North Maharashtra University, Jalgaon

NAAC Re-accredited 'A' Grade University

FACULTY OF
COMMERCE AND MANAGEMENT

Structure, Equivalence and Syllabus

of

Master in Management Studies (Computer Management)

MMS (CM)

(Semester 60-40 Pattern)

w.e.f AY 2017-18

North Maharashtra University, Jalgaon

(NAAC Reaccredited 'A' Grade University)

FACULTY OF COMMERCE and MANAGEMENT

STRUCTURE OF MASTER IN MANAGEMENT STUDIES M.M.S.(C.M.)

w.e.f. AY 2017-18

MMS-CM –I W.e.f A.Y. 2017-18			
Semester I		**Semester II**	
Code	**Subject**	**Code**	**Subject**
1.1	Principles of Management	2.1	Communication Skills
1.2	Financial Accounting	2.2	Management Information System
1.3	Web Designing and Web Authoring Tools	2.3	System Analysis and Design
1.4	ICT fundamentals & Office Automation	2.4	RDBMS
1.5	Programming in C	2.5	Object Oriented Programming using C++
1.6	Lab I-Practical on Tally ERP & Web Designing	2.6	Lab III-Practical on RDBMS
1.7	Lab II-Practical on Office Automation & C Programming	2.7	Lab IV-Practical on C++
MMS-CM –II W.e.f A.Y. 2018-19			
Semester III		**Semester IV**	
Code	**Subject**	**Code**	**Subject**
3.1	CRM & Digital Marketing	4.1	Human Resource Management
3.2	Cyber Security and IT Act	4.2	E-commerce and M-commerce
3.3	Graphics & Animation	4.3	Internet Computing with ASP.NET
3.4	Web Scripting with PHP and MySQL	4.4	Java Programming
3.5	C#.Net Programming	4.5	Project Work
3.6	Lab V-Practical on Graphics & Animation & PHP	4.6	Lab VII-Practical on ASP.NET
3.7	Lab VI-Practical on C#.NET Programming	4.7	Lab VIII-Practical on Java Programming

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<u>STRUCTURE OF MASTER IN MANAGEMENT STUDIES</u>(M.M.S.(C.M.))

	Semester-I and II						Semester-I and II				
Paper	Semester-I	Credit	Maximum marks			Paper	Semester-II	Credit	Maximum marks		
			Int.	Ext.	Total				Int.	Ext.	Total
1.1	Principles of Management	4	40	60	100	2.1	Communication Skills	4	40	60	100
1.2	Financial Accounting	4	40	60	100	2.2	Management Information System	4	40	60	100
1.3	Web Designing and Web Authoring Tools	4	40	60	100	2.3	System Analysis and Design	4	40	60	100
1.4	ICT fundamentals & Office Automation	4	40	60	100	2.4	RDBMS	4	40	60	100
1.5	Programming in C	4	40	60	100	2.5	Object Oriented Programming using C++	4	40	60	100
1.6	Lab I-Practical on Tally ERP & Web Designing	4	40	60	100	2.6	Lab III-Practical on RDBMS	4	40	60	100
1.7	Lab II-Practical on Office Automation & C Programming	4	40	60	100	2.7	Lab IV-Practical on C++	4	40	60	100
	Total Maximum Marks	28	280	420	700		Total Maximum Marks	28	280	420	700

	Semester-III and IV						Semester-III and IV				
Paper	Semester-III	Credit	Maximum marks			Paper	Semester-IV	Credit	Maximum marks		
			Int.	Ext.	Total				Int.	Ext.	Total
3.1	CRM & Digital Marketing	4	40	60	100	4.1	Human Resource Management	4	40	60	100
3.2	Cyber Security and IT Act	4	40	60	100	4.2	E-commerce and M-commerce	4	40	60	100
3.3	Graphics & Animation	4	40	60	100	4.3	Internet Computing with ASP.NET	4	40	60	100
3.4	Web Scripting with PHP and MySQL	4	40	60	100	4.4	Java Programming	4	40	60	100
3.5	C#.NET Programming	4	40	60	100	4.5	Project Work	4	40	60	100
3.6	Lab V-Practical on Graphics & Animation & PHP	4	40	60	100	4.6	Lab VII-Practical on ASP.NET	4	40	60	100
3.7	Lab VI-Practical on C#.Net Programming	4	40	60	100	4.7	Lab VIII-Practical on Java Programming	4	40	60	100
	Total Maximum Marks	28	280	420	700		Total Maximum Marks	28		420	700

STRUCTURE OF <u>MASTER IN MANAGEMENT STUDIES</u> M.M.S (C.M.)

<u>W.ₑ.f.A.Y. 2017-18</u>

1. TITLE OF THE DEGREE

This degree shall be titled as Master in Management Studies (Computer Management) i.e. MMS (CM). This new curriculum shall be effective from Academic year 2017-18.

2. OBJECTIVES

The main objective of MMS(CM) is to develop future managers/software developers/office support professionals, who would meet, the dynamic needs of the industry in a competitive and challenging environment. The program aims at providing expertise to students in different office support system and software development area.

