

## **University of Pune**

**1. The Title :** The Degree shall be titled as Master of Commerce ( E- Com)

### **2. Objectives of the Programme**

- A) To prepare students competent enough to take up to employment and self employment opportunities in E- Commerce and M.-Commerce fields.
- B) To provide adequate knowledge and understanding about E- Com practices to the students.
- C) To provide adequate exposure for the students to environment and operations in the field of E- Commerce
- D) To inculcate amongst the students training and practical approach by exposing them to modern technology in Commercial Operations.

### **3. Eligibility:**

A candidate for being held eligible held for admission to the Master of Commerce ( E- Com/IT) Degree programme shall have passed B.Com., BCA, BBA, BBM(IB) Examination of this University or any other University recognized by AIU .

### **4. Duration of the Programme and Related Information:**

- A) M.Com ( E- Com/IT) Programme shall be a full time, Having 2 years duration divided into four Semesters.
- B) Number of students per batch shall not be more than 40 students.
- C) The programme shall consist of 28 Courses of studies carrying 100 marks and having weightage of 4 credits each.
- D) Two kinds of courses offered are Core courses and Elective courses. Core courses are offered by the department conducting the programme. Elective courses are offered either by the department conducting the programme or by any other department

### **5. Evaluation Pattern**

5.1 Each course will carry 100 marks.

5.2 There will be continuous assessment(CA) and University Evaluation(UE) mechanism for each course and carry 50 Marks each.

5.3 50 marks of the course towards CA will be based on tests (minimum 2). In addition a teacher may consider one or more of the following evaluation systems as CA.

- a) Home assignments
- b. Seminar /Presentation by the student
- c. Lab Assignment

## **6. Award of credits**

6.1 Each course will be of 4 credits.

6.2 Each regular student will have to appear for all the 28 credits of the respective semester.

6.3 Students can appear for maximum 32 credits in all semester.

## **7. Completion of Degree Program:-**

7.1 As soon as student obtains 112 credits the student will be deemed to have completed the require means of the M.Com(Ecommerce) degree programme.

7.2 The policies and procedures determined by University will be followed for the conduct of Examinations and declaration of the result of a candidate.

## **8. Question Paper Pattern**

8.1 Theory paper-

- Question 1. 14Marks
- Question 2. 12 Marks
- Question 3. 12 Marks
- Question 4. 12 Marks

8.2 Practical Paper-

- Question 1. 10 Marks
- Question 2 15 Marks
- Question 3. 20 Marks
- Viva 05Marks

## **9. Medium of Instruction**

Medium of Instruction will be English

**The structure of M.Com ( E- Com/I.T) Programme shall be as given below:  
M.Com ( E-Com/ I.T.)  
Programme Structure**

Year/Se mester	Subject	Paper	Title of Paper	Hour s/We ek	Credit	Marks		
						CA	UE	Total
I Year Sem-I	Core	101	Fundamental of Information technology	4	4	50	50	100
	Core	102	Statistical Methods & Analysis	4	4	50	50	100
	Core	103	Financial and Investment Analysis using Tally	4	4	50	50	100
	Core	104	System Analysis and Design	4	4	50	50	100
	Core	105	Practicals	4	4	50	50	100
	Elective	106	Business Communication	4	4	50	50	100
	Elective	107	Perspectives of Commercial and business growth	4	4	50	50	100
	Elective	108	Management Information system	4	4	50	50	100
	Elective	109	Business Application software	4	4	50	50	100

Minimum Credit : 28. Maximum credit:32. Core Subject is compulsory. From elective courses student can select two courses for minimum credit and three for maximum credit. CA – Continuous Assessment. UE – University Examination.

Year/Semester	Subject	Paper	Title of Paper	Hours/Week	Credit	Marks		
						CA	UE	Total
I Year Sem-II	Core	201	Business Process and Practices	4	4	50	50	100
	Core	202	Financial and Management Accounting Methods	4	4	50	50	100
	Core	203	Database Management System	4	4	50	50	100
	Core	204	Programming in C	4	4	50	50	100
	Core	205	Practicals	4	4	50	50	100
	Elective	206	Human Resource Management	4	4	50	50	100
	Elective	207	Introduction to Operating system	4	4	50	50	100
	Elective	208	Cyber law	4	4	50	50	100
Elective	209	Information System Security	4	4	50	50	100	

Minimum Credit : 28. Maximum credit:32. Core Subject is compulsory. From elective courses student can select two courses for minimum credit and three for maximum credit. CA – Continuous Assessment. UE – University Examination.

