

# University of Mumbai



No. UG/16 of 2019-20

**CIRCULAR:-**

Attention of the Principals of the Affiliated Colleges and Directors of the recognized Institutions in Commerce & Management Faculty is invited to this office Circular No. UG/369 of 2005, dated 9<sup>th</sup> September, 2005, relating to the introduction of various Add-on courses under the UGC scheme of Vocationalization of Higher Education in the Faculties of Arts, Science and Commerce.

They are hereby informed that the recommendations made by the I/c Dean, Faculty of Commerce & Management, have been accepted by the Academic Council at its meeting held on 26<sup>th</sup> December, 2018 vide item No. 4.15 and that in accordance therewith, the revised syllabus for Add-on-Vocational Certificate, Diploma and Advanced Diploma Course in E-Commerce (Sem. I to VI) (intake capacity 25 students), has been brought into force with effect from the academic year 2018-19, accordingly. (The same is available on the University's website [www.mu.ac.in](http://www.mu.ac.in)).

MUMBAI – 400 032

20<sup>th</sup> May, 2019

To

The Principals of the affiliated Colleges and Directors of the recognized Institutions in Commerce & Management Faculty. (Circular No. UG/334 of 2017-18 dated 9<sup>th</sup> January, 2018.)

**A.C./4.15/26/12/2018**

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No. UG/ 16 -A of 2019-20

MUMBAI-400 032

20<sup>th</sup> May, 2019

Copy forwarded with Compliments for information to:-

- 1) The I/c Dean, Faculty of Commerce & Management,
- 2) The Director, Board of Examinations and Evaluation,
- 3) The Professor-com-Director, Institute of Distance and Open Learning (IDOL),
- 4) The Director, Board of Students Development,
- 5) The Co-ordinator, University Computerization Centre,

(Dr. Ajay Deshmukh)  
REGISTRAR

AC - 26/12/2018

Item No. : 4.15

**UNIVERSITY OF MUMBAI**



**Syllabus for Add-on-Vocational  
Certificate, Diploma and Advanced Diploma Course  
in  
E-Commerce  
Semester I to VI**

**Under the Faculty of Commerce & Management  
(with effect from the Academic Year 2018-19)**

**ADD-ON-VOC E-COMMERCE**  
**CERTIFICATE, DIPLOMA AND ADVANCED DIPLOMA COURSE**  
**SYNOPSIS OF SYLLABUS**  
**(w.e.f. 2018-2019)**

**LEARNING OBJECTIVE :**

- To enable students to be covenants with different aspects of computer systems and have working knowledge in MS-OFFICE SUIT and Managerial Skills.
- To get hands on experience in software development tools, software system and modern computing platforms.

**FIRST YEAR**

**SEMESTER – I**

**PAPER – I**

**FUNDAMENTALS OF COMPUTERS AND APPLICATIONS**

**UNIT I**

**(10 Lectures)**

Computer system and its components, Concepts of hardware and software, Generations of computers, Input and Output devices, Application software and System software, Concepts of operating systems, Batch and Real Time Processing

**UNIT II**

**(10 Lectures)**

Data representation- data and information, bits and bytes, text codes , number system , conversions, Computer memory- main memory, auxiliary memory and RAM, Processor- CPU, microprocessor, processor structure, multiprogramming

**UNIT III**

**(10 Lectures)**

Basic communication system, Data transmission, Methods of transmission, Modes of transmission, Computer networks- LAN , MAN , WAN , Routing , network topology , Transmission technology, Internetworks and Protocols

**UNIT IV (PRACTICALS)**

**(10 Lectures)**

Practicals on Word processing using MS-Word, Electronic Spreadsheet using MS-Excel and Interacting presentations using MS-PowerPoint

**REFERENCES :**

- 1) Fundamentals of Computers and Information Technology by M. N. Doja
- 2) Fundamentals Information Technology by Deepak Bharihoke, Third Edition
- 3) Fundamentals of Computers and Information System by Niranjana Shrivastava

## **SEMESTER – I**

### **PAPER – II**

#### **PRINCIPLES OF MANAGEMENT**

**Max. Marks : 50**

**Unit : 01 – Introduction to Management : (05 Lectures)**

- Management – Meaning – Concept – Definition – Functions of Management – Henry Fayol’s 14 Principles of Management – F.W. Taylor’s Scientific Management Approach.
- Managerial Skills – Concept – Conceptual Human and Technical Skills.

