NORTH MAHARASHTRA UNIVERSITY, JALGAON

MASTER IN BUSINESS MANAGEMENT (Computer Management) Structure

(w.e.f. June 2014)

Course Name: Master in Business Management (Computer Management)

Short Title of Degree: M.B.M. (Computer Management)

Faculty to which Assigned: Commerce and Management

Duration: 2 years full time

Pattern: semester

Examination Pattern: 60 (external) + 40 (internal)

Eligibility : Any Graduate

Medium of instruction: English

Objectives

- To prepare students for respectable career in the Software Design, Development & Testing. Also in Software Support, e-commerce, e-business, e-banking, e-services, e-governance etc. Or in business management domain where management is augmented by information communication technology.

-To develop inter-twining competence in the field of Commerce and Management, Computing Skill and Computational Tools.

-To develop students as Cyber Security experts, Information System Auditors.

North Maharashtra University, Jalgaon

(NACC Re Accredited 'B' Grade University)
FACULTY OF COMMERCE & MANAGEMENT

STRUCTURE OF MASTER IN BUSINESS MANAGEMENT (COMPUTER MANAGEMENT)

ACADEMIC YEAR: 2014-15

MBM (COMPUTER MANAGEMENT)

Semester-I and II (w.e.f.- 2014-15)			
Paper	**Semester-I**	**Paper**	**Semester-II**
1.1	ICT Fundamentals & Operating Systems	2.1	Object Oriented Programming using C++
1.2	Web Designing & Web Tools	2.2	RDBMS with MS-SQL Server
1.3	Programming concepts using C++	2.3	Graphics & Animation
1.4	Financial Accounting for Manager (Tally ERP)	2.4	Software Engineering & Project Management
1.5	Business Management	2.5	Management Information System & ERP
1.6	Lab - I (Based on 1.1 & 1.2)	2.6	Lab – III (Based on 2.1 & 2.2)
1.7	Lab – II (Based on 1.3 & 1.4)	2.7	Lab – IV (Based on 2.3 & 2.4)

Semester-III and IV (w.e.f.-2015-16)			
Paper	**Semester-III**	**Paper**	**Semester-IV**
3.1	Database Administration with Oracle & D2K	4.1	ASP.NET
3.2	VB.Net	4.2	Scripting languages
3.3	Advance Graphics & Animation	4.3	Java Programming Language
3.4	E-Commerce and Website Management	4.4	Organizational Behavior & HRM
3.5	ICT Applications in Business	4.5	Lab - VII (Based on 4.1 & 4.2)
3.6	Lab - V (Based on 3.1 & 3.2)	4.6	Lab – VIII (Based on 4.3 & 4.4)
3.7	Lab – VI (Based on 3.3 & 3.4)	4.7	Project Work

Semester-I and II (w.e.f.-June 2014)										
Paper	Semester-I	Maximum Marks			Paper	Semester-II	Maximum Marks		
		Int	Ext.	Total			Int	Ext.	Total
1.1	ICT Fundamentals & Operating Systems	40	60	100	2.1	Object Oriented Programming using C++	40	60	100
1.2	Web Designing & Web Tools	40	60	100	2.2	RDBMS with MS-SQL Server	40	60	100
1.3	Programming concepts using C++	40	60	100	2.3	Graphics & Animation	40	60	100
1.4	Financial Accounting for Manager (Tally ERP)	40	60	100	2.4	Software Engineering & Project Management	40	60	100
1.5	Business Management	40	60	100	2.5	Management Information System & ERP	40	60	100
1.6	Lab - I (Based on 1.1 & 1.2)	40	60	100	2.6	Lab – III (Based on 2.1 & 2.2)	40	60	100
1.7	Lab – II (Based on 1.3 & 1.4)	40	60	100	2.7	Lab – IV (Based on 2.3 & 2.4)	40	60	100
Total		280	420	700	Total		280	420	700

Semester-III and IV(w.e.f.-June 2015)										
Paper	Semester-III	Maximum Marks			Paper	Semester-IV	Maximum Marks		
		Int	Ext.	Total			Int	Ext.	Total
3.1	Database Administration with Oracle & D2K	40	60	100	4.1	ASP.NET	40	60	100
3.2	VB.Net	40	60	100	4.2	Scripting languages	40	60	100
3.3	Advance Graphics & Animation	40	60	100	4.3	Java Programming Language	40	60	100
3.4	E-Commerce and Website Management	40	60	100	4.4	Organizational Behavior & HRM	40	60	100
3.5	ICT Applications in Business	40	60	100	4.5	Lab - VII (Based on 4.1 & 4.2)	40	60	100
3.6	Lab - V (Based on 3.1 & 3.2)	40	60	100	4.6	Lab – VIII (Based on 4.3 & 4.4)	40	60	100
3.7	Lab – VI (Based on 3.3 & 3.4)	40	60	100	4.7	Project Work	40	60	100
Total		280	420	700	Total		280	420	700

1. TITLE OF THE DEGREE

This degree shall be titled as Master in Business Management (Computer Management),

MBM(Computer Management) for short.

This new curricula shall to be effective from June 2014.

2. DURATION

The regular Full Time Post Graduate Management Professional Course shall be of 2 Years duration; comprising of 4 Semesters through Theory papers, Practical, Project work.