Year/Semester	Subject	Paper	Title of Paper	Hours/Week	Credit	Marks		
						CA	UE	Total
II Year Sem-III	Core	301	Business models for E-Commerce	4	4	50	50	100
	Core	302	E- Banking and Financial Services	4	4	50	50	100
	Core	303	Management Information System	4	4	50	50	100
	Core	304	Data Centre Technology	4	4	50	50	100
	Core	305	Practicals	4	4	50	50	100
	Elective	306	Software Testing	4	4	50	50	100
	Elective	307	Business and Professional Skills	4	4	50	50	100
	Elective	308	Information System Audit	4	4	50	50	100
	Elective	309	Project	4	4	50	50	100

Minimum Credit : 28 Maximum Credit : 32. Core Subject is compulsory. From elective courses student can select two courses for minimum credit and three for maximum credit. CA – Continuous Assessment. UE – University Examination.

Marks	Grade	Grade Point
100 to 75	O : Outstanding	06
74 to 65	A : Very Good	05
64 to 55	B : Good	04
54 to 50	C : Average	03
49 to 45	D : Satisfactory	02
44 to 40	E : Pass	01
39 to 0	F : Fail	00

(C) GPA	Grade
05.00 – 6.00	O
04.50 – 04.99	A
03.50 – 04.49	B
02.50 – 03.49	C
01.50 – 02.49	D
00.50 – 01.49	E
00.00 – 00.49	F

Year/Semester	Subject	Paper	Title of Paper	Hours/Week	Credit	Marks		
						CA	UE	Total
II Year Sem-IV	Core	401	Internet & Web Designing	4	4	50	50	100
	Core	402	Accounting Information System	4	4	50	50	100
	Core	403	Business Research & Analytics	4	4	50	50	100
	Core	404	M-Commerce	4	4	50	50	100
	Core	405	Practicals	4	4	50	50	100
	Elective	406	ERP (Enterprise Resource Planning)	4	4	50	50	100
	Elective	407	Multimedia Systems	4	4	50	50	100
	Elective	408	Content Management System	4	4	50	50	100
Elective	409	Project	4	4	50	50	100	

Minimum Credit : 28 Maximum Credit : 32. Core Subject is compulsory. From elective courses student can select two courses for minimum credit and three for maximum credit. CA – Continuous Assessment. UE – University Examination.

**M.Com. (e-commerce) Part I, Semester I**  
**Subject Name -: Fundamental of Information Technology**  
**Course Code -: 101**

Unit No.	Topic	Peroids
1.	<b>Number System and Introduction to 8085:</b> Digital Signals and Logic gates, Number systems: Binary, octal and hexadecimal number systems, signed binary number, binary arithmetic, 2's complement arithmetic, Microprocessors: Introduction, System Bus, Architecture and operation of 8085 microprocessor and instruction set	10
2.	<b>Introduction to software:</b> Software types and Software Development activities (Requirement, Design (algorithm, flowchart, decision table and tree), Coding, Testing, Installation, Maintenance). Low and high level languages, assemblers, compilers, interpreters, linkers.	6
3.	<b>Introduction to Graphics primitives:</b> Display Devices: Refresh Cathode Ray Tube, Raster Scan Display, Plasma Display, Liquid Crystal Display, Plotters, Printers, Keyboard, Trackball, Joystick, Mouse, Light Pen, Tablet and Digitizing Camera. External Storage devices.	6
4.	<b>Operating System:</b> Introduction to Operating system, Different types of operating systems and its working, DOS commands, File Structure and Storage, Introduction to process management: process, threads, scheduling and synchronization. Introduction to Database Management System and its types.	10
5.	<b>Introduction to Computer Networks:</b> Basic elements of a Communication System, Data transmission media, Digital and Analog Transmission, Network topologies, Network Types (LAN, WAN and MAN), Introduction to Communication protocols, Inter networking tools	10