**Unit : 02 – Planning & Decision Marketing : (05 Lectures)**

- Planning – Concept – Components – Significance / Importance – Steps.
- Organising – Principles – Organisation Structures – Matrix – Line & Staff – Virtual Organisations – Key Features, Merits & Limitations.
- Decision Making – Concept – Techniques.

**Unit : 03 – Human Resource Management : (10 Lectures)**

- Human Resource Management – Concept – Scope.
- Motivation – Concept – Need – Factors – Theories – Maslow’s Need Hierarchy Theory – Theory X & Theory Y – Need for Motivation in Corporate Business Houses – Case Studies.

**Unit : 04 – Leadership & Corporate Governance : (10 Lectures)**

- Leadership – Concept – Qualities – Styles – Transactional & Transformational Leadership Styles – Case Studies.
- Corporate Governance – Concept – Importance – Corporate Governance with respect to Accountability of Board of Directors.
- Case Studies.

**SEMESTER – II**  
**PAPER – I**  
**DEVELOPMENT OF PERSONAL SKILLS**  
**Max. Marks : 50**

**Unit : 01 – Personal Skills** **(06 Lects)**

Personal Skills – Concept – Importance

Personality – Concept – Determinants

Self Evaluation – Identifying Ones Strengths & Weaknesses

**Unit : 02 – Types of Skills – Implications** **(08 Lects)**

Types of Personal Skills – Written Communication Skills – Interpersonal – Presentation Skills – Listening Skills – Human Skills – Honesty and Integrity Skills – Leadership – Concept Benefits – Applicability in Corporate Houses.

**Unit : 03 – Intelligence Quotient & Emotional Quotient :** **(08 Lects)**

**Intelligence Quotient** – Concept – Skills Required – Critical Thinking – Thinking Skills – Analytical Skills – Adaptability Skills – Decision Making Skills – Importance – Implications.

**Emotional Quotient** – Concept – Importance – Implications.

**Unit : 04 – Stress Management & Networking :** **(08 Lects)**

- Stress & Stress Management – Concept – Sources – Effects and Ways to Reduce Stress.
- Conflict Management – Concept – Techniques.
- Networking – Concept – Importance.

## **SEMESTER – II**

### **PAPER – II**

#### **INTERNET PRACTICES AND APPLICATIONS**

##### **UNIT I**

**(10 Lectures)**

History of Internets, Protocols, Services, Domains, Search engines ,Security issues for systems, Internet as a research tool, Intranets, Viruses, Anti-Viruses, Precaution and Safety measures,

##### **UNIT II**

**(10 Lectures)**

Client and servers, host and terminals, TCP/IP, URL , World Wide Web , Web browsers, IP Address, HTML document life cycle, Planning the site , Designing the site , Developing the site, Domain name registration, Testing the site, Maintaining the site

##### **UNIT III**

**(10 Lectures)**

Using basic html tags, adding headings, paragraphs, adding lists, table tag, form tag, images, and frames.