The broad objectives of the Program are:

i. To equip the students with requisite knowledge, skills and right attitude necessary to provide effective software development skills in a global environment.

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

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

3. DURATION

The regular Full Time Course shall be of 2 Years duration; comprising of 4 Semesters through Theory papers, Practical, Project report, Viva-voce, and such other Continuous Evaluation Systems as may be prescribed, in this respect, from time to time.

4. ELIGIBILITY FOR ADMISSION

As per admission rules framed by the North Maharashtra University, Jalgaon

5. **PATTERN**

5.1. The suggested curriculum comprises 28 papers.

5.2. Each semester will have 7 papers of 4 credits each, thus comprising 28 credits for each Semester that is 112 credits for whole MMS (CM) Degree Course

5.3. One credit for the theory course shall be of the 15 clock hours (Each course being taught in the semester will be of 4 credits) that is each course will be of 60 hours.

5.4. Continuous evaluation of the students shall comprise the 60+40 pattern; where every paper of 100 marks (4 credits), shall be divided as External evaluation of 60 marks and internal continuous assessment of 40 marks.

5.5. 4 credits shall be awarded to the 4.5 Project Report and Viva-Voce. The marks and the credits will be allotted in IV Semester.

5.6. Academic calendar showing dates of commencement and end of teaching, internal assessment tests shall be duly notified before commencement of each semester every year by the Institute/College.

5.7. The external assessment shall be based on external written examination to be conducted by the University at the end of each semester.

5.8. The student shall not be allowed to appear for the semester examination unless the Head/Director of the Department/Institution certifies completion of internal work, regularity, practical etc. The institution / Department shall submit alongwith this certificate Internal marks to 'The Director, Examination and Evaluation' of the University.

6. **Evaluation of the student:**

6.1. The evaluation of the student shall be divided into two parts viz. Internal Assessment and Semester examination with a weightage in the ratio of 40:60.

6.2. Standard of passing –

6.2.1. In order to pass the examination, the candidate has to obtain at least 40% marks for each head separately, that is 24 marks out of 60 (External) & 16 marks out of 40 marks (Internal) for all courses.

6.2.2. Minimum marks for passing the Lab and Project Report and Viva Voce i.e. the marks obtained in internal examination and external Viva Voce shall be 50% separately.

6.3. The distribution of marks for each theory paper of 4 credits at term (Semester) end examination and for continuous internal assessment shall be as follows:

Theory Examination	Maximum marks
Internal assessment	40
External assessment	60
Total marks	**100**

6.4. **Internal Assessment:**

6.4.1.For the internal assessment, 40 marks shall be assigned which includes:

Heads	Marks	Evaluating Authority
Internal test-I	10	
Internal test-II	10	
Attendance, Behavior and classroom participation.	10	Concerned Faculty
Assignments	10	
Total marks	**40**	

6.4.1.1. Two internal tests of 10 Marks each shall be conducted by the subject teacher. The duration of the each test will be of 30 minutes.

6.4.1.2. Ten Marks for continuous Evaluation through regular Attendance, behavior and classroom participation,

6.4.1.3. Ten Marks for Classroom Paper Presentation, Special Assignments, Research Paper Presentations, Publications in Journals, Practical (Computer related courses), Presentations of software, Group Discussions, Book Review, Active participation in activities, Visit to Business/software Exhibition etc. In related subjects (at least one activity has to be completed by the student per semester per paper to be supervised and guided by the concerned subject teacher).

6.4.2. The marks for each test shall be displayed on notice board within 15 days of conducting the test.

6.4.3. It is mandatory to show the answer sheets of all tests to the students on demand.

6.5. **Semester examination:**

6.5.1. The Semester examination for 60 marks per subject would be held after completion of teaching for the semester and as per Timetable declared by North Maharashtra University.

6.5.2. Each theory paper comprising of 60 marks shall be of three hours duration.

7. Grides:

7.1. Marks for each course would be converted into grade points as per **Seven-Point** grading scale as stated in the following table.

Table 1 Table Showing Conversion of Marks into grade points

Marks Obtained	Grade	Equivalent Grade points
75 to 100	O : Outstanding	6
65 to 74	A : Very Good	5
55 to 64	B : Good	4
50 to 54	C : Average	3
45 to 49	D : Satisfactory	2
40 to 44	E : Pass	1
0 to 39	F : Fail	0

7.2. Every paper carries maximum of 6 grade points. Similarly, each paper carries 4 credit points. Thus, each paper carries maximum of 24 CR x GP points.

7.3. One semester carries 7 papers of 24 CR x GP points each. Thus, every semester carries maximum of 168 CR x GP points.

7.4. The MMS(CM)programme consists of 4 semesters, each carrying 168 CR x GP points. Thus, The MMS(CM) programme in all carries maximum of 672 CR x GP points.

7.5. The grade point will be given on the basis of total marks (sum of mark obtained in internal assessment and Semester examination) obtained by a student in a subject.

