefficient (with and without ties)	
	2.2	Linear Regression: Concept of dependent and independent variables, Identification of response and predictor variables and relation between them, Meaning of regression, difference between correlation and regression, Connection between correlation and regression, regression line of Y on X and X on Y, regression coefficient, Explained and unexplained variation, coefficient of determination, adjusted R2	
	2.3	Time Series Analysis: Introduction, Definition, Components of Time Series, The Trend, Seasonal variation, Cyclical variation, Irregular variation, Methods of estimating Trends, moving averages (with periods 3,4,5), Fitting of trend line and second degree curve, Exponential smoothing, Example and problem	
Unit - III		**Theory of Attributes and Index Number**	**15L**
	3.1	Attributes: Concept of a Likert scale, classification, notion of manifold classification, dichotomy, class- frequency, order of a class, positive class- frequency, negative class frequency, ultimate class frequency, relationship among different class frequencies (up to three attributes), and dot operator to find the relation between frequencies, fundamental set of class frequencies Consistency of data up to 2 attributes. Concepts of independence and association of two attributes. Yule's coefficient of association (Q), $-1 \leq Q \leq 1$, interpretation	
	3.2	Introduction and scope of Index Numbers. Various types of Index Numbers like Human Development Index, Happiness Index BSE sensitivity Index, Definition and Meaning, Problems/considerations in the construction of index numbers, Simple and weighted price index numbers based on price relatives, Simple and weighted price index numbers based on aggregates.	
	3.2	Laspeyre's, Paasche's and Fisher's Index numbers, Consumer price index number: Considerations in its construction. Methods of construction of consumer price index number - (i) family budget method (ii) aggregate expenditure method	
Unit-IV		**Probability distributions and Testing of Hypothesis**	**15L**

	4.1	Standard Discrete Probability distributions: 1. Bernoulli Distribution: p. m. f., mean, variance and properties 2. Binomial Distribution: p. m. f., mean, variance and properties. 3. Hypergeometric distribution: p. m. f., mean, variance and properties. 4. Geometric Distribution: p. m. f., mean, variance and properties, lack of memory property 5. Poisson Distribution: p. m. f., mean, variance and properties	
	4.2	Standard Continuous Probability distributions: 1. Continuous Uniform distribution: p. d. f., mean, variance and properties 2. Normal Distribution: p. d. f., mean, variance and properties 3. Exponential distribution: p. d. f, mean, variance and properties 4. Limiting relations between these distributions 5. Chi-square distribution: p. d. f, mean, variance and properties 6. Student t-distribution: p. d. f, mean, variance and properties 7. F-distribution: p. d. f, mean, variance and properties	
	4.3	Hypothesis, null and alternative hypothesis, two types of errors, test statistic, critical region acceptance region, level of significance, p-value Chi square test for goodness of fit, Chi square test for independence of two attributes. Small Sample Tests – 1. One sample test, 2. Two sample test, 3. Paired t – test, 4. F- test Large sample tests for population mean and population proportion 1. Test for the mean a) one sample b) two samples 2. 2. Test for the proportion a) one sample b) two samples	

Suggested Readings:

1. Strategic Management: The Indian Context, R. Srivivasan
2. Concepts in Strategic Management and Business Policy, By Thomas L. Wheelen, J. David Hunger, Alan Hoffman, Charles E. Bamford
3. Strategic Management, Fred R. David, Forest R. David
4. Probability and Statistics, R Walpole, S Myers and K Ye Pearson Education International London
5. Fundamentals of Mathematical Statistics, S.C. Gupta and V.K. Kapoor, Sultan Chand & Sons New Delhi.
6. Fundamentals of Applied Statistics, S.C. Gupta, Sultan Chand & Sons New Delhi
7. Quantitative Techniques for Business, Dr. A.B. Rao, Jaico Publishing House Mumbai
8. Fundamentals of Statistics, D.N. Elhance, Kitab Mahal Kanpur.

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: Operation Management								
Year: I				Semester: I				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSE-1	MCOMIT-115 T (B)	04	00	04	60	30	70	100

Course Outcomes (Cos)

a. After completion of this course students will formulate the real-life problems in equations.
b. The student will understand the mathematical tools that are needed for solving optimization problems.
c. It will help to understand transportation and assignments problems,
d. Students will be able to plan, schedule, and control the project by using CPM and PERT techniques.