3. ELIGIBILITY FOR ADMISSION

Any Graduate /equivalent as prescribed by North Maharashtra University,Jalgaon.

4. PATTERN

4.1 This Course is a Full Time Post Graduate Management Professional Course and the curriculum comprises 28 papers.

4.2 Each semester will have 7 papers of 100 marks each, thus comprising 2800 marks for the PG

Degree.

4.3 Each paper will have 40 marks for Internal examination and 60 marks for external examination.

4.4 The external assessment shall be based on external written examination for theory courses and external practical examination for lab based courses. This external examination shall be conducted by the university at the end of the each semester.

4.5 CGPA system as devised by the University shall be applicable.

4.6 RULES FOR CONDUCTING PRACTICAL COURSES

Practical batch size should be of 12 students.

For each Lab based course there shall be 12 Practical.

All Practicals must be completed by the student, which should be observed by the subject teacher.

 Detailed guidelines for practical exam etc. shall be communicated by the university from time to time.

5. PROJECT

5.1. In the Fourth semester examination student were to do "Project Work" individually.

No group work is allowed. The topic should be decided with consultation and guidance of internal teacher of the Institute at the start of the Third Semester. No teacher shall be entrusted with more than 10 students for guidance and supervision.

5.2. The student shall submit outline of the project in Semester-III, before external practical exam. The examiner should ensure that the outline is submitted by the student and duly signed by internal project Guide.

5.3. Guidelines issued by the University from time to time in this respect of project report shall be applicable as and when issued.

6. PASSING STANDARDS

6.1. For lab based courses the candidate shall score at least 20 marks in internal exam and 30 marks in external exam i.e. 50% of the maximum marks.

6.2. For other than lab based course, in order to pass the examination the candidate has to at least 40% marks for each head separately, that is 24marks out of 60 (External) & 16 marks out of 40 marks (Internal) for all theory courses.

6.3. The student shall be allowed to keep the terms of the next year as per the University rules.

7. GUIDELINES FOR TEACHING

7.1. There shall be 4 lectures / week / paper.

7.2. The semester workload is balanced with 5 full theory papers of 100 marks each / semester and 2 full practical papers of 100 Marks each / semester.

7.3. Self-study shall be natural requirement beside the time table. The Faculty will have to exert a little extra for cultivating reading habits amongst the students.

7.4. The teaching method shall comprise a mix of Lectures, Seminars, Group discussions, Brain storming, Game playing, Interactions with Executives etc. so as to prepare the students to face the global challenges as Computer professional. For this Audio-visual aids and Practical and field work should be a major source of acquiring knowledge and project work should be encouraged to enhance industrial interaction.

7.5. Case study method preferably shall be used, wherever possible, for the better understanding of the students.

8. STRUCTURE OF THE QUESTION PAPER

8.1. Each question paper shall be of 60 marks and of 3 hours duration.

8.2. All questions shall carry equal marks i.e. 12 marks each.

8.3. Question paper shall be designed such that out of 8 questions of 12 marks each, any 5 questions of equal marks need to be attended by the student.

9. ELIGIBILITY OF THE FACULTY

As per the norms fixed by AICTE, UGC, Govt. of Mah.& the North Maharashtra University, Jalgaon.

For all Commerce &Management related subjects :

First Class MBA/M.Com or equivalent.

For Computer Related subjects:

First Class MCM/MBM(CM)/MCA/M.Sc.(Computer Science/ IT)/MBA(IT & Systems)

Job Opportunities for M.B.M. (Computer Management) post graduates are available in following domains -

Software Engineering
Programming
Web Development
Graphics and Animation
Software Testing
MIS Development
Information System Audit
E-Commerce & E-Business
E-Governance
E-Services
Software Support
Database Administration
Operating System Administration
Cyber Security
Service Industry where ICT is predominantly used
Teaching in School and Colleges
Training
Computerized Financial Accounting
General Administration
Human Resource Management

Self-Employment Opportunities for M.B.M. (Computer Management) post graduates are available in following domains -

Software Development
Computer Programming
Web Development
Graphics and Animation
Information System Audit Consulting
E-Commerce, E-Business and E-Governance portal development
E-Services using Software as Service Model
Software Support
Database and Operating Systems Administration
Cyber Security
Training Business
Computerized Accounting

Further Educational / Training / Professional opportunities with/after M.B.M. (Computer Management):

Oracle Certification in Database Administration, Microsoft Certification in various technologies, Certification in Information System Audit , Certification in Software Testing, Certification in web development, Certification in Computerized Accounting. SAP certification. PhD in Computer and Management domain. SET/NET qualifications in Management. Cyber Security certification.

North Maharashtra University, Jalgaon

(NACC Re-Accredited 'B' Grade University)
FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester I

1.1   ICT Fundamentals & Operating Systems
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

Objective : To prepare students in understanding ICT basics and make them conversant in using operating systems.

1) ICT Fundamentals   **Lectures : 8**
Definition of ICT, Impact of ICT, Types of computer systems, Definition, Characteristics & Block diagram of Computer.
Input Devices- Keyboard, mouse, scanner, web camera
Output Devices -Monitor, Speakers, Printer: DotMatrix, Inkjet & laser
Modem : Definition, Types
Storage Media - HDD, CD, DVD, Memory Card

2) Introduction to viruses & vaccines   **Lectures : 8**
a) Meaning of viruses
b) Effects of viruses
c) Role of antivirus, spy ware & firewall.