7.6. The CR x GP points earned in each course shall be calculated as –

Total CR x GP points = Grade points obtained (vide Table-1) x Credits for the course

7.7. Semester Grade Point Average (SGPA) –

7.7.1. The performance of a student in a semester is indicated by a number called SGPA. SGPA is the weighted average of the grade points obtained in all courses registered by the student during the semester. It shall be calculated as follows-

$$SGPA = \frac{\sum_{i=1}^{n} C_i p_i}{\sum_{i=1}^{n} C_i} = \frac{\sum_{i=1}^{n} 4p_i}{28}$$

Where,

C_i = the maximum number of credits prescribed for the ith course of a semester for which SGPA is to be calculated

p_i = grade point earned in the ith course

i = 1,2,3……n represent the number of courses in which a student is registered in the concerned semester.

That is,

$$SGPA = \frac{\text{Total CR x GP points earned for the Semester}}{\text{Total Credit points for the Semester}}$$

SGPA is rounded up to two decimal places.

7.8. **Final result**

Up-to-date assessment of the overall performance of a student from the time of his/her first registration is obtained by calculating a number called Cumulative Grade Point Average (CGPA), which is a weighted average of the grade points obtained in all courses registered by the student since he/she has been admitted to the **MMS (CM)** course.

$$CGPA = \frac{\sum_{j=1}^{m} C_j p_j}{\sum_{j=1}^{m} C_j}$$

Where

C_j = the number of credits earned in the jth course up to the semester

p_j = grade point earned in the jth course.

A letter grade lower than E (i.e. grade point < 1) in a course shall not be taken into consideration for the calculation of CGPA

j = 1, 2,3……m represent the number of courses in which a student is registered up-to the semester for which the CGPA is to be calculated

The CGPA is rounded up to two decimal places.

7.9. The final grade earned shall be as per Table given below-

Final grade to be awarded and equivalent percentage of marks of the candidate based on his/her CGPA

CGPA Value	Final Grade to be awarded to the candidate	Equivalent range for percentage of marks	Formula for obtaining equivalent approximate percentage of marks
5.50-6.00	0: Outstanding	75-100	$75 + \left\{ \frac{(CGPA - 5.5)}{0.02} \right\}$
4.50-5.49	A: Very Good	65-74	$65 + \left\{ \frac{(CGPA - 4.5)}{0.02} \right\}$
3.50-4.49	B: Good	55-64	$55 + \left\{ \frac{(CGPA - 3.5)}{0.02} \right\}$
2.50-3.49	C: Average	50-54	$50 + \left\{ \frac{(CGPA - 2.5)}{0.02} \right\}$
1.50-2.49	D: Satisfactory	45-49	$45 + \left\{ \frac{(CGPA - 1.5)}{0.02} \right\}$
1.00-1.49	E: Pass	40-44	$40 + \left\{ \frac{(CGPA - 1.0)}{0.02} \right\}$
0.00-0.99	F: Fail	00-39	Not Applicable

8. **PASSING STANDARDS**

   8.1. In order to get through the examination, a candidate shall have to secure minimum of 40% of the marks allotted to each subject(i.e. 16 marks out of 40 marks (Internal) and 24 marks out of 60 (External) for all subjects).

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

9. **GUIDELINES FOR TEACHING**

   9.1. There shall be atleast 60 lecture hours (including internal assessment) per semester per course. The duration of the lectures shall be 60 minutes each. There shall be atleast 15 weeks of teaching before commencement of examination of respective semester.

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

   9.3. The semester workload is balanced with 7 full papers of 100 marks each / semester. Thus, 420 lectures hours are considered for teaching sessions and continuous assessment.

   9.4. 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.

   9.5. The teaching method shall comprise a mix of Lectures, Practical, demos, Seminars, Group discussions, Brain storming, Game playing, Interactions with Executives etc. so as to prepare the students to face the global challenges as business executive for this Audio-visual aids and Practical field work should be a major source of acquiring knowledge.

   9.6. Institute may use a combination of various teaching methods such as cases, projects, independent studies, computer aided instructions, group discussions, lectures, seminars, presentations by students, and lectures by guest speakers from industry and government, workshops. The case method/ software demonstration is generally seen as a most effective tool, and it should be included as part of the curriculum teaching as far as possible. This sharpens analytical skills of students and helps analyze problems from multi-functional perspectives. Case study method preferably shall be used wherever possible for the better understanding of the students.

   9.7. Each institute shall issue annual souvenir as well as a placement brochure separately to each student and a copy of the same shall be submitted to the university before the end of the year.

10. **GUIDELINES FOR PROJECT**

    10.1. Each student will have to develop software individually.

    10.2. In the Fourth semester examination, student shall submit "Project Report". The topic should be decided with consultation and guidance of internal guide of the Institute/college.

10.3. The institute / College shall submit the detailed list of candidate to the University with Project Titles, name of the organization, internal guide and functional elective on or before 31st January of the second year.

10.4. Teacher shall not be entrusted/allowed to take more than 15 students for guidance and supervision of project report.

10.5. The student has to write a report based on the actual work of software development, get it certified by the concerned teacher that the Project report has been satisfactorily completed and shall submit one typed copy of the same to the Head / Director of the institute along with 1 CD of Project Report. In order to save the paper, both side printing is allowed.