Detailed Syllabus:

Unit-I		Introduction	15L
	1.1	Definition, Application of Operations Research. Scope of operation research. Statement of the linear Programming Problem (LPP), Formulation of problem as LPP. Definition of convex region and concave region , slack variable ,Surplus Variable , solution , basic and non-basic variables , feasible solution , basic feasible solution, degenerate and non–degenerate solution and an optimal solution.	
	1.2	LPP in Canonical form and LPP in Standard form. Solution of L.P.P by Graphical Method, Examples where the solution is unique solutions, feasible solution, unbounded solution, infeasible solution, infinite solution, obtaining an optimal solution.	
Unit-II		Big- M Techniques and Dual simplex method	15L
	2.1	Simplex Method: Obtaining Initial Basic Feasible Solution (IBFS), criteria for deciding whether obtained solution is optimal, criteria for unbounded solution, no solution, more than one solution.	
	2.2	Introduction of artificial variable, Big-M method with examples.	

	2.2	Duality Theory: Writing dual of a primal problem, and its properties	
Unit-III		**Transportation and Assignment Problem**	**15L**
	3.1	Transportation problem (T.P.), statement of T.P., Relation between LPP and TP balanced and unbalanced T.P. Methods of obtaining initial basic feasible solution of T. P.: i) North-West corner rule ii) Method of matrix minima (least cost method), iii) Vogel's approximation method (VAM).	
	3.2	U-V method and MODI method of obtaining Optimal solution of T.P., degenerate solution, uniqueness and non- uniqueness of optimal solutions.	
	3.3	Assignment problems: i) Statement of an assignment, relation between LPP and AP, Relation between TP and AP, balanced and unbalanced problem, ii) Relation with T.P. iii) optimal solution of an assignment problem using Hungarian method. Examples and numerical problems.	
Unit-IV		**CPM and PERT**	**15L**
	4.1	Introduction Definition of (i) Events with Merge and Burst Events, (ii) Node, (iii) Activities – Predecessor, Successor, Dummy, (iv)Critical Activity, (v)Project Duration.	
	4.2	CPM: Construction of network, Definitions of (i) earliest start time (ii) earliest finish time (iii) latest start time (iii) latest finish time for an activity. Types of float - total floats, free float, independent float and their significance. Determination of critical path.	
	4.3	PERT: Construction of network; (i) pessimistic time estimate, (ii) optimistic time estimate (iii) most likely time estimates, Determination of critical path, determination of mean and standard deviation of project duration, computations of probability of completing the project in a specified duration.	

Suggested Readings:

1. Gass, S.L. (2011). Linear programming methods and applications, Fifth Edition Dover Publications Inc.
2. Gupta, P.K. and Hira, D.S. Operation Research, 7th edition S. Chand and company Ltd., New Delhi. 3. Kapoor, V. K. (2006). Operations Research, S. Chand and Sons. New Delhi.
3. Saceini, M., Yaspan,A. and Friedman, L.(2013).Operation Research methods and problems, Willey International Edition.
4. Sharma, J.K. (1989). Mathematical Models in Operation Research, Tata McGraw Hill Publishing Company Ltd., New Delhi.
5. Shrinath. L.S (1975). Linear Programming, Affiliated East- West Pvt. Ltd, New Delhi.
6. Taha, H.A. (2017). Operation research: An Introduction, 10th edition, Prentice Hall of India, New Delhi.

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: Research Methodology								
Year: I				Semester: I				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
RM	MCOMIT-116 T	04	00	04	60	30	70	100

Course Outcomes (Cos)
> 1. It will help students in understanding basic knowledge of Business Research, Research processes, ethical issues and modern practices in research.
> 2. It will enhance the capabilities of students to conduct research in the field of business
> and social Sciences.
> 3. The students will be able to develop the most appropriate methodology for their research studies.
> 4. It will help to learn and understand the procedure of the Research Report and the mode of citation and bibliography.

Detailed Syllabus:

Unit I- Introduction to Research (15)
1. Introduction.- Definition, Objectives, Significance & Types of Research, Criteria of research, Features of a Good Research, Steps in Scientific Research Process,Research Methods versus Methodology
2. Ethics and Modern practices in Research: Ethical Issues in Research – Plagiarism, Role of Computer in Research, Application of Statistical software-.Introduction to SPSS.

Unit II- Research Process (15)
1. Research Problem: Defining the Research Problem, Techniques involved in Defining Research Problem.
2. Review of Literature: Types of Literature Review
3. Hypotheses: Meaning, Definition & Types of Hypothesis, Formulation of the Hypotheses, Methods of testing Hypothesis.
4. Research Design : Meaning, Nature & Classification of Research Design, Need for Research Design, Steps in Research Design
5. Sampling: Meaning & Definition of Sampling, Key terms in Sampling, Types of Sampling: Probability & Non-probability, Sampling Errors.