3) Communication Technologies   **Lectures : 8**
a) Types of Networks – LAN, WAN, MAN, Internet, Intranet, VPN
b) Network Topologies – Bus, Tree, Ring, Star, Hybrid
c) Wireless Technology for ICT – Wi-Fi, WiMax, Bluetooth, Cellular, Infrared
d) Internet Communication Types – Dialup, Broadband, 2G, 3G, 4G

4) Hardware and Software Installation   **Lectures : 8**
a) Installation of I/O device, Web camera, Scanner, printer
b) Operating systems Installation: Windows XP/7
c) Installation of MS- Office, Anti Virus
d) BIOS Configuration

5) Introduction to System Software   **Lectures : 8**
a) System Software- Definition, Components of System Software
b) Operating System: Meaning, Need for Operating system
c) Types of Operating Systems-Single user, Multi-user, simple and batch processing,
Multitasking, Distributed system, Real time System, OS functions and Services

6) Introduction Operating System – Linux and Windows   **Lectures : 10**

a) LinuxOperating System : Study of file system, Features of Linux, Linux Distributions, XWindows- GNOME, KDE, Shells and Types-BSh, BASh, CSh,KSh, Basic commands: pwd, cd, ls, more, less, head, tail, cat, echo, clear, kill, ps, find, grep, man,chmod, cal, date, cut, paste, who, who am I, wall, wc, pr, mkdir, rmdir, rm, sort, tar, tty,
users, groups, cmp

b) Windows Operating System: Comparison of Windows Products, Design Goals: Extensibility, Portability, Reliability, Compatibility, Performance, Introduction to - Memory Management, File Management,Network Management, Security Management, and User Interface

REFERENCE BOOKS:
1. Fundamentals of Computer by V. Rajaraman.
2. Computer Fundamental by P. K. Sinha.
3. System Programming and Operating Systems - D. M. Dhamdhere- Tata McGraw Hill
4. Operating system concepts - Peterson Silberschatz- Addison Wesley.
5. Operating System, By S.R.Sathe& Anil S.Mokhade- MacMillan Publication.
6. Operating System Concepts- A. Silberzchaz& P.B. Galvin, Addison Wesley
7. Operating System -Achyut Godbole- TMH Publications
8. Complete Guide to Linux By Peter Norton, Techmedia Publication
9. The Complete Reference Red Hat Linux By Richard Petersen, Tata McGraw Hills Publications
10. Operating Systems By Flynn/McHoes, Cengage Learning Publication

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FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester I

1.2   Web Designing & Web Tools
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

Objective : To prepare students in web designing using various web tools.

1. Internet   **Lectures : 8**
a. What is Internet, History of Internet, Advantage& Disadvantages of Internet.
b. Routers, Gateways, Firewall, ISP,TCP/IP,
c. Transmission Media: Co-axial Cable, Twisted Pair Cable, Fiber Optics
d. Types of web sites, Domain types, Different types of Browsers
e. ISO-OSI seven layer model

2. HTML   **Lectures : 8**
a. Introduction : Structure of HTML
b. HTML Tags: Text formatting tags, Marquee tags, Changing Background with color and images, Anchor-Internal and External Linking, Image tags, List
c. Moving from HTML to XHTML
d. Browser compatibility issues

3. Planning Site Navigation   **Lectures : 8**
a. Create usable Navigation, Text-Based Navigation, Contextual linking,
b. Using Graphics for navigation & Linking

4. Working with Tables, Graphics & Color   **Lectures : 8**
a. Understanding table basics, using table elements, Formatting Tables
b. Understanding graphics file formats, Using<img>, working with images and color, applying background properties

5. CSS (Cascading Style Sheets) and Working with Frames and Forms   Lectures : 8
a. Style & Types of styles-Internal/External Style Sheets.
b. Using <Div> and <Span>
c. CSS Font Properties , Creating Font and Text Properties Style Sheets
d. Controlling color & image properties with css
e. Designing effective Frames, Working with Framesets
f. Understanding Form Syntax, Creating input objects-<form>, <input>, <select>, <option>, <textarea>, <button>, <label>, <optgroup>

6. Web Designing Tools   **Lectures : 10**
a. Dream Weaver:
i. Introduction & Dreamweaver Interface
ii. Adding content to site: Creating web pages, defining sites, Page Properties, using design template, inserting/presenting text, list, horizontal rules.
iii. Formatting with CSS: Formatting page, CSS, creating CSS, using external CSS, attaching CSS,page layout with CSS.

b. Flash CS 3
i. Introduction to Flash: Starting the flash program, Interface of Flash Environment, Introduction to Flash Features, Window of Flash

REFERENCE BOOKS:
1) Textbook of Web Designing By Joel Sklar, Cengage Learning Publication 2009
2) Web designing in Nut Shell (Desktop Quick Reference) by Jennifer Niederstublication – O'Reilly publication
3) Designing web navigation by James Kalbach Publication – O'Reilly publication
4) How to become web master in 14 days Publication – Techmedia publication
5) The Web collection revealed premium edition : Dream weaver CS4 & Photoshop CS4 by Sherry Bishop, Jim Shuman, Elizabeth Eisner Reading, Delmar, Language Learning
6) Local & Wide Area Network By Michael Palmer and Robert Bruce Sinclair, Thomson Publications
7) Web Enabled Commercial Application Development using HTML, DHTML, Java Script, PERL,
8)CGI By Ivan Bayross, BPB Publication
9) Flash MX BIBLE (By BPB Publisher)

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FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester I

1.3   Programming concepts using C++
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

OBJECTIVE: To Train students with basic concepts of programming using C++.