10.6. It is responsibility of concerned Institute to check the authenticity of Project.

10.7. CD submitted by the student shall be forwarded to the University by the Institute before the deadline mentioned in University circular.

10.8. Project viva voce shall be conducted at the end of Semester IV.

10.9. The project work will carry a maximum 100 marks, of which internal teacher shall give marks out 40 on the basis of project work done by the student as a internal assessment. Viva voce of 60 marks will be conducted by the panel of the external examiners to be appointed by the University.

10.10. No students will be permitted to appear for Viva-voce and Semester IV examinations, unless and until (s) he submits the project report before the stipulated time.

11. STRUCTURE OF THE QUESTION PAPER

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

11.2. **For Theory papers** there will be 2 Sections. In section I, a candidate shall be required to answer 3 questions out of 5 questions and in section II, student shall be required to answer 2 questions out of 3 questions. All questions shall carry equal marks i.e. 12 marks each.

11.3. **For Lab,** the student will have to perform the assigned practical within of 3 hours.

12. ELIGIBILITY OF THE FACULTY

Strictly As per norms fixed by UGC (www.ugc.ac.in) and North Maharashtra University, Jalgaon (www.nmu.ac.in)

For all Commerce & Management related subjects :

First Class MBA or equivalent.

For Computer Related subjects:

First Class MCM/MBM(CM)/MMS(CM)/MCA/ MBA(IT & Systems)

EQUIVALENCE OF OLD AND NEW COURSES FOR

MASTER IN MANAGEMENT STUDIES (COMPUTER MANAGEMENT) M.M.S.(CM)

Old Paper	Old courses (w.e.f.- July 2014) MBM (CM)	New Paper	New courses (w.e.f.- AY 2017-18) MMS(CM)
Semester-I			
1.1	ICT Fundamentals & Operating System	1.4	ICT Fundamentals and Office Automation
1.2	Web Designing and Web Tools	1.3	Web Designing and Web Authoring Tools
1.3	Programming concepts using C++	1.5	Programming in C
1.4	Financial Accounting for Manager (Tally ERP)	1.2	Financial Accounting
1.5	Business Management	1.1	Principles of Management
1.6	Lab -I (Based on 1.1 & 1.2)	1.6	Lab I-Practical on Tally ERP & Web Designing
1.7	Lab – II (Based on 1.3 & 1.4)	1.7	Lab II- Practical on Office Automation and C Programming
Semester – II			
2.1	Object Oriented Programming using C++	2.5	Object Oriented Programming using C++
2.1	RDBMS with MS-SQL Server	2.4	RDBMS
2.3	Graphics and Animation	2.1	Communication Skills
2.4	Software Engineering and Project Management	2.3	System Analysis and Design
2.5	Management Information System & ERP	2.2	Management Information System
2.6	Lab – III (Based on 2.1 & 2.2)	2.6	Lab III- Practical on RDBMS
2.7	Lab – IV (Based on 2.3 & 2.4)	2.7	Lab III- Practical on C++
Semester – III			
3.1	Database Administration with Oracle & D2K	3.2	Cyber Security and IT Act
3.2	VB.Net	3.5	C#.Net Programming
3.3	Advance Graphics and Animation	3.3	Graphics and Animation
3.4	E-Commerce and Website Management	3.4	Web Scripting with PHP and MySQL
3.5	ICT Applications in Business	3.1	CRM & Digital Marketing
3.6	Lab – V (Based on 3.1 & 3.2)	3.7	Lab VI- Practical on C#.Net Programming
3.7	Lab – VI (Based on 3.3 & 3.4)	3.6	Lab V- Practical on Graphics and Animation & PHP
Semester – IV			
4.1	ASP.Net	4.3	Internet Computing with ASP.NET
4.2	Scripting Languages	4.2	E-commerce and M-commerce
4.3	Java Programming language	4.4	Java Programming
4.4	Organization Behavior and HRM	4.1	Human Resource Management
4.5	Lab – VI (Based on 4.1 & 4.2)	4.6	Lab VII- Practical on ASP.Net
4.6	Lab – VIII (Based on 4.3 & 4.4)	4.7	Lab VIII- Practical on Java Programming
4.7	Project Work	4.5	Project Work

North Maharashtra University, Jalgaon
(NAAC Re-Accredited 'A' Grade University)
FACULTY OF COMMERCE & MANAGEMENT
MMS (Computer Management) Semester-I
w.e.f. 2017-18
1.1 Principles of Management
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

Objective: To acquaint the students with the basic Business Management concept & process.

UNIT 1: Nature and Development of Management   [10]
   a. Management: Concept, Nature, Importance
   b. Evolution of Management: Introduction to Scientific Management by Taylor, Administrative Management by Fayol, Contribution of Peter Drucker

UNIT 2: Management Functions – I   [10]
   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

UNIT 3: Management Functions - II   [10]
   a. Organizing: Concept, Organization Structure, Forms of Organizational Structure
   b. 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.
   c. Staffing: Concept, Manpower Planning.