Unit III- Data Collection & Data Interpretation: (15)

1. Data Collection:Primary Data- Methods of Data Collection, Merits & Demerits. Secondary Data-Internal & External Sources of Data Collection Factors influencing the choice of method of data collection Designing of a questionnaire –Meaning, types of questionnaire, Stages in questionnaire designing, Essentials of a good questionnaire, Schedule

2. Measurement & Scaling: Meaning & Types of Measurement Scale, Classification of Scales

3. Processing of Data: Editing, Coding, Classification & Tabulation.

4. Analysis & Interpretation of Data:Types of Analysis- Univariate, Bivariate and Multivariate Analysis of Data

Unit IV- Research Report, Mode of Citation & Bibliography: (15)

1. Research Report: Importance of Report Writing, Types of Research Reports, Structure or Layout of Research Report

2. Mode of Citation & Bibliography:Author, Date, System, Footnote or Endnote System, Use of Notes. Position of Notes, Citing for the first time, Subsequent Citing, List of Abbreviations used in Citation, Mode of preparing a Bibliography, Classification of Entries, Bibliography Entries compared with Footnotes, Examples of Bibliography Entries.

Teaching Methodology
● Lecture
● PPT Presentation
● Group Discussion
● Library visit
● Home Assignment
● Internet resources.

Suggested Readings:

1. Research Methodology- Methods & Techniques C. R. Kothari New Age International Publishers New Delhi.
2. Research Methodology Dipak Kumar Bhattacharyya Excel Books New Delhi.
3. Research Methodology- Methods & Techniques Anil Kumar Gupta Value Education of India New Delhi
4. Research Methodology- Concepts and Cases Deepak Chawla & Neena Sondhi Vikas Publishing House Pvt. Ltd New Delhi
5. Research Methods Ram Ahuja Rawat Publications, Jaipur
6. Methodology & Techniques of Social Research, P. L. Bhandarkar, T.S. Wilkison & D. K. Laldas Himalaya Publishing House Mumbai
7. Legal Research and Writing Methods Anwarul Yaqin Lexis Nexis Butterworths Nagpur
8. Business Research Methods, Donald R. Cooper & Pamela S. Schindler Tata McGraw-Hill Edition New Delhi
9. Investigating the Social World- The Process and Practice of Research, Russell K.S chutt, Sage Publication, New Delhi
10. Business Research Methods, Alan Bryman & Emma Bell, Oxford University Press, New York

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: Financial Analysis and Control								
Year: I				Semester: II				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSC-5	MCOMIT-211 T	04	00	04	60	30	70	100

Course Outcomes (Cos)
1. It will help the students to acquire knowledge of financial analysis and control tools .
2. It will help to understand the appropriate applications and uses of financial analysis and control.
3. It will help the students to understand the importance of cash liquidity in an organisation.
4. It will enhance the ability to computation of cash and fund flows under operating, investing and financing categories.
5. It will develop the skill of appropriate use of different ratios to evaluate the financial performance of entities.

Detailed Syllabus:

Unit I: Fundamentals of Financial Analysis & Control (15)

Meaning of financial analysis and control, importance, advantages, limitations Uses. Introduction to the new tools of Financial Analysis.

Unit II:Comparative and common size statement (15)
Meaning, importance, advantages, limitations, uses, Problems on Intra & Inter Company Comparison

Unit III: Cash Flow and Funds Flow Statement (15)

Meaning,, importance, advantages limitations, uses, Problems on Cash flow and fund flow statements

Unit IV : Ratio Analysis and Trend Analysis (15)
Meaning, importance, advantages, limitations, uses, Problems on Ratio analysis and Trend analysis

Reference books:

1. Ravi Kishore,Advanced Management Accounting, Taxman,New Delhi
2. Ravi M. Kishore, Management Accounting & Financial Analysis Taxman,New Delhi
3. Dr.Jawahar Lal, Dr. Sucheta Guaba Financial Reporting and Analysis, Himalaya Publication House, New Delhi
4. P Perm Chand and Madna Mohan, Financial Accounting and Analysis, Himalaya Publishing, Mumbai.
5. M.Y.Khan & P.K.Jain, Management Accounting & Financial Analysis, (Tata McGraw hill),New Delhi.
6. Advanced Accounting, Dr. Sadashiv Sirgave, Success Publications,Pune.
7. Management Accounting, Dr. Arun Gaikwad, Success Publications, Pune.
8. Management Accounting, Dr. Yashodhan Mithare, Success Publications, Pune.

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: DBMS and RDBMS								
Year: I				Semester: II				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSC-6	MCOMIT-212 T	04	00	04	60	30	70	100

Course Outcomes (Cos)

1. To know the advanced features of DBMS and RDBMS.
2. To know the use of SQL in storing and retrieving the data.
3. To Understand the Basic programs in PL/SQL.
4. To understand how to use SQL in a PL/SQL program.
5. To understand the transaction management in regular activity.