1. Introduction to C++   Lectures : 8
History of C++, advantages of C++, Difference between C++ and old programming Languages

2. Data types, operators, expression and control structure: Lectures : 8
Character set, tokens, identifiers, keywords, variables, operators, Control flow statements, expressions and qualifiers, operator precedence and associatively

3. Array, strings   Lectures : 8
Arrays, multidimensional array, strings, array of string, string functions.

4. Structures and Union   Lectures : 8
Structure declaration and definition, use of structure and union, difference between structure and unions.

5. Function   Lectures : 8
Function component, parameter passing – pass by value, pass by address, pass by reference, inline function, scope and extent of variables, recursive function,

6. Pointers and Preprocessor directives   Lectures : 10
Introduction to pointers, uses of pointers, address variable, pointer variable, pointer to function, void pointer, memory management operator, object to pointer(vice versa)
#define, defining like macros, #error, #include

References:-
Mastering C++, K.R. Venugopal, Rajkumar, T. Ravishankar, TMH.
Object Oriented Programming C++, Balguruswamy, TMH

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FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester I

1.4   Financial Accounting for Manager (Tally ERP)

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

OBJECTIVE: To prepare students about important financial accounting concepts and understand usage of Tally ERP software.

1) Basic Concepts: **Lectures : 10**
a) Accounting Concepts & Conventions.
b) Accounting Standards: AS 1, AS 2, AS 3, AS 4, AS 5, AS 6, AS 7,AS 8, AS 9, AS 10

2) Elements of Accounts: **Lectures : 8**
a) Types of Accounts
b) Journals, Ledgers, Trial Balance, Cash Book
c) Adjustment Entries and Final Account of Sole Traders

3) Rectification of Errors   **Lectures : 6**

4) Bank Reconciliation Statement: **Lectures : 6**
Need, Causes of Disagreement, Preparation of Bank Reconciliation Statement

5) Tally Accounting Package   **Lectures : 16**
a) Introduction To Tally :
i) Features Of Tally Software (ERP)
ii) Starting Tally - Gateway Of Tally And Exit From Tally
iii) Company Creation in Tally, Saving the Company Profile, Alteration / Deletion Of Company, Selection of Company
iv) Account Groups and Ledgers
v) Hierarchy Of Account Groups And Ledgers, Reserved Account Groups,
vi) Account Groups Of Balance Sheet – Account Groups Of Liabilities & Assets
vii) Account Groups Of Profit & Loss Account - Account Groups Of Direct Income And Direct Expenses Apart From Sale And Purchases, Indirect Income And Indirect Expenses
viii) Account Masters - Account Groups Creation and Account Ledgers Creation
ix) Feeding of Opening Balances
x) Alteration / Deletion Of Account Master Records
xi) Feeding of Closing Stock Value

b) Tally: Voucher Entry
i) Types Of Vouchers In Tally - Contra, Receipts, Payments And Journal

ii) Entering Account Voucher - Sales, Purchases, Debit Note, Credit Note, Incomes, Expenses, Voucher Modification, Saving The Voucher
iii) Voucher Alteration, Deletion and Cancellation, Single Mode Voucher Entries, Account Voucher Printing - Online Voucher Printing, Multi Voucher Printing
iv) Displaying Voucher List, Day Book, Ledger
v) Extracting Daybook Summaries

c) Tally: Trial Balance And Final Accounts
i) Extracting Detailed Trial Balance, Exploded Trial Balance And Ledger wise Trial Balance
ii) Extracting Balance Sheet - Primary Balance Sheet , Detailed Balance Sheet
iii) Closing Stock Value Entry through Balance Sheet
iv) Extracting Profit And Loss Account - Detailed Form and Vertical Form,
v) Extracting Income And Expenditure Statements for Non-Trading Units

6) Introduction to Stock Management (Inventory)   **Lectures : 4**
Stock Group, Stock Category, Stock Items, Multiple Warehouses, Introduction to Inventory vouchers, Displaying Stock related reports

REFERENCE BOOKS:

1. Fundamentals of Accounting, S.N & S.K Maheshwari – Vikas Publications
2. Advanced Accountancy – Shukla & Grewal – Sultan Chand & Sons
3. Advanced Accountancy – Tulsian – Tata McGraw Hill
4. Financial Accounting – Ashok Banerjee – Excel Books
5. Implementing Tally 9, Comprehensive Guide – A. K. & K. K. Nandani, BPB Publishers, New Dehli
6. Tally 9.2 - Comdex Publisher
7. Practical Approach towards Tally 8.1 & 9 S. H. Sharma ,Siddhant Prakashan, Aurangabad

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FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester I

1.5 Business Management
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

OBJECTIVE: To familiarize the students with the basic Business Management concept & process.