UNIT 4: Management Functions - III   [10]
   a. Directing: Concept, Direction and Supervision, Importance of Directing, Principles of Directing.
   b. Coordination – Need & Importance, Coordination & Cooperation,
   c. Controlling: Concept, Types of control.

UNIT 5: Management Practices   [10]
   a. Concepts of – Kaizen, Six Sigma, Theory Z, SWOT analysis, Business Process Outsourcing, Knowledge management.

UNIT 6: Organizational Communication Skills - I   [10]
   b. Meaning & Importance of Organizational Communication

c. Internal communication: Notice, Circular, Memo.
d. External Communication – Enquiries, Quotations, Bank & Financial Institutions
e. Letter writing: Layout of Business letter, types of layouts, Essentials of Good Business Letters, Attitude in Business writing
f. Purpose of letters: Resume, Application

REFERENCE BOOKS:

1. Koontz, "Principles Of Management", 1st Edition, Tata McGraw Hill, 2008
2. Stoner , Freeman & Gilbert Jr, "Management", 6th Edition, Prentice Hall Of India
3. Robbins & Coulter, "Management", 8th Edition, Prentice Hall Of India
4. Robbins S.P And Decenzo David A, "Fundamentals Of Management : Essential Concept And Applications",. 5th Edition, Pearson Education
5. L.M.Prasad, "Principals Of Management", Himalaya Publications
6. Dr. Manmohan Prasad, "Management: Concepts & Practices", Himalaya Publications
7. Weihrich Heinz And Koontz Harold, "Management: A Global And Entrepreneurial Perspective", 12th Edition, McGraw Hill, 2008
8. Penrose / Rasberry / Myers, "Business Communication for Managers", Cenage Learning.
9. Raman & Singh, "Business Communication", Oxford Publication.
10. C.S. Raydu, "Business Communication", Himalaya Publishing House

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FACULTY OF COMMERCE & MANAGEMENT
MMS (Computer Management) Semester-I
w.e.f. 2017-18
1.2 Financial Accounting
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: **60 hours**]

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

UNIT 1: Basic Concepts [10]
   a. Accounting Concepts & Conventions.
   b. Basic Accounting Terms.

UNIT 2: Elements of Accounts [10]
   a. Types of Accounts- Personal, Impersonal: Real and Nominal
   b. Rules for recording journal entries for different types of accounts
   c. Journals, Ledgers, Trial Balance, Cash Book – Cash Book with Cash and Bank Column
   d. Adjustment Entries and Final Account of Sole Traders

UNIT 3: Rectification of Errors [10]
   a. Introduction
   b. Types of Errors- Errors of Omission, Commission, Error of Principles, Compensating error
   c. Suspense Account

UNIT 4: Bank Reconciliation Statement [10]
   a. Need, Causes of Disagreement, Preparation of Bank Reconciliation Statement

UNIT 5: Tally Accounting Package [10]
a) Introduction To Tally :
   a. Features Of Tally Software (ERP)
   b. Starting Tally - Gateway Of Tally And Exit From Tally
   c. Company Creation in Tally, Saving the Company Profile, Alteration / Deletion Of Company, Selection of Company
   d. Account Groups and Ledgers
   e. Hierarchy Of Account Groups And Ledgers, Reserved Account Groups,
   f. Account Groups Of Balance Sheet – Account Groups Of Liabilities & Assets
   g. Account Groups Of Profit & Loss Account - Account Groups Of Direct Income And Direct Expenses Apart From Sale And Purchases, Indirect Income And Indirect Expenses

h. Account Masters - Account Groups Creation and Account Ledgers Creation ix)
   Feeding of Opening Balances
i. Alteration / Deletion Of Account Master Records
   xi) Feeding of Closing Stock Value

b) Tally: Voucher Entry
a. Types Of Vouchers In Tally - Contra, Receipts, Payments And Journal
b. Entering Account Voucher - Sales, Purchases, Debit Note, Credit Note, Incomes, Expenses, Voucher Modification, Saving The Voucher
c. Voucher Alteration, Deletion and Cancellation, Single Mode Voucher Entries, Account
d. 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
a. Extracting Detailed Trial Balance, Exploded Trial Balance And Ledger wise Trial Balance
b. Extracting Balance Sheet - Primary Balance Sheet , Detailed Balance Sheet
c. Closing Stock Value Entry through Balance Sheet
d. Extracting Profit And Loss Account - Detailed Form and Vertical Form,
e. Extracting Income And Expenditure Statements for Non-Trading Units

UNIT 6: Introduction to Stock Management (Inventory)   [10]
a. Stock Group, Stock Category, Stock Items, Multiple Warehouses,
b. Purchase Order and Sales Order

REFERENCE BOOKS:

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

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FACULTY OF COMMERCE & MANAGEMENT
MMS (Computer Management) Semester-I
w.e.f. 2017-18

1.3 Web Designing and Web Authoring Tools

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

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

UNIT 1: Internet [10]

a. What is Internet, History of Internet, Advantage & Disadvantages of Internet, Network Topologies
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

UNIT 2: HTML [10]

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. Browser compatibility issues