Detailed Syllabus:

Unit 1. File Structure and Organisation   **8 Hrs**

1.1 Introduction
1.2 Logical and Physical Files
1.3 Basic File Operations
1.4 File Organisation – Field and record
1.4.1   Record Types
1.4.3   Types of file organisation
1.5 Indexing

Unit 2. Database Management System   **12 Hrs**

2.1 Basic concept Introduction and definition
2.2.1   Data and Information
2.2.2   Data Dictionary
2.2.3   Data Item or Field, record
2.3 Applications of DBMS
2.4 File processing system Vs DBMS
2.5 Advantages and Disadvantages of DBMS
2.6 Users of DBMS
2.8 Views of Data
2.9 Data Models
2.10   Entity Relationship Diagram (ERD)

    2.11   Extended features of ERD
    2.12   Overall System structure

Unit 3. Structure Query Language (SQL)   **15 Hrs**
3.1 Introduction to SQL
3.2 History of SQL
3.3 Basic structure of SQL
3.4 Commands in SQL
3.5 Aggregate Functions
3.6 String functions

Unit 4. **Introduction To RDBMS**   **05 Hrs**
4.1 Introduction to Popular RDBMS Product and their Features
4.2   Difference Between DBMS and RDBMS
4.3 Relationship among application programs, RDBMS
4.4Terms in Relational Model
4.3   Keys

Unit 5. PLSQL   **14 Hrs**
5.1 Overview of PL/SQL
5.2 Data Types
5.3 PL/SQL Blocks
  5.3.1 % type, % rowtype
  5.3.2 Operators, Functions, comparison, numeric, character, date
5.3 Control Statement
5.4 Exceptional Handling
5.5 Functions , procedures
5.6 Cursor Definition
5.6.1 Types of cursor- implicit, explicit(with attributes)
5.6.2 Parameterized cursor
5.7. Procedure and function

Unit 6. Transaction Management   **06 Hrs**
6.1 Transaction Concept
6.2 Transaction Properties
6.3 Transaction States
6.4 Concurrent Execution
6.5 Serializability
6.5.1 Conflict Serializability
6.5.2 View Serializability
6.6 Recoverability
6.6.1 Recoverable Schedule
6.6.2 Cascadeless Schedule

Reference Books :
1) Understanding of DBMS – Dr. B.W.Khalkar and Parthsarthy
2) Database System Concepts 5th Edition - Silberschatz, Korth, Sudershan.
3) Database Management System - Bipin Desai
4) PL/SQL – Evan Byross

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: DBMS and RDBMS Practical								
Year: I				Semester: II				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSC-7	MCOMIT-213 P	00	04	04	60	30	70	100

Course Outcomes (Cos)

1. To know how to create the basic database files.
2. To know the syntax and relationship among the tables.
3. To understand the retrieval of data from multiple tables.
4. To understand how to use SQL in a PL/SQL program.

PRACTICAL WORKBOOK

Assn No	WEEK	ASSIGNMENT
1.	First	DDL COMMANDS CREATE TABLE (Create table and insert record in the table) Alter table command With ADD and MODI options Drop Command Rename Command Truncate Command
2.	Second	DML COMMAND Select Command Insert Command Update Command Delete Command
3.	Third	TCL Command Grant, Revoke, Commit, Rollback
4.	Fourth	Functions : Aggregate Function String Function Date Function Group by and having clause Order by clause
5.	Fifth	Operators AND, OR, NOT, IN, NOT IN, BETWEEN, LIKE, DISTINCT,

		ALIAS CONSTRAINTS Primary Key, check, not null, Foreign Key JOIN QUERY, SUBQUERY
6.	Sixth	1 – 1 Relationship Assignment 1 – M Relationship Assignment
7.	Seventh	M – 1 Relationship Assignment
8.	Eight	M – M Relationship Assignment To solve Assignment
9.	Ninth	Simple program in PL/SQL Loops in PL/SQL with an example
10.	Tenth	Exception Handling – Predefined and User defined Exception programs Cursor – Basic programs
11.	Eleventh	Cursor – Implicit Cursor with an example Cursor – To solve the case study on cursor
12.	Twelve	Trigger – Types with and example
13.	Thirteenth	Procedure – Programs with an example
14.	Fourteenth	Function – programs with an example
15.	Fifteenth	Package – with an example

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: Business Finance								
Year: I				Semester: II				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSC-8	MCOMIT-214 T	02	00	02	30	15	35	50

Course Outcomes (Cos)

1. It will provide basic knowledge and understanding of various concepts of Business Finance.
2. It will help the students to know the concept of traditional theories of capitalization and dividend distribution practices.
3. It will enable the students to understand the working of capital management practices of finance.
4. It will provide knowledge about Ownership Securities and Short Term Finance and Working Capital Management.