1) Nature & Development of Management   **Lectures : 8**
a) Management: Concept, Nature, Importance
b) Evolution of Management: Introduction to Scientific Management by Taylor, Administrative Management by Fayol, Contribution of Peter Drucker

2) Management Functions - I   **Lectures : 8**
a) Functions of Management, Levels of Management, Managerial Skills & roles
b) Planning: Nature, Scope, Objective and Significances of Planning, Key factors to planning, Types of Plans, Process of Planning.
c) Decision Making – Types of Decision , decision making processes, Individual Vs Group decision making, Information Technology & Decision Making

3) Management Functions - II   **Lectures :10**
a) Organizing: Concept, Organization Structure, Forms of Organizational Structure, Departmentation- need, importance & bases of Departmentation, Span of Control - Determination of factors affecting Span of Control, Delegation of Authority, Authority & Responsibility, Line & Staff, and Formal & Informal Organization.
b) Staffing: Concept, Manpower Planning.
c) Directing: Concept, Direction and Supervision, Importance of Directing, Principles of Directing.
d) Coordination – Need & Importance, Coordination & Cooperation,
e) Controlling : Concept, Types of control.

4) Management Practices   **Lectures : 8**
Concepts of – Kaizen, Six Sigma, Theory Z, SWOT analysis, Business Process Outsourcing, Knowledge management

5) Organizational Communication Skills - I   **Lectures : 8**
a) Meaning & Importance of Organizational Communication
b) Internal communication: Notice, Circular, Memo.
c) External Communication – Enquiries, Quotations, Bank & Financial Institutions
d) Letter writing: Layout of Business letter, types of layouts, Essentials of Good Business letters, Attitude in Business writing
e) Purpose of letters: Resume, Application

6) Organizational Communication Skills - II   **Lectures : 8**

a) Reading Skills: Rapid Reading, Comprehension.

b) Speaking Skill: Speech-preparation, Guidelines for Effective speech

c) Listening Skill: Importance, Process, and Barriers & Guidelines for Effective Listening.

d) Presentation Skill: Types of Presentations, Propositions about presentations, Types of delivery, Process of Preparing & Delivering.

e) Interview : Types, Preparation, Conducting and Appearing for interview

f) Drafting Skills: Documents, Policies, Procedures, Rules, Note taking etc.

REFERENCE BOOKS:

1. Principles Of Management , Koontz – (Tata McGraw Hill, 1st Edition 2008)

2. Management, Stoner , Freeman & Gilbert Jr – (Prentice Hall Of India ,6th Edition)

3. Management, Robbins & Coulter – (Prentice Hall Of India,8th Edition)

4. Fundamentals Of Management : Essential Concept And Applications, Robbins S.P And Decenzo David A. – (Pearson Education ,5th Edition)

5. Principals Of Management, L.M.Prasad – (Himalaya Publications)

6. Management : Concepts & Practices, Dr. Manmohan Prasad – (Himalaya Publications)

7. Management : A Global And Entrepreneurial Perspective, Weihrich Heinz And Koontz Harold – (McGraw Hill 12th Edition 2008)

8. Business Communication for Managers By Penrose / Rasberry / Myers, Cenage Learning.

9. Business Communication by Raman & Singh, Oxford Publication.

10. Business Communication – C.S. Raydu – Himalaya Publishing House

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FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester I
1.6   Lab - I (Based on 1.1 &1.2)
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

OBJECTIVE: To practically train students in performing basic computer operations and use DOS, Windows and Linux Operating System and develop effective web pages.

Practicals on - 1.1 ICT Fundamentals & Operating Systems

1) Demonstration any basic 5 operation on Windows Operating System
2) Demonstrate any basic 5 DOS Commands
3) Demonstration of Linux commands with attributes:
pwd, cd, ls, more, less, head, tail, cat, echo, clear, kill, ps, find, grep, man, chmod, cal, date, cut, paste, who, who am I, wall, wc, pr, mkdir, rmdir, rm, sort, tar, tty, users, groups, cmp
4) Write a shell script to display first 20 terms of Fibonacci series.

Practicals on - 1.2 Web Designing & Web Tools

1) Developing a web page using
        a) Basic HTML tags
        b) List , Hyperlinks
2) Develop a web page
        a) Tables
        b) Forms
3) Design a web page using
        a) Frames
        b) CSS
                i) Demonstrate Internal CSS
                ii) Demonstrate External CSS
4) Develop a web page using Dream Weaver.
5) Create website using flash elements in Dreamweaver

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FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester I
1.7   Lab – II (Based on 1.3 & 1.4)
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

OBJECTIVE: To practically train students in programming using C++. Also to prepare students in using Tally ERP.