UNIT 3: Working with Tables, Graphics & Color [10]

a. Understanding table elements, Formatting Tables
b. Understanding graphics file formats, Using<img>, working with images and color, applying background properties

UNIT 4: Planning Site Navigation, frames and forms [10]

a. Create usable Navigation, Text-Based Navigation, Contextual linking,
b. Using Graphics for navigation & Linking
c. Designing effective Frames, Working with Framesets
d. Understanding Form Syntax, Creating input objects-<form>, <input>, <select>, <option>,
e. <textarea>, <button>, <label>, <optgroup>

UNIT 5: CSS (Cascading Style Sheets) and Working with Frames and Forms [10]

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

UNIT 6: Web Designing Tools and framework   **[10]**

    a. **Dream Weaver**:

        a. Introduction & Dreamweaver Interface

        b. Adding content to site: Creating web pages, defining sites, Page Properties, using design template, inserting/presenting text, list, horizontal rules.

        c. Formatting with CSS: Formatting page, CSS, creating CSS, using external CSS, attaching

        d. CSS, page layout with CSS.

    b. **Bootstraps framework**

        a. Basics of bootstrap, grid, components

REFERENCE BOOKS:

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

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1.4 ICT Fundamentals & Office Automation

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

Objective: To prepare students in understanding ICT basics and to make aware of Office automation using MS- Office.

UNIT 1: Elements of ICT [10]

    a. Definition of ICT, Impact of ICT in business

    b. Communication – simplex, half-duplex and full duplex

    c. Network, Types of computer Networks

    d. Network Topology

    e. Wireless communication – Bluetooth and wi-fi

    f. Communication tools: email, chatting, Social networking, teleconferencing/video conferencing

UNIT 2: Operating System [10]

A) Operating Systems : What is booting, Definition of operating system , functions of operating system, types of operating system - batch operating system, time sharing, multi programming, multitasking, Distributed system, Real time System, Introduction to Operating systems – Mac OS, Linux, Windows, Android

B) Concept of Software: Definition**,** Types of software- System Software, Application Software, System Software

Meaning of Virus, Types & Effects of Viruses, Anti –Virus, Roles of antivirus

Programming Languages: High level, Middle Level, Low Level, 4GL

UNIT 3: WORD PROCESSING [10]

    a. Introduction to Office Automation Suites, Components and features

    b. Working with Documents and the Keyboard, Navigating through a Word Document

    c. Basic Text Editing, Text Formatting, Paragraph Formatting, Page Formatting, header & footers, Templates

    d. Working With Graphics and Pictures, Tables, Mail Merge, Printing, spell check, auto text.

    e. Managing bibliography, working with index

UNIT 4: WORKING WITH SPREADSHEET [10]

   a. Introduction to Worksheets and Workbooks, Working with Cells, Rows, and Columns,
   b. Formatting Data and Cells, Formatting Rows and Columns, Editing Cells, Rows, Columns, and Worksheets, Conditional formatting
   c. Formulas and Calculations, inbuilt Functions, Sorting and filtering
   d. Adding Images and Graphics, Charts, Printing Worksheets, Protecting sheets

UNIT 5: PRESENTATION SOFTWARE [10]

   a. Introduction to Power Point, Basics of Creating Presentations, Applying Themes and Layouts
   b. Working with Objects, Entering, Editing, and Formatting Text, Working in Outline View
   c. Inserting Pictures, Graphics, Shapes, and Other Things, Inserting Tables into Presentations, Charts and SmartArt, Adding Sound and Video
   d. Adding Transitions and Animation, Master Slides, Printing and Running Slide Shows

UNIT 6: SOHO DATABASE SOFTWARE [10]

   a. Introduction to database software, creating and editing databases, tables, forms and reports

REFERENCE BOOKS:

1. V. Rajaraman, "Fundamentals of Computers", PHI publication.
2. Roger Hunt and John Shelley, "Computers and Commonsense", PHI publication
3. Abrham Silberschatz, "Operating System concepts", John Wiley & sons INC
4. A. S.Tananbaum, "Computer Network"
5. Vipra Computers, "Microsoft Office 2007", Vipra Printers Pvt. Ltd.
6. Ed Bott and Woody Leonhard, "Special Edition Using Microsoft Office 2007"
7. Misty Vermaat, "Microsoft Office 2013", Shelly Cashman

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1.5 Programming in C
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

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

UNIT 1: Introduction [10]
    a. History, Special features and application areas, Structured programming approach
    b. Definitions- Program, Interpreter, Compiler
    c. Algorithm: Basic notation of algorithm
    d. Flowcharts: Definition, Symbols of flow charts
    e. Examples of algorithms and flowcharts

UNIT 2: Input-Output and Control Flow [10]
    a. Variable name, data types
    b. Operators and expressions - arithmetic operators, relational operators, logical operators, increment, decrement operators, assignment operators, compound assignment operator, conditional expression, precedence and order of evaluation.
    c. Standard Input-output, formatted input and output statements
    d. Control flow: statement and block, if- else- if, switch, break, continue, go to, loops: while, for, do-while, nesting of loops.