Detailed Syllabus:

Unit I: Business Finance   **(07)**
   1. Meaning, objectives, scope and importance
   2. Time Value of Money: Need, Importance, Future value, Present
       value through discounted cash flow technique

Unit II: Strategic Financial Planning: **(08)**
   1. Meaning - objectives, assumptions,
   2. Steps in financial planning
   3. Estimating financial requirements of the firm - limitations of financial planning
   4 Capitalization - overcapitalization, undercapitalization,
   5 Theories of capitalization**,**
   6 Estimating financial needs and Sources of finance

Unit III: Corporate Securities and Sources of Long term Finance   **(08)**
   1. Ownership securities - equity shares: characteristics, advantages, and disadvantages, preference shares: characteristics, advantages,s and disadvantages, Companies Act (Amendment) 2013
   2. Creditor's securities- debentures: characteristics, classification, the procedure of issuing debentures and Bonds.

3. Company Deposit

4.The dividend decision: Background of dividend policy, Theories of dividend, Trends in dividend distribution in India, Measures of dividend policy, dividend yield and dividend Payout

Unit IV: Short Term Finance and Working Capital Management   (07)

1. Characteristics of short-term finance – short-term needs,

2. sources of short-term finance, the role of working capital, best management practices of working capital

3.Financing of working capital – trade creditors, bank credit, bank financing of account receivables, working capital -advantages and disadvantages.

Teaching methodology:-

1. Traditional Lecture Method
2. PPT
3. Guest Lecture,
4. Presentation of the students
5. Lectures are available on YouTube
6. Group Discussion

Reference books:

1. Aswath Damodaram: Corporate Finance: Theory and Practice, Wiley International

2. Bhole L.M. and Mahakud Jitendra, 'Financial Institutions and Markets', Tata McGraw-Hill Education, Delhi.

3. Kuchal S.C., 'Corporate Finance', Chaitanya Publishing House, Allahabad

4. Kulkarni P.V., 'Business Finance', Himalaya Publishing House

5. Prasanna Chandra, 'Financial Management: Theory and Practice'

6. William L. Megginson, Scott B. Smart, Lawrence J. Gitman, 'Principles of corporate finance', Cengage Learning Private Limited, Delhi.

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: Business System Analysis & Design								
Year: I				Semester: II				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSE-2	**MCOMIT-215 T (A)**	04	00	04	60	30	70	100

Course Outcomes:

1. To understand System concepts.
2. To understand System Analysis & System Design concepts.
3. To understand the applications of Software Analysis concept and Design in Software development.

Detailed Syllabus:

Unit I: Introduction to System & Business Concepts   (08)

1. Definition & Characteristic of System and Business
2. Basic Components of the System and Business
3. Types of System and Business

Unit II: System Analysis and Design in Business   (08)

1. Introduction-Def^n. System Analysis
2. Steps of System Analysis and Design for Business
3. Tools and techniques of system analysis and design.
4. Advantages of Using System Analysis & Design to Improve Business Quality

Unit III: Introduction to Software Engineering   (08)

1. Definition & Characteristics of Software
2. Definition of Software Engineering
3. Need for Software Engineering
4. Mc Call's Quality factors
5. The Software Process
6. Software Product and Process
7. V & V Model

Unit IV: Software Development Life Cycle (10)

1. Introduction
2. Activities of SDLC
3. SDLC
4. Waterfall Model
5. Incremental Process Models
6. Prototyping Model
7. Spiral Model

Unit V: Requirement Engineering (08)

1. Introduction
2. Requirement Elicitation
3. Requirement Elaboration
4. Requirement Gathering
5. Feasibility study
6. Fact Finding Techniques
7. SRS Format

Unit VI: Analysis And Design Tools (10)

1. Decision Tree and Decision Table
2. Data Flow Diagrams (DFD) (Up to 2nd level)
3. Data Dictionary
4. Input and Output Design
5. Structured Design Concepts
6. Structure Chart
7. Coupling and Cohesion
8. Three Case Studies on above topics

Unit VII: Software Maintenance and Software Re-Engineering (08)

1. Maintenance definition and types
2. Software reengineering
3. Reverse Engineering
4. Restructuring and forward Engineering

Reference books :

1.System Analysis, Design and Introduction to Software Engineering (SADSE) -
  S.Parthasarathy, B.W. Khalkar

2.Software Engineering: A Practitioner's Approach- Roger S. Pressman, McGraw Hill
  International Editions 2010(Seventh Edition)

3. Analysis and Design of Information Systems(Second Edition) - James A. Senn,McGraw
Hill

4. System Analysis and Design- Elias Awad, Galgotia Publication, Second Edition.

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: Management Information System								
Year: I				Semester: II				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
DSE-2	MCOMIT-215 T (B)	04	00	04	60	30	70	100

Course Outcomes (Cos)

1 Describe the major technological, organisational, behavioural, and ethical issues facing today's information systems professionals.
2 Describe IT strategy formulation and explain its alignment with organisational strategy.
3 Describe ways in which technology can provide an organisation with competitive advantages.
4 Describe how technology facilitates both operational and strategic decision making in an organisation.