Practicals on - 1.3 Programming concepts using C++

1 Program using various arithmetic operators
2 Program using control statements (if, if else, nested if, switch)
3 Program using various looping structure (for, while, do while, nested loops)
(Programs like prime number, factorial of a number, Fibonacci series)
4 Program using arrays (One dimension, Two dimensions)
5 Write a program to demonstrate use of function (call by value, call by reference, recursive)
6 Write a program to demonstrate use various string function
7 Write a program to demonstrate use structure and union

Practicals on - 1.4 Financial Accounting for Manager (Tally ERP)

1. Creation of company, Alter and Shut Company, Delete the existing company and show the company details.
2. Creation of Groups, Alter the Groups and deletion of Group and Display Groups.
3. Creation of Ledger A/c's, Display and Alter the Ledger A/c's, Deletion of Ledger a/c's.
4. Demonstrate different types of voucher entries and display Profit & Loss A/c and Balance Sheet.
5. Creation of stock groups, stock Item and also stock category with unit of measurements.
6. Creation of Purchase order and sales order.
7. Showing Ledger wise Trial-Balance of a Company
8. Showing detailed Profit & Loss Account & balance Sheet of a Company
9. Showing Income & Expenditure Statements for Non Trading Concerns.
10. Showing Stock Summery Aging Analysis

Semester 2

North Maharashtra University, Jalgaon

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FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester II

2.1   Object Oriented Programming using C++

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

Objective- To train students in programming using object oriented concepts with C++.

1) Introduction   **Lectures : 8**
History of C++, Structured Vs Object oriented development, OOP's Features-Object, Classes, Data Encapsulation & Abstraction, Delegation, Inheritance, Polymorphism, Message Communication.

2) Classes and Objects   **Lectures : 8**
Class Specification, Defining Members, Object, Access Specifier, Constructors, types of Constructors, destructor, Friend Class and Friend Function

3) Inheritance   **Lectures : 8**
Types of Inheritance, Member Accessibility, Visibility Modes, Virtual Base Class, Benefits of Inheritance, Virtual & Pure Virtual functions, Abstract class.

4) Operator Overloading   **Lectures : 8**
Rules, Unary & Binary Operator Overloading using friend functions, without using friend functions

5) Templates & Exception Handling   **Lectures : 8**
Class template, Function template, Exception handling constructs**.**

6) Stream Computation and Introduction to Data Structure   **Lectures : 10**
Stream Computation with console, Streams computations with Files.
Definition and application of – Array, Stack, Queue, Link List, Tree and Graph

REFERENCE BOOKS:
1. Mastering C++ by K R Venugopal, Rajkumar, T Ravishankar, Publication - TMH
2. Exploring C++ by YashwantKanetkar
3. Object Oriented Programming using C++ by W. Balguruswamy, Publication - TMH
4. The C++ Programming Language by Bjarane Stroustrup,
5. Data Structures – TMH Publications.

North Maharashtra University, Jalgaon

(NACC Re-Accredited 'B' Grade University)
FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester II
2.2   RDBMS with MS-SQL Server
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

Objective- To prepare students in using and managing databases.

1) Database Systems& Data Models   **Lectures : 8**
a) Definition of DBMS& RDBMS
b) File processing system vs. DBMS
c) Limitation of file processing system
d) Advantages and Disadvantages of RDBMS
e) Relational Model, Network Model, Hierarchical Model, Entity Relationship Model

2) Entity Set and Relational Database Design   **Lectures : 10**
a) Attribute
b) Relationship Set
c) Entity Relationship Diagram (ERD)
d) Keys: Super, Candidate, Primary , Foreign Key
e) Codd's Rules
f) Normalization
g) Normal Form:1 NF, 2 NF, 3 NF

3) Introduction to SQL (Structured Query Language) &SQL Server   **Lectures : 8**
a) Introduction, Basic Structure, DDL Commands, DML Commands
b) Features of SQL Server - Intellisense, Encrypting Databases
c) Data Types in SQL Server
d) Creation of database
e) Modifying database

4) Creating tables, Database Functions and Operators   **Lectures : 8**
a) Creating table using different constraints like Primary Key, Foreign Key, Check, NOTNULL
b) Alter Table, Drop Table & Truncate Table
c) Functions : Aggregate functions, Date time functions, String functions, Arithmetical functions
d) Operators: Logical and Relational

5) Joins, Subqueries and Stored Procedures: **Lectures : 8**
a) Joins: Equi , Self, Inner, Outer Join
b) Subquries: using IN, EXISTS and nested subquery
c) Benefits & Types of Stored Procedures
d) Executing & Deleting Stored Procedures

6) Triggers and Error Handling: **Lectures : 8**
a) Types of triggers including DDL & DML Trigger
b) Creating, Viewing, Modifying and Deleting Triggers
c) Using @@ERROR function, RAISERROR statement, TRY…CATCH Statement

REFERENCE BOOKS:
1. Database System Concepts :- Abraham Silberschatz, Henry F. Korth&S. Sudarshan, McGraw-Hill
2. SQL Server 2008 in Simple Steps by Kogent Learning Solutions Inc., Dreamtech Press Publication
3. SQL Server 2008 Programming – Rob Vieira – Willy Wrox
4. Microsoft SQL Server 2008 Bible , TMH
5. SQL Sever 2008,The complete Reference, TMH
6. SQL Server 2008 Blackbook, BPB Publishers

North Maharashtra University, Jalgaon
(NACC Re-Accredited 'B' Grade University)
FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester II
2.3   Graphics & Animation
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

Objective- To prepare students in designing graphics and animation applications.