**References:**

1. Norton Peter, "Introduction to computers", TMH, 4<sup>th</sup> Ed., 2006.
2. Simon Haykins, "Communication System", John Wiley & Sons, 2006.
3. B. Basaraj, "Digital Fundamentals", Vikas Publications, 1999.
4. V. Rajaraman, "Introduction to Information Technology", PHI, 2006.
5. V. Rajaraman, "Fundamentals of Computers", PHI, 5<sup>th</sup> Ed., 2006.
6. David Anfinson and Ken Quamme, "IT Essentials PC Hardware and Software Component on Guide", Pearson, 3<sup>rd</sup> Ed., 2008

**M.Com. (e-commerce) Part I, Semester I**  
**Subject Name -: Statistical Methods and Analysis**  
**Course Code -: 102**

**Objectives:**

1. To understand and Master the concepts, techniques & applications of Statistical Methods.
2. To develop the skills of solving real life problems using Statistical methods.
3. To make students to understand the art of applying statistical techniques to solve some real life problems.
4. To gain knowledge of Statistical Computations.

Sr.No.	Topic	No. of Lectures
<b>UNIT 1</b>	<p><b>Multiple correlation and Regression, Partial correlation : (For trivariate data)</b></p> <p>1.1 Introduction: Simple Correlation &amp; Simple Regression.</p> <p>1.2 Trivariate sample data and notation.</p> <p>1.3 Meaning of multiple and partial correlation.</p> <p>1.4 Calculation of multiple and partial correlation coefficients when :</p> <p style="padding-left: 20px;">i) Simple correlation coefficients are given ,</p> <p style="padding-left: 20px;">ii) Sum of squares and products are given.</p> <p>1.5 Meaning of multiple regression.</p> <p>1.6 To state equation of multiple regression equations when means, standard deviations and simple correlation coefficients are given.</p> <p style="padding-left: 20px;">Interpretation of regression coefficient.</p> <p>1.7 Examples and Problems.</p>	<b>8</b>
<b>UNIT 2</b>	<p><b>Simulation :</b></p> <p>2.1 Introduction : Discrete random variable, Binomial &amp; Poisson distribution (p.m.f., problems on computation of probabilities).</p> <p>2.1 Definition and scope of simulation.</p> <p>2.2 Advantages and disadvantages of simulation.</p> <p>2.3 Monte – Carlo simulation.</p> <p>2.4 Examples and problems.</p>	<b>10</b>
<b>UNIT 3</b>	<p><b>Normal Distribution :</b></p> <p>3.1 Introduction: Concept of continuous random variable with examples.</p> <p>3.2 Definition of Normal distribution with mean 'm' and variance <math>\sigma^2</math></p> <p>3.3 Standard normal variate (SNV).</p> <p>3.4 Properties of normal distribution (without proof).</p> <p>3.5 Additive property of two independent normal variates (without proof).</p> <p>3.5 Problems on evaluation of probabilities and to find mean and variance.</p> <p>3.6 Examples and problems.</p>	<b>8</b>



<b>UNIT 4</b>	<p><b>Testing of hypothesis :</b></p> <p>Large Sample Test :</p> <p>4.1 Introduction : Concept of hypothesis, Statistical hypothesis, null hypothesis, alternative hypothesis, Two types of errors, Level of significance, Test of Significance, critical region &amp; acceptance region.</p> <p>4.2 Concept of a large sample test for testing :</p> <p>4.2.1 <math>H_0 : M = M_0</math> v/s <math>H_A : M \neq M_0</math></p> <p>4.2.2 <math>H_0 : M_1 = M_2</math> v/s <math>H_A : M_1 \neq M_2</math></p> <p>4.2.3 <math>H_0 : P = P_0</math> v/s <math>H_A : P \neq P_0</math></p> <p>4.2.4 <math>H_0 : P_1 = P_2</math> v/s <math>H_A : P_1 \neq P_2</math></p> <p>4.3 Examples and problems</p> <p>Small Sample Test :</p> <p>4.4 Chi-square (<math>\chi^2</math>) test of goodness of fit.</p> <p>4.5 Chi-square (<math>\chi^2</math>) test of independence of two attributes a) 2 x 2 contingency table b) m x n contingency table</p> <p>4.6 t-test for <math>H_0 : M = M_0</math> v/s <math>H_A : M \neq M_0</math> t –test for <math>H_0 : M_1 = M_2</math> v/s <math>H_A : M_1 \neq M_2</math> paired t- test. t – test for <math>H_0 : p = 0</math> v/s <math>H_A : p \neq 0</math> (Test of significance of correlation coefficient )</p> <p>4.7 F – test for testing <math>H_0 : \sigma_1^2 = \sigma_2^2</math> v/s <math>H_A : \sigma_1^2 \neq \sigma_2^2</math></p> <p>4.8 Examples and problems</p>	<b>14</b>
<b>UNIT 5</b>	<p><b>Time Series :</b></p> <p>5.1 Meaning and utility</p> <p>5.2 Components of time series</p> <p>5.3 Additive and multiplicative models</p> <p>5.4 Methods of estimating trend by graphical method, ratio method moving averages method of least squares for linear trend and exponential smoothing method</p> <p>5.5 Examples and problems.</p>	<b>8</b>