##### **UNIT IV (PRACTICALS)**

**(10 Lectures)**

Designing the Webpages using HTML

##### **REFERENCES :**

- 1) The World Wide Web, Tata McGraw-Hill.
- 2) Web Application Architecture Principles, protocols and practices Leon Shklar Richard Rosen Dow Jones and Company.
- 3) HTML AND CSS: DESIGN AND BUILD WEBSITES, BY JON DUCKETT

## **SECOND YEAR**

### **SEMESTER III**

#### **PAPER – I**

#### **DATABASE MANAGEMENT SYSTEMS (DBMS) & RELATIONAL DATABASE MANAGEMENT SYSTEMS (RDBMS) (50 MARKS)**

**Total : 20 Lects + 20 Practs**

<b>UNIT I</b>		
<b>1.</b>	Introduction to DBMS Definition, Purpose, Database language, Database management system, Database Users, Overall System Structure, Different types of database systems.	<b>08 Lects</b>
<b>2.</b>	E- R Model Basic concepts, Mapping constraints, Keys, E-R diagram, Database Schema, Reduction of schema to tables.	
<b>3.</b>	Relational Model Structure of relational database, Relational Algebra.	
<b>UNIT II</b>		
<b>4.</b>	SQL – Background, Basic structure, Null values, Nested sub queries, Derived relations, Joined relations, DDL	<b>08 Lects</b>
<b>5.</b>	Concurrency control-lock based protocol, timestamp based protocol, validation based protocol, Deadlock handling	
<b>UNIT III</b>		
<b>6.</b>	Introduction to SQL The SQL language, role of SQL, Features and benefits, SQL standards (ANSI/ISO standards, other SQL standards & SQL access group), SQL and Networking	<b>04 Lects + 20 Practs</b>
<b>7.</b>	Basics Statements, names, data types, constants, expressions, built in functions, missing data (NULL values), Insert and delete operations, SET operations, Aggregate functions,	
<b>8.</b>	Simple Queries & Multi Table Queries	
<b>Practical : Minimum 10 practical to be covered.</b>		
<b>References :</b>		
1. Database management Systems, Majumdar / AK Bhattacharya, Tata McGraw Hill		
2. Database Systems and Concepts, Henry F. Korth, Sliberschatz, Sudarshan, McGraw Hill		

## SEMESTER III

### PAPER II

#### NETWORKING (50 MARKS)

**Total : 20 Lects + 20 Practs**

UNIT I		
1.	Networking Need, types, Media, topologies, standards, Internetworking, Network design and tasks in designing a network	10 Lects
2.	Identifying requirements Business need, future growth of the network, working with existing infrastructure, internet and intranet requirements, security and accessibility requirements, choosing suitable architecture, Choosing a suitable LAN & WAN	
3.	Terms Protocols, Network traffic, Protocol analyzer	
UNIT II		
4.	Different types of switching and its applications	10 Lects
5.	Network access methods for enterprise: Ethernet, gigabit Ethernet, token ring, FDDI	
6.	Access and backbone networks, Network tuning	
7.	Address management CIDR, NAT	
UNIT III		
8.	Introduction to network security Need, threats, authentication, access control, server logs, virus protection, firewalls, intrusion detection systems, VPN, backup and off-site storage, Physical security, physical threats, implementing physical security.	10 Lects
9.	Data security SSL, cryptography	
10.	Data Privacy Encapsulation, IPSec, L2TP Protocol	
<b>References:</b>  1. Andrew Tonenbourn - Networking 2. William Stollings – Computer Networks		



**SEMESTER IV**

**PAPER I**

**TALLYERP 9 (50 MARKS)**

**Total : 20 Lects + 20 Practs**

<b>TALLY ERP 9</b>		
<b>UNIT I</b>		
<b>1.</b>	Introduction Opening Tally.ERP9 software, creating a company, selecting a company, shut a company, delete a company	<b>08 Lects</b>
<b>2.</b>	Groups and Ledgers Creating: single group, sub – groups, multiple groups and displaying and altering groups Create, display and later a single ledger, create multiple ledgers and display or alter it.	
<b>UNIT II</b>		
<b>3.</b>	Understanding Inventory Stock group, stock categories, godowns, units of measure, stock items	<b>08 Lects</b>
<b>4.</b>	Understanding vouchers Types of vouchers, configuring entry, journal entry for receipt and payment	
<b>UNIT III</b>		
<b>5.</b>	Contra and journal voucher Purchase and Sales Sequence, Cost categories and cost centre's	<b>04 Lects</b> + <b>20 Practs</b>
<b>6.</b>	Understanding BOM (Bill of material) and Price list Tax deducted at source, VAT and service tax	
<b>Practical : Minimum 5 practical of Tally to be covered.</b>		
<b>References :</b>		
<b>1. Tally ERP 9</b>		