Detailed Syllabus:

Unit I: Management Information Systems (15)

Need, Purpose and Objectives - Data, Information, Knowledge – Types of Information Systems - Information as a strategic resource - Use of information for competitive advantage Information Technology Infrastructure: Information Systems Architecture – Mainframe, Client Server, Web Based, Distributed, Grid, Cloud

Unit II: : Management of Performance Appraisal (15)

Meaning-Purpose-Essentials-Modern TechniquesManagement by Objectives (MBO), Performance Appraisal in Indian Industries-Requisites of an effective performance appraisal programme-360 degree appraisal and benchmarking.

Unit III: Management Practices in India (10)

Management Structures-Management for Tomorrow-Indian Management style for creative action-Recent Trends in Management : (a) Social Responsibility of Management (b)

Management of Change, (c) Management of Crisis (d) Total Quality Management (e) New Corporate Governance.

Unit IV: Functional Information Systems (10)

Marketing, Finance, HR, Production/Operations information systems and Applications

Unit IV: Cases in Management (10)

Case study-Application-Student role in case analysis-Steps for case analysis-practical cases on all above topics.

Reference Books:

1.   MIS-Bidgoli/Chattopadhyay- Cengage Learning 2.

2.   Management Information Systems by Obrien, Marakas and Ramesh Behl, TMGH

3.   Management Information Systems by Dr. D. B. Bharati & Rohan Dahivale Himalaya Publications

4.   Management Information Systems by Jawadekar, TMGH, 4 th Edition

5.   Management Information System by Akhtar Ali Sayyed.

6.   Management Information Systems – Managing the Digital Firm – Tenth Edition, Kenneth C. Laudon and Jane P. Laudon

7.   Management Information System- Jame O Brien- Tata Mcgraw Hill is very good for this course.

8.   Software Engineering with UML, Mohammad Ali Shaikh, ISBN 9781643243566

Ahmednagar Jilha Maratha Vidya Prasarak Samaj's
New Arts, Commerce and Science College, Ahmednagar
(Autonomous)
Syllabus of M.Com (IT)

Board of Studies in Commerce and Management

Title of the Course: OJT/ Internship								
Year: I				Semester: II				
Course Type	Course Code	Credit Distribution		Credits	Allotted Hours	Allotted Marks		
		Theory	Practical			CIE	ESE	Total
OJT	MCOMIT-216 P	00	04	04	60	30	70	100

Course Outcomes (Cos)

CO1: To demonstrate professional competence through industry internship.
CO2: To apply knowledge gained through internships to complete academic activities in a professional manner.
CO3: To choose appropriate technology and tools to solve given problem.
CO4: To demonstrate abilities of a responsible professional and use ethical practices in day to day life.
CO5: Creating network and social circle, and developing relationships with industry people.
CO6: To analyze various career opportunities and decide carrier goals.

OJT/ Internship Guideline

Internships are educational and career development opportunities, providing practical experience in a field or discipline. Internships are far more important as the employers are looking for employees who are properly skilled and have awareness about industry environment, practices and culture. Internship is structured, short-term, supervised training often focused around particular tasks or projects with defined time scales. Core objective is to expose technical students to the industrial environment, which cannot be simulated/experienced in the classroom and hence creating competent professionals in the industry and to understand the social, economic and administrative considerations that influence the working environment of industrial organisations. Engineering internships are intended to provide students with an opportunity to apply conceptual knowledge from academics to the realities of the field work/training. The following guidelines are proposed to give academic credit for the internship undergone as a part of the Third Year Engineering curriculum.

Duration: Internship is to be completed after semester 3 and before commencement of semester 4 of at least 60 Hours ; and it is to be assessed and evaluated in semester 4. **Internship work Identification:** Students may choose to undergo Internship at Industry/Govt.Organisations/NGO/MSME/RuralInternship/Innovation/IPR/Entrepreneurship. Students may choose either to work on innovation or entrepreneurial activities resulting in start-up or undergo internship with industry/NGOs/Government organisations/Micro/Small/ Medium enterprises to make themselves ready for the industry.