**Recommended Books:**

1. S.C. Gupta -Fundamentals of Statistics
2. J.S Chandran -Statistics for Business and Economics
3. S. P Gupta -Statistical Methods
4. S.C Gupta, Gupta Indra -Business Statistics
5. Amir D Aczel, Jayavel Sounderpandian -Complete Business statistics
6. D.N. Elhance -Fundamentals of Statistics

**M.Com. (e-commerce) Part I, Semester I**  
**Subject Name -: System Analysis and Design**  
**Course Code -: 104**

**Objectives:**

1. To gain broad understanding of software engineering.
2. To understand software requirements
3. To build significant team work.

<b>Chapter No.</b>	<b>Topics</b>	<b>Book reference</b>	<b>No. of lectures</b>
1	Ch 1 : System Concepts 1.1 Introduction to system 1.2 Characteristics of system 1.3 System elements 1.4 Types of System 1.5 Categories of information	2,3	4
2	Ch 2 : Process Models 2.1 SDLC 2.2 Waterfall Model 2.3 Prototyping Model 2.4 Spiral Model	2,3	8
3	Ch 3 : System Analysis Tools and Techniques 3.1 System Analysis 3.2 System Analyst & its role 3.3 Feasibility Study 3.4 Fact Finding Techniques	2,3	4
4	Ch 4 : System Design Tools and Techniques 4.1 Decision Tree 4.2 Decision Table 4.3 ER Diagram 4.4 Data dictionary 4.6 Pseudo code 4.7 Input & Output Design	2,3	12

5	Ch 5 : System Testing and Quality Assurance 5.1 definition 5.2 Testing Principles 5.3 Testing Process 5.4 Types of Testing 5.5 McCall's Quality factors	1,2,3,4	6
6	Ch 6 :System Implementation 6.1 Implementation Approaches 6.1.1. Incremental 6.1.2. Traditional. 6.2 Implementation Steps 6.3 Post Implementation review	1,2,4	6
7	Ch 7 : System Maintenance 7.1 Types of Maintenance 7.2 Side effects of Maintenance 7.3 Reverse Engineering 7.4 Re-engineering	1,2,4	6

**Reference Books :**

1. System analysis and Design (SADSE) – Parthsarty, Khalkar
2. System analysis and Design – Elias Awad
3. System analysis and Design of Information system- James Senn
4. Software engineering – Roger Pressman

**M.Com. (e-commerce) Part I, Semester I**  
**Subject Name -: Business Communication**  
**Course Code -: 106**

**Objectives:**

1. To understand the concept, process and importance of communication.
2. To develop an integrative approach where reading, writing, presentation skills are used together to enhance the students' ability to communicate and write effectively.
3. To create awareness among students about Methods and Media of communication.
4. To make students familiar with information technology and improve job seeking skills.