## SEMESTER IV

### PAPER II

#### CONCEPTS OF E-COMMERCE & CYBER LAWS (50 MARKS)

Total : 30 Lects

<b>CONCEPTS OF E-COMMERCE</b>		
<b>UNIT I</b>		
<b>1.</b>	Introduction to Internet The development of internet, TCP/IP, Internet protocols, Internet components, Uses of internet	<b>10 Lects</b>
<b>2.</b>	Introduction to E-commerce Definition, Scope, E-commerce and trade cycle, Electronic Markets, EDI, Internet Commerce, E-commerce in Perspective, Trade Cycle, Other E-commerce technologies, Online payments, the E-shop, Delivering the goods, After sales service, Internet e-commerce security	
<b>UNIT II</b>		
<b>3.</b>	Business strategy in an Electronic Age The Value chain : Supply chains, Porters value chain model, inter organizational value chains, Competitive Advantage, Business strategy	<b>10 Lects</b>
<b>4.</b>	E – business Introduction, Internet bookshops, grocery supplies, software supplies and support, software supplies and support, electronic newspapers, internet banking, virtual auctions, online share dealing, gambling on the net, e-diversity, Business to Business and Business to Consumer E-commerce.	
<b>CYBER LAWS</b>		
<b>UNIT III</b>		
<b>1.</b>	Introduction to cyber laws, IT Act	<b>10 Lects</b>
<b>2.</b>	IT – Digital Signature, Private key, Public key	
<b>3.</b>	Cyber crime, Digital Signature Certificate	
<b>4.</b>	Penalties & Adjudication, Offences under IT Act	
<b>5.</b>	Virus on the Internet, Defamation, harassment & Email abuse, Protection of Cyber Consumers in India, Arrest without warrant (u/s 80) & Act to have an overriding effect	
<b>References :</b>  1. E- commerce Strategy, Technologies and Applications, David Whiteley, McGraw Hill International. 2. E – commerce: The cutting Edge of Business, Kamlesh K Bajaj & Debjani Nag, Tata McGraw Hill. 3. Vivek Sood, Cyber Law Simplified, Tata McGraw Hill Publishing Company LTD 4. D.P.Mittal, Law of Information Technology, Taxmann's		

**THIRD YEAR**

**PAPER – V**

**SEMESTER V**

**ADVANCED CONCEPTS OF WEB – DESIGNING (100 MARKS)**

**Total : 15 Lects + 25 Practs**

<b>JAVA SCRIPTING &amp; XML</b>		
<b>UNIT I</b>		
<b>1.</b>	Introduction to Java scripting, Web browser object model, manipulating Windows & frames with java script, using java script to create smart forms.	<b>05 Lects + 15 Practs</b>
<b>UNIT II</b>		
<b>2.</b>	Introduction toXML	<b>05 Lects</b>
<b>ASP.NET 2.0</b>		
<b>UNIT III</b>		
<b>3.</b>	Creating a webpage application, binding data to ASP.net server controls, accessing data from database using ADO.NET, using stored procedures in ASP.NET.	<b>05 Lects + 10 Practs</b>
<b>Practical : Minimum 10 practical to be covered.</b>		
<b>References :</b> 1. O'reily – ASP.net 2.0 cookbook 2. O'reily – Javascripting the definitive guide		