Students must get Internship proposals sanctioned from college authority well in advance. Internship work identification process should be initiated in the IIIrd semester in coordination with training and placement cell/ industry institute cell/ internship cell. This will help students to start their internship work on time. Also, it will allow students to work in the vacation period after their IIIrd semester examination and before the academic schedule of semester IV.

Student can take internship work in the form of the following but not limited to:

Working for consultancy/ research project, Contribution in Incubation/ Innovation/ Entrepreneurship Cell/ Institutional Innovation Council/ startups cells of institute / Learning at Departmental Lab/Tinkering Lab/ Institutional workshop, Development of new product/ Business Plan/ registration of start-up, Industry / Government Organization Internship, Internship through Internshala, In-house product development, intercollegiate, inter department research internship under research lab/group, micro/small/medium enterprise/online internship, Research internship under professors, IISC, IIT's, Research organisations, NGOs or Social Internships, rural internship, Participate in open source development.

Internship Diary/ Internship Workbook:

Students must maintain an Internship Diary/ Internship Workbook. The main purpose of maintaining a diary/workbook is to cultivate the habit of documenting. The students should record in the daily training diary the day-to-day account of the observations, impressions, information gathered and suggestions given, if any. The training diary/workbook should be signed every day by the supervisor. Internship Diary/workbook and Internship Report should be submitted by the students along with attendance record and an evaluation sheet duly signed and stamped by the industry to the Institute immediately after the completion of the training.

Internship Work Evaluation:

Every student is required to prepare and maintain documentary proofs of the activities done by him as an internship diary or as a workbook. The evaluation of these activities will be done by Programme Head/Cell In-charge/ Project Head/ faculty mentor or Industry Supervisor based on- Overall compilation of internship activities, sub-activities, the level of achievement expected, evidence needed to assign the points and the duration for certain activities.

Assessment and Evaluation is to be done in consultation with the internship supervisor (Internal and External – a supervisor from the place of internship.

Recommended evaluation parameters-Post Internship Internal Evaluation -50 Marks + Internship Diary/Workbook and Internship Report - 50 Marks

Evaluation through Seminar Presentation/Viva-Voce at the Institute

The student will give a seminar based on his training report, before an expert committee constituted by the concerned department as per norms of the institute. The evaluation will be based on the following criteria:

- Depth of knowledge and skills: Communication and Presentation Skills
- Team Work
- Creativity
- Planning and Organisational skills
- Adaptability
- Analytical Skills
- Attitude and Behavior at work
- Societal Understanding
- Ethics
- Regularity and punctuality
- Attendance record
- Diary/Work book
- Student's Feedback from External Internship Supervisor

After completion of Internship, the student should prepare a comprehensive report to indicate what he has observed and learnt in the training period.

Internship Diary/workbook may be evaluated on the basis of the following criteria:

● Proper and timely documented entries

● Adequacy & quality of information recorded

● Data recorded

● Thought process and recording techniques used

● Organization of the information

The report shall be presented covering following recommended fields but limited to,

- Title/Cover Page
- Internship completion certificate
- Internship Place Details- Company background-organisation and activities/Scope and object of the
- study / Supervisor details
- Index/Table of Contents
- Introduction
- Title/Problem statement/objectives
- Motivation/Scope and rationale of the study
- Methodological details
- Results / Analysis /inferences and conclusion
- Suggestions / Recommendations for improvement to industry, if any
- Attendance Record
- Acknowledgement
- List of reference (Library books, magazines and other sources)
- Feedback from internship supervisor(External and Internal)
- Post internship, faculty coordinator should collect feedback about student with following
- recommended parametersTechnical knowledge, Discipline, Punctuality, Commitment, Willingness to do the work,

Reference:

[1] https://www.aicte-india.org/sites/default/files/AICTE%20Internship%20Policy.pdf

[2] https://internship.aicte-india.org/

Course Structure:

M.Com.(IT) programme is 02 academic years and 04 semesters. The minimum total number of credits requirement for this programme is 88 credits and 12 additional credits

- CGPA will be calculated based on core 88 credits only
- Each theory credit is equivalent to 15 clock hours of teaching and each practical credit is equivalent to 30 clock hours of laboratory teaching in a semester.
- The duration of each theory semester is 15-18 weeks in which at least 12-week classroom teaching and 03 weeks of continuous internal assessment is must.
- The duration of each practical semester is 15-18 weeks in which at least 14-week laboratory sessions and one week of internal evaluation including viva and journal certification is must.
- For the purpose of computation of workload, the following mechanism may be adopted as per UGC guidelines:
- 1 Credit = 1 Theory period of one-hour duration per week, 1 Credit = 1 Tutorial period of one-hour duration per week, 1 Credit = 1 Practical period of two-hour duration per week
- **Each theory Lecture time for M.Com. is of 1 hour = 60 min**
- **Each practical session time for 4 credit course is of 8 hour = 480 min per week**
- **Each practical session time for 2 credit course is of 4 hour = 240 min per week**

Award of Credits:

- Each course having 4 credits shall be evaluated out of 100 marks and student should secure at least 40 marks to earn full credits of that course.
- Each course having 2 credits shall be evaluated out of 50 marks and student should secure at least 20 marks to earn full credits of that course.
- GPA shall be calculated based on the marks obtained in the respective subject provided that student should have obtained credits for that course.