1) Exploring the Adobe Photoshop Environment   Lectures : 8
- Explore the Photoshop interface
- Explore the Navigation Tools
- Customize the Workspace
- Explore Adobe Bridge
- Differentiate between Raster and Vector Graphics

2) Working with Adobe Photoshop   Lectures : 8
- Working with Workspace
- Working with Tools – Selection Tools, Drawing Tools, Painting Tools, Retouching Tools
- Working with Layers - Create Layers, Transform Layers, Apply Layer Styles, Masking Layer, Manage Layers
- Working with Filters - Apply Filter Effects

3) Working with Images and Different Color Modes in Adobe Photoshop   Lectures : 8
- Paint on an Image
- Understand Image Resolution
- Exploring Image Modes and Color Adjustments
- Explore Grayscale and Bitmap Modes
- Explore Color Modes

4) Introduction to CorelDRAW Graphic Suits X4   Lectures : 8
- CorelDRAW Graphics Suite X4 Applications
- New and enhanced features in CorelDRAW Graphic Suite X4
- Getting Started with CorelDRAW
- Workspace of CorelDRAW Application Window
- Drawing Basic Geometric Figures
- Viewing a Drawing in Different Views
- Working with Page Layout.

5)Working with CorelDRAW Graphic Suits X4   **Lectures : 8**
- Working with Drawing tools.
- Working with Shapes
- Edit the object with tools- Shape Tool, Knife Tool, Erase Tool, Smudge Tool, Roughen Tool
- Transformation

6) Working with Text and Interactive Tool   **Lectures : 10**
Types of Text, Converting Text from One Type to Another , Changing the Appearance of Text , Applying Effects to Text , Converting Text to Object using Curve Command Working with Text in Tables.

Interactive Blending Tool, Interactive Contour Tool, Interactive Distortion Tool, Interactive Envelope Tool, Interactive Extrude Tool

Reference
- Photoshop CS4 in Simple Steps – Dreamtech press
- CorelDRAW X4 in Simple Steps – Dreamtech press

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FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester II

2.4   Software Engineering & Project Management
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

Objective- To understand important concepts of software engineering and project management.

Unit - I   **Lectures : 8**

- Introduction to Management

- Software Engineering Definition, Process, SW Engineering Project Management

- System Concept: Definitions, Types, Characteristics of system

Unit - II   **Lectures : 10**

- Role of Software Engineer / System Analysts / Users in the various phases of Systems Development Life Cycle

- SDLC Phases & Models, Types of SDLC Models - Waterfall Model, Spiral Model, Prototyping, RAD

- Planning   a Software Engineering Project, Software Cost and Size estimation.

Unit - III   **Lectures : 8**

- Organizing a Software Engineering Project, Staffing a Software Engineering Project

- Requirement Engineering, Documenting Software Requirement Specifications, Process Modeling – Data Flow Diagrams

Unit - IV   **Lectures : 8**

- Documentation Techniques- System Flow Charts, Functional Decomposition Diagrams, Structured Flow Charts (N-S Diagrams), Logic Representation Techniques - Decision Trees, Decision Tables, Pseudo code and Structured English

- Users Interface Design: Menu, Screen and Report Layout Designing

Unit - V   **Lectures : 8**

- Software design and implementation and Implementation strategies –Top - Down, Bottom-Up

- Testing and Debugging

Unit - VI   **Lectures : 8**

- Introduction to Computer Aided Software Engineering (CASE) , CASE Tools

- Introduction to Reverse Engineering

References:
1. Software Engineering Project Management, Thayer, 2nd Edition, Wiley Student Edition
2. Software Engineering Practitioner's Approach – Roger Pressman, McGraw-Hill H.E.
3. Software Engineering, 6th Edition., Ian Somerville, Addison Wesley,
4. Systems Analysis and Design – Elias Awad

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FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester II

2.5   Management Information System & ERP
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

Objective- To prepare students in understanding important MIS and ERP concepts.

1. Fundamentals of Management Information Systems   **Lectures : 8**
      1.1. Concepts, Classification & Value of Information
      1.2. Information System : Open & Closed
      1.3. Management Information System
            1.3.1. Definition, Concepts & Meaning
            1.3.2. Components & Activities
            1.3.3. Types – Operation support system & Management support systems
            1.3.4. Control systems – Feedback & Feed forward systems
            1.3.5. MIS planning process – Steps in planning
            1.3.6. MIS design & Development Process – Phases
            1.3.7. Components of MIS
      1.4. MIS vis-à-vis Computer, Academics & Users
      1.5. MIS vis-à-vis Information Concepts , System Concepts

2. Process of Management Information System   **Lectures : 8**
2.1. System Analysis & Design
      2.1.1. Introduction & Need for System analysis
      2.1.2. System analysis of a new requirement
      2.1.3. Structured systems analysis & Design (SSAD)
2.2. Development of MIS
      2.2.1. Introduction & Contents of MIS Long range plans
      2.2.2. Determining the information Requirement
      2.2.3. Management of Quality in the MIS
      2.2.4. Factors contributing in the Success & Failure of MIS

3. Application of Management Information System   **Lectures : 8**
3.1. Business Processes : Primary, Supportive & Administrative
3.2. MIS in functional area
      3.2.1. MIS & Manufacturing sector
      3.2.2. Marketing Information System
      3.2.3. Accounting Information system