## PAPER – VI

### SECTION A : ENTREPRENEUR SHIP DEVELOPMENT (50 MARKS)

(This Section is Common for all Third Year Vocational Students) = 50 Marks

#### **Module 1 : Introduction to Entrepreneurship** **(07 Lects)**

- Concept & Definition of an Entrepreneur.
- Characteristics of an Entrepreneur.
- Functions of Entrepreneur.
- Need & Significance of Entrepreneurship Development.
- Types of Entrepreneurs.
- Intrapreneur – Meaning / Concept.
- Difference between Intrapreneur & Entrepreneur.
- Difference between Social Entrepreneur & Business Entrepreneur.
- Problems faced by Women Entrepreneurs.
- Entrepreneurship Development Programmes (EDP) – Concept & Importance.

#### **Module 2 : Setting Up an Entrepreneurial Venture** **(07 Lects)**

- Sources of Business Idea.
- Environmental Scanning.
- SWOC Analysis.
- Project – Concept & Meaning.
- Project Report – Elements & Importance.
- Feasibility Study – Concept – Importance – Areas.
- Steps in Project Selection.
- Business Plan – Concept – Elements – Devising a B – Plan on Business Ideas.

#### **Module 3 : Sources of Finance for an Entrepreneur** **(07 Lects)**

- Fixed Capital & Working Capital.
  - Meaning & Factors.
- Capital Structure – Concept.
- Special Schemes for Women Entrepreneurs.
- Institutional Support to an Entrepreneur.
  - Small Industries Development Bank of India (SIDBI).
  - National Bank of Agriculture & Rural Development (NABARD).
  - National Small Industries Corporation (NSIC).
  - Industrial Development Bank of India (IDBI).
  - Khadi & Village Industries Commission (KVIC).
- Recent Trends of Finance Options for start-ups to venture into entrepreneurship  
High Network Individuals (HNI's), Venture Funding.
- Self Help Groups.
- Microfinance.

**Module 4 : Forms of Organisation & New Opportunities Available to Entrepreneurs (07 Lects)**

- Forms of Organisation – Sole Trading Concern – Partnership Firm – Limited Liability Partnership (LLP) – Limited Company – Public Company – Non-Government Organisations (NGO's).
- Prospects and Challenges for Entrepreneur in India.
- Scope of E-Entrepreneurship.
- Role of Entrepreneurship Development Cell (EDC) in Educational Institutions.

**Module 5 : Practical Training / Project Work on Live Projects / Start-Up Ventures in Any Form / Venturing into any form of Entrepreneurship. (02 Lects)**

(30 Lects)  
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<b>Total Marks</b>	
<b>Theory</b>	<b>: 35</b>
<b>Practical / Project</b>	<b>: 15</b>
	<b><u>50 Marks</u></b>

**OUTLINE OF THE QUESTION PAPER : (Maximum Marks – 100)**

**Section I ( Max marks - 35 marks)**

N.B : 1) Q.01 is compulsory

2) Attempt any two questions from Q.02-Q.05

Q.01 /- Answer the following. (Any 1 out of 2) (07)

Q.02/- Answer the following. (14)

Q.03/- Answer the following. (14)

Q.04/- Answer the following. (14)

Q.05/- Write short notes on. (Any two) (14)

N.B : Q.02- Q.04 can be descriptive questions or short answer questions.

## SECTION B : OBJECT ORIENTED PROGRAMMING (50 MARKS)

**Total : 15 Lects + 25 Practs**

<b>C++</b>		
<b>UNIT I</b>		
1.	Introduction to Programming language C++	<b>05 Lects + 15 Practs</b>
2.	Keywords, Identifiers, Data types, User defined data types, Derived data types, constants, Type compatibility, Declaration of variables	
3.	Operators in C++, memory management operators, Manipulators	
4.	Control Structures – if, if... else, nested if...else, switch, do-while, for	
<b>UNIT II</b>		
5.	Functions in C++, Arrays, pointers, references, strings	<b>05 Lects + 10 Practs</b>
6.	Principles of OOP's, Classes and objects, Inheritance, Polymorphism, Data Abstraction, Encryption	
7.	Constructors and destructors	
8.	Operator overloading and type conversion	
<b>JAVA</b>		
<b>UNIT III</b>		
1.	Introduction to JAVA	<b>05 Lects</b>
<b>Practical : 50 Programs in C++ &amp; 5 programs in JAVA.</b>		
<b>References :</b>		
1. C++ complete reference Tata McGraw Hill		
2. JAVA complete reference Tata McGraw Hill		