Examination Pattern:

Four Credits:

Theory paper: Autonomous College/University Examination-70 marks (at the end of semester)

Internal Examination-30 marks

Practical course: Autonomous College/University Examination-70 marks (at the end of semester), Internal Examination-30 marks

Two Credits:

Theory paper: Autonomous College/University Examination-35 marks (at the end of semester)

Internal Examination-15 marks

Practical course: Autonomous College/University Examination-35 marks (at the end of semester) Internal Examination-15 marks

Question Paper Format:

Theory examination for 4 Credits:

Theory examination will be of 3 hours' duration for each theory course of 4 credits. There shall be 5 questions and all are compulsory. Question 1 carries 10 marks and question 2 is short answer question for 20 marks, question 3 and 4 are long answer questions each question carries 10 marks and question 5 is short notes or short answer for 20 marks. The pattern of question papers shall be:

Question 1: Solve any 4 out of 6 sub-questions, each of 2 marks; answerable in 4-5 line and based on the entire syllabus.

Question 2: Long answer type question for 14 marks, solve any 1 out of 2 sub-question; answerable in 500 words

Question 3: Long answer type question 14marks, solve any 1 out of 2 sub-question; answerable in 500 words.

Question 4: Long answer type question for 14 Marks , solve any 1 out of 2 sub-question; answerable in 500 words,.

Question 5: Short notes/Short answer type question 20 marks, solve any 4 out of 5/6 sub-question; answerable in 250 word lines, 7 marks.

Theory examination for 2 Credits:

Theory examination will be of 2 hours' duration for each theory course. There shall be 5 questions and all questions are compulsory. Question 1 carries 5 marks and from question 2 and 3 carries 12 marks and question 4 carries 6 marks. The pattern of question papers shall be:

Question 1:   Solve any 5 out of 7 sub-questions, each of 1 marks; answerable in 2-4 lines and based on the entire syllabus.

Question 2:   Short answer type questions 12 marks, Solve any three out of 5 sub-questions:; each of 4 marks; answerable in 12-15 lines and based on the entire syllabus.

Question 3:   Short note/Short answer type questions 12 marks, Solve any three out of 5 sub-questions; each of 4 marks; answerable in 12-15 lines and based on entire syllabus

Question 4:   Solve any 1 out of 2 sub-questions: long answer type questions; each of 6 marks; answerable in 20-25 lines and based on the entire syllabus.

Internal examination: Internal assessment of the student by the respective teacher will be comprehensive and continuous, based on a written test, 10/20 marks each term. The written test shall comprise of subjective type questions or objective type questions-Multiple Types Questions, True/False, Definitions, Tricky computational problems with minimum calculations.

Practical Examination: Practical examination shall be conducted at the end of the semester. Practical examination will be of minimum 4 hours' duration. There shall be a minimum of two experiments for the examination. Certified journal is compulsory to appear for practical examinations. There shall be two experts and two examiners per batch for the practical examination.

Evaluation Pattern/Standard ofPassing

- Each course carrying 100 marks shall be evaluated with Continuous Assessment (CA) and Autonomous College Evaluation (ACE).Continuous assessment shall be of 30 marks while Autonomous College Evaluation shall be of 70 marks. To pass in a course, a student has to secure a minimum 40 marks provided that he should secure a minimum of 28 marks in Autonomous College Evaluation (ACE).

- Each course carrying 50 marks shall be evaluated with Continuous Assessment (CA) and Autonomous College Evaluation (ACE). Continuous assessment shall be of 15 marks while Autonomous College Evaluation (ACE) shall be of 35 marks. To pass in a course, a student has to secure a minimum 20 marks provided that he/she should Secure minimum14 marks in Autonomous College Evaluation (ACE).
- For Internal examination minimum two tests per paper of which one has to be written test 10 marks
- Methods of assessment for Internal exams: Subjective/Objective written tests (comprehension/open book), Seminars, Viva-voce, Projects, Surveys, Field visits, Tutorials, Assignment, Group Discussion, etc. (on approval of the head of the centre)