UNIT 3: Functions and Program Structures [10]
    a. Basics, declaring and calling and defining functions
    b. Recursion
    c. String functions.

UNIT 4: Pointer and Arrays [10]
    a. Introduction to pointers, uses of pointers, address variable, pointer variable, pointer to function, pointers and function argument, pointer and arrays, pointer arithmetic
    b. Character pointers and function
    c. Multidimensional array
    d. Command line argument

UNIT 5: Structure, Union, Typedef [10]
    a. Structure Basics, Pointer to structure, Nested structure
    b. Union
    c. Typedef, enumerated data type

UNIT 6: File Handling [10]

    a. Sequential file handling, File creation and access

    b. Miscellaneous functions of file.

REFERENCES BOOKS:

1. E. Balagurusamy, "Programming in ANSI C", Tata McGraw-Hill Education, 2008.

2. Yashavant P. Kanetkar, "Let us C", BPB Publication.

3. Herbert Sehlidt, "The Complete Reference C", Tata McGraw-Hill Publication.

4. V. Rajaraman, "Computer Programming in C", PHI publications

5. Brian W. Kernighan, Dennis Ritchie, "C Programming Language," 2nd edition, Prentice Hall

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1.6 Lab I - Practical on Tally ERP and Web Designing
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

Practical on 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

Practical on Web Designing

1. Develop a web page using basic HTML tags
2. Develop a web page using Lists
3. Develop web pages using internal and external Hyperlinks
4. Develop a web page using tables
5. Develop a web form
6. Design a web page using frames
7. Design a web page demonstrating internal CSS
8. Design a web page demonstrating external CSS
9. Develop a web page using Dream Weaver
10. Create simple website using bootstrap elements

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1.7 Lab II – Practical on Office Automation and C Programming

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

Practical of Office Automation

1. Demonstrate style formatting and page formatting in Word Processor
2. Demonstrate creating and using templates in Word Processor
3. Demonstrate working with graphics, pictures, and tables in Word Processor
4. Demonstrate using mail merge with Word Processor
5. Demonstrate entering data, managing data, sorting and formatting data and cells in spreadsheet
6. Demonstrate using formulas and calculations in spreadsheet
7. Demonstrate adding images, graphics, charts and diagrams in spreadsheet
8. Demonstrate creating presentations and applying themes and layouts to slides
9. Demonstrate inserting pictures, graphics, shapes, tables, charts, Smart Art, notes and objects in presentation
10. Demonstrate adding sound, video, transitions, and animation to your PowerPoint presentations.
11. Create Student database. Insert records using form and generate report

Practical on Programming in C

1. Write a program to find the simple interest.
2. Write a program in to check the number is palindrome or not.
3. Write a program to find factorial of given number.
4. Write a program to print FiboNAACi series upto given term.
5. Write a program to generate all prime numbers in the given range.
6. Write a program to print given number in word (Ex: - 937 – Nine hundred Thirty Seven).
7. Write a program to find maximum and minimum of array elements..
8. Write a program to check armstrong number.
9. Write a program for matrix multiplication.
10. Write a program to demonstrate string functions
11. Write a program to Count the number of words in a given sentence.
12. Write a Program create a file & store information in it.
13. Write a Program to copy contents of one file into another file.

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2.1 Communication Skills

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

Objective:
- To study the personality development of individuals in the micro perspective.
- To understand communication cycle.
- To provide employability skills
- To know the process of Interview Techniques& Group discussion.
- To understand the needs and benefits of written communication.

UNIT 1: Basic Elements of Communication   [10]

   a. Definition – Elements of Communication - Process of communication
   b. Role of Communication in Business – Characteristics of communication
   c. Formal Channels – External – Outward and Inward –
   d. Internal – vertical – Horizontal
   e. Group Networks - Informal channels – Grapevine.

UNIT 2: Personality development   [10]

   a. Developing Interpersonal Relations
   b. Analytical Skills, Multitasking Ability
   c. Listening Skills.
   d. Body Language.
   a. Non Verbal Communication Skills.
   b. Dialogue Skills

   > Need for dialogue and Conversation skills – skills needed for dialogue – Clear and Pleasant speech – Good manners and Etiquette – Self-control – Listening – Asking questions – Assertiveness without Aggression- Expressing disagreement without being offensive – summarizing and closure – feedback skills

UNIT 3: The "Why" and "To Whom" Parts of communication   [10]
   a. Defining Communication
   b. Types of Communication- verbal/Non verbal
      Technological/ Non Technological
      Mediated/Non mediated
      Participatory/Non Participatory

Intrapersonal or face to face Communication

Focused and Unfocused Interactions

  c. Interactive Communication

  d. Barriers of Communication

UNIT 4: Written Communication [10]
  a. Qualities of good letter
  b. Resume writing
  c. Layouts of business letters
  d. Writing different types of letters:-
      i Enquiries & Replies
      ii Orders & Replies
      iii Complaints & Claims
      iv Application Letters
      v Reports writing
  e. Web Communication

UNIT 5: Interview Techniques [10]
  a. General Tips on taking interview - Do's & don'ts.
  b. Pre & post Preparation of the interview.
  c. Interview : Types, Preparation, Conducting and Appearing for interview
  d. Common Questions and flow-Warm-up questions-Questions that set the stage-detail part of interview-the trick negative questions- intention testing questions-compensation and financial details- difference between the American and Indian Interviews
  e. The Interviewer Perspective

UNIT 6: Group Discussion [10]
  a. Meaning, Objective, Methodology of Group Discussion, Guidelines for Group Discussion, Role Function in Group Discussion, Nonfunctional Behavior, Improving Group Performance.

REFERENCE BOOKS:
1. Penrose, Rasberry, Myers, "Business communication for managers", Cengage Learning
2. Raman & Singh, "Business communication", oxford Publication
3. Ruben Roy, Communication Today, Himalaya Publication
4. C. S. Raydu, "Business communication", Himalaya Publication
5. Taylor, Communication for Business, Pearson Education
6. Dr. Rao& Dr. Das, "Communication Skills", Himalaya Publication
7. Scot Ober, Biztantra, Dreamtech, "Contemporary Business Communication "
8. Bovee, Thill, Schatzman, "Business communication Today", Pearson
9. Lesikar & Flately, "Basics of Business communication", Tata McGraw Hills
10. R. K. Madhukar, "Business communication", Vikas Publication

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2.2 Management Information System
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

Objective: To develop the knowledge about process of MIS and its application to the business for decision making process.

UNIT 1: Fundamentals of Management Information Systems   **[10]**
- a. Definition - Data and information, types of information
- b. Information System: Definition, classification of IS
- c. Management Information System
- d. Definition, importance, evolution
- e. Components & Activities of MIS
- f. Types – Operation support system & Management support systems
- g. Control systems – Feedback & Feed forward systems
- h. Computers and MIS

UNIT 2: Planning and development of MIS   **[10]**
- a. MIS planning process – Steps in planning
- b. Management of Quality in the MIS
- c. MIS design & Development Process
- d. Factors contributing in the Success & Failure of MIS

UNIT 3: Support System   **[10]**
- a. Decision Support System (DSS): Concept, Philosophy, Characteristic, Classes, Users of DSS
- b. Executive Support System (ESS) : Introduction, Components & Architecture
- c. Office Information System: Document management & Communication system

UNIT 4: Expert System and Artificial Intelligence   **[10]**
- a. Artificial intelligence – definition, evolution, components and application
- b. Expert System – Definition, architecture, stages in expert system development process
- c. Knowledge based expert system

UNIT 5: ERP   **[10]**
- a. Definition, evolution, Advantages and limitations
- b. Architecture of ERP
- c. Phases of ERP implementation
- d. Success and failure factors of ERP

UNIT 6: Application of MIS in functional areas   **[10]**
- a. Production

b. Marketing information System
c. Accounting
d. Personnel and services

REFERENCE BOOKS:

1. Waman S. Jawadekar, "Management Information System", Tata McGraw Hill
2. Waman S. Jawadekar, "Management Information System Text and cases", Tata McGraw Hill
3. Arora, Management Information System, Excel Books
4. Davis & Gordon, "Management Information System", Tata McGraw Hill
5. James O'Brian & George M Marakas, "Management Information System", TataMcGraw
6. D P Goyal, "Management Information Systems Managerial Perspectives", Macmillan
7. S. Sadagopan, "Management Information Systems", PHI
8. C S V Murthy, "Management Information System", Himalaya Publishing House
9. Alex Leon, "Enterprise Resource Planning", McGraw Hill Education

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2.3 System Analysis and Design

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

Objective: The course has been designed to provide a foundation of systems principles and an understanding of System development.

UNIT 1: Introduction   [10]

a. **System definition and concepts,** Characteristics and types of system, Elements of Systems,
b. Feedback and feed forward control system
c. **Systems models types of models:** Real-time and distributed systems, Basic principles of successful systems

UNIT 2: System Development cycle   [10]

a. Role and need of systems analyst
b. Introduction of Systems Development Life Cycle (SDLC)
c. Various phases of development :Analysis, Design, Development, Implementation, Maintenance
d. Systems documentation considerations: Principles of systems documentation , Types of documentation and their importance, Enforcing documentation discipline in an organization
e. SDLC Models : Waterfall Model, Spiral and RAD, Prototyping

UNIT 3: System Planning   [10]

a. Data and fact gathering techniques: Interviews, Group communication, Presentations, Site visits.
b. Feasibility study and its importance
c. Types of feasibility reports- Technical, Economical and Behavioral
d. System Selection plan and proposal Prototyping

UNIT 4: Systems Design and modeling   [10]

a. Logical and physical design
b. Systems flowcharts & Data flow diagrams
c. Common diagramming conventions and guidelines using DFD and ERD diagrams
d. Tools for Structured Analysis : Data Dictionary, Decision Tree and Decision Tables, Structured English

UNIT 5: Input / Output Design   [10]

a. Classification of forms: Input/output forms design
b. User-interface design

c. Graphical interfaces

UNIT 6: Designing business application system using DFD, ERD , Input and Output layouts [10]
    a. Library System
    b. Inventory