	<b>Contents</b>	<b>No. of Lectures</b>
<b>Unit 1</b>	<b>Introduction to Communication</b> 1.1 Meaning 1.2 Definition 1.3 Process, importance. <i>1.4 Principles of effective communication</i> 1.5 Scope of Business communication - Internal & External 1.6 Barriers to Communication, Overcoming the barriers	08
<b>Unit 2</b>	<b>Media of Business Communication</b> <b>2.1 Verbal Communication</b> 2.1.1 – Written Communication-Advantages & Limitations (writing a Cover Letter, Memo, Agenda, Notice & Minutes) 2.2.2 Oral Communication -Advantages & Limitations <b>2.2 Non-Verbal Communication</b> 2.2.1 Body Language ( Positive & Negative Gestures) <b>2.3 Grapevine</b>	06
<b>Unit 3</b>	<b>Listening Skills</b> Importance Types of Listening Barriers to Effective listening How to make listening effective <b>10 Commandments of listening</b>	06
<b>Unit 4</b>	<b>Business Correspondence</b> 4.1 Need of Business Correspondence 4.2 Components and layout of Business letter, 4.3 Drafting of letters: Enquiry, Quotation, order , Complaints and follow up , Recovery 4.4 Email etiquette	08
<b>Unit 5</b>	<b>Information Technology for Communication</b> Introduction, Advantages and Limitations of – Telex, Telegram, Fax, Voice Mail, Teleconferencing, Video Conferencing, Internet and Social Media Sites, E-communication at work place.	08

<b>Unit 6</b>	<b>Job Skills</b> 6.1 Job application letter 6.2 Essentials of an impressive Resume 6.3 Group Discussion 6.4 Interview Skills 6.5 Learning to deliver an Effective Presentation	06
<b>Unit 7</b>	<b>Introduction to Grammar</b> Parts of Speech Noun - Pronouns - Adjective - verb - adverb - Preposition - Conjunction - Interjection Correct Usage of Tenses	06
	<b>Total</b>	48

**Recommended Books:**

1. Modern Business Organization - S.A. Sherlekar
2. Industrial Organization Management - Sherlekar
3. Business Organization and management – Y.K. Bhushan
4. Business Environment - F. Cherunilam
5. Business Organization & Management – C.B. Gupta.
6. Entrepreneurial Development – S.S. Khanna.
7. Organizing and Financing of Small scale Industry – Dr. V. Desai
8. Business Communication - Sangeeta Magan - International Book House Pvt Ltd./ Biztantra Management for the flat world.
9. Communication for Business - Shirley Taylor - V. Chandra Pearson Publication

**M.Com. (e-commerce) Part I, Semester I**  
**Subject Name -: Management Information System**  
**Course Code -: 108**

Chapter No.	Topics	Reference Book	No. of Lectures
1	<b>1. Management Information Systems</b> - Need, Purpose and Objectives - Contemporary Approaches to MIS - Information as a strategic resource – Use of information for competitive advantage - MIS as an instrument for the organizational change		8
2	<b>2. Information, Management and Decision Making</b> - Models of Decision Making - Classical, Administrative and Herbert Simon's Models - Attributes of information and its relevance to Decision Making - Types of information		8
3	<b>3. Information Technology</b> - Definition, IT Capabilities and their organizational impact -Telecommunication and Networks - Types and Topologies of Networks		6
4	<b>4. Data Base Management Systems –</b> Data Warehousing and Data Mining		6
5	<b>5. Systems Analysis and Design</b> - Systems Development Life Cycle - Alternative System Building Approaches - Prototyping model - Spiral model - Rapid Development Tools - CASE Tools		8
6	<b>6. Decision Support Systems - Group Decision Support Systems</b> - Executive Information Systems - Executive Support Systems - Expert Systems and Knowledge Based Expert Systems - Artificial Intelligence		8
7	<b>7. Management Issues in MIS</b> - Information Security and Control		8

	<ul style="list-style-type: none"> <li>- Quality Assurance</li> <li>-Ethical and Social Dimensions</li> <li>- Intellectual Property Rights as related to IT Services / IT Products</li> <li>- Managing Global Information Systems</li> </ul>		
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**Reference Books :-**

1. Management Information Systems, Laudon and Laudon, 7th Edition, Pearson Education Asia
2. Management Information Systems, Jawadekar, Tata McGraw Hill
3. Management Information Systems, Davis and Olson, Tata McGraw Hill
4. Analysis and Design of Information Systems, Rajaraman, Prentice Hall
5. Decision Support Systems and Intelligent Systems, Turban and Aronson, Pearson Education Asia
6. Management Information Systems, Schulthesis, Tata McGraw Hill
7. Management Information Systems - Sadagopan, Prentice Hall
8. Management Information Systems - Jayant Oke