## ADOBE FLASH & SOFTWARE TESTING (100 MARKS)

**Total : 22 Lects + 18 Practs**

<b>ADOBE FLASH</b>		
<b>UNIT I</b>		
1.	Flash Tools	<b>04 Lects + 18 Practs</b>
2.	Drawing and modifying an Image	
3.	Making the moves with Symbols	
4.	Layering and other Neat Tricks	
<b>SOFTWARE TESTING</b>		
<b>UNIT II</b>		
1.	Fundamentals of Testing Definition, requirement, Fundamental test process, psychology of testing	<b>08 Lects</b>
2.	Testing throughout the software life cycle Software development models, test levels, test types : the targets of testing, Maintenance	
<b>UNIT III</b>		
3.	Design Techniques and tool support for testing Identifying test conditions and designing test cases, categories of test design techniques, specification based or black box techniques, structure based or black box techniques, experienced based techniques, choosing a test technique, test organization, test plans, estimates and strategies, types of test tools	<b>10 Lects</b>
<b>Practical : Minimum 12 practical to be covered</b>		
<b>Reference :</b>		
1. Foundation of Software Testing, ISTQB certification, D Graham, Erik, Cengage Learning		
2. Adobe Flash Professional CC Classroom in a Book, by Russell Chun		

## PROJECT (100 MARKS)

Design a project which is a temporary endeavor undertaken to create a unique product or service. Thus, the end result sought may be distinct from the mission from the organization which undertakes it because the project specifically has a deadline.

Services defined in project

In economics and marketing, a service is the non – material equivalent of a good. Service provision has been defined as an economic activity that does not result in ownership, and this is what differentiates it from providing physical goods. It is claimed to be a process that creates benefits by facilitating either a change in customers, a change in their physical possessions, or a change in their intangible assets.

### Project Specifications :

- 1) Design any dynamic website
- 2) Develop any dummy or an actual software using appropriate server with a front end system to access the data of this custom made proprietary software.

### Evaluation of Project :

SR. NO.	TOPIC	MARKS
1.	Written / Hardcopy of Project	80
2.	Viva	20
<b>TOTAL</b>		<b>100</b>

### Format of Project :

1. Front page
2. Certificate
3. Declaration
4. Introduction
5. Index
6. Content
  - General Introduction
  - Objectives of study
  - Scope of study
  - Research Methodology
    - (a) Research Problem
    - (b) Hypothesis (Optional)
    - (c) Collection of data
    - (d) Sampling Plan
    - (e) Research limitation
7. Conclusion
8. Acknowledgement
9. References
10. Work experience along with certificate

**Font Size – 12**  
**Headline – 16**  
**Font Type – Times New Roman**  
**Line Spacing – 1.5**  
**Total No. of Pages – Minimum 20**  
**Header – Title of the Project**  
**Footer – Page Number**  
**Set Right & Left margin, Justify each paragraph**  
**Spiral bind the project**

**COURSE FEES RECOMMENDED :**

<b>Course</b>	<b>Year</b>	<b>Fees</b>	<b>Project</b>	<b>Practicals</b>	<b>Total p.a.</b>
First Year	Certificate Course	3000	–	500	3500
Second Year	Diploma Course	3000	–	500	3500
Third Year	Advance Diploma Course	3000	1000 (inclusive of all projects)	1000	5000

**INTAKE CAPACITY : 25 Seats**