3.2.4. Human Resource Information System
3.3. Transaction Processing System
3.4. Concept of Knowledge Based Expert System
3.5. Concept of Artificial Intelligence
3.6. Knowledge Management: Concepts , Benefits & Application

4. Support System　　　　　　　　　　　　　　　　　　**Lectures : 8**
4.1. Decision Support System (DSS): Concept, Philosophy, Characteristic, Classes, Users of DSS
4.2. Executive Support System (ESS) : Introduction, Components & Architecture
4.3. Office Information System: Document management & Communication system

5. Enterprise Resource Planning　　　　　　　　　　　　**Lectures : 8**
5.1. Concept/System
5.2. Drivers for implementing ERP
5.3. ERP architecture
5.4. ERP Solution Structure: Business operations, Technology & Implementation
5.5. Benefits of ERP
5.6. ERP Selection: Vendor evaluation, Technology evaluation & Solution evaluation
5.7. ERP Implementation: Customization & Precautions
5.8. Problems encountered with ERP
5.9. Service process optimization: Service processes & its benefits
5.10. ERP in the twenty-first century

6. ERP – Technologies & Application　　　　　　　　　　**Lectures : 10**
6.1. Material Requirement Planning (MRP-I)
6.2. Manufacturing Resource Planning (MRP-II)
6.3. Business Process Re-engineering
　　　　6.3.1. Meaning, Necessity & Principles
　　　　6.3.2. Application of re-engineering
　　　　6.3.3. Three R's – Rethink, Redesign & Retool
　　　　6.3.4. Quality & re-engineering
　　　　6.3.5. Benefits & Limitations of re-engineering
6.4. Geographical Information Systems (GIS)

Study of ERP Case Studies is also desirable (Post implementation review of ERP Packages in Manufacturing, Services, and other Organizations)

REFERENCE BOOKS:
1) Management Information System by Jawadekar – Tata McGraw Hill
2) Management Information System by Arora – Excel Books
3) Management Information System by Davis & Gordon - Tata McGraw Hill
4) Management Information System by James O'Brian & George M Marakas- Tata McGraw
5) Management Information Systems Managerial Perspectives- D P Goyal – Macmillan
6) Management Information Systems – S. Sadagopan- PHI
7) Business Process Reengineering by K Sridhar Bhat – Himalaya Publishing House

8) Management Information System by C S V Murthy – Himalaya Publishing House
9) Enterprise Resource Planning by Alex Leon - Tata McGraw Hill
10) Enterprise Resource Planning (Concept & Practices) by Garg, Venkitrkrishnan – PHI

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FACULTY OF COMMERCE & MANAGEMENT
M.B.M. (C.M.) Semester II
2.6   Lab – III (Based on 2.1 & 2.2)
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

Objective- To practically train students in programming in object oriented way using C++ and use and administer databases.

Practicals on - 2.1 Object Oriented Programming using C++

1. Write C++ program to demonstrate the use of function.(call by value & call by reference)
2. Write a C++ program to demonstrate function overloading
3. Write a C++ program to demonstrate operator overloading using friend function.
4. Write a C++ program to demonstrating the use of constructors and destructor
5. Write a C++ program to demonstrate the Single & multiple inheritances.
6. Write a C++ program to demonstrating Pointers to Function & Pointer to object
7. Write a C++ program to demonstrate the use of virtual function
8. Write a C++ program to demonstrate the concept of function template & class template.
9. Write a C++ program to demonstrate Exception Handling
10. Write a C++ program to demonstrate File handling**.**

Practicals on - 2.2 RDBMS with MS-SQL Server

1. Demonstration of creating database and table.
2. Defining different types of database constraint.
3. Manipulation of data.
4. Query based on operators and joins
5. Simple and nested query
6. Demonstration of stored procedures and triggers
7. Creating DML & DDL triggers
8. Demonstrate the Use of @@error & RAISERROR

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M.B.M. (C.M.) Semester II
2.7   Lab – IV (Based on 2.3 & 2.4)
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: 50 hours]

Objective- To practically train students in designing graphics and animation applications. Also to use CASE tool MS-Visio.

Practicals on - 2.3 Graphics & Animation

1. Demonstrate the use of Various Tools in Photoshop
2. Create a Photoshop design based on Image Resolution and sizes
3. Create a Photoshop design with Multiple Layers. Apply effects like transparency, feather effects.
4. Create a design in Photoshop with mixed contents from multiple images.
5. Create a design in Photoshop and change the actual colors. (Black and white image to Color Image)
6. Demonstrate the use of CorelDraw Interface and Various Tools.
7. Create a Design in CorelDraw by Converting a shape into curves.
8. Create a Design in CorelDraw use tools like Blend, Shadow, Transparency, Lens, Contour, and Distortion
9. Create a Design using fill, outline, transformation, text shaping tools.
10. Create an attractive advertisement for Newspaper.

Practicals on - 2.4 Software Engineering & Project Management

Study following systems -
1. Sales Order Processing System
2. Library System

Perform following for above systems and using any CASE Tool   -(Microsoft Visio/ ERWin/Rational Rose)

Draw DFD

Draw ERD

Note: Study of other systems is also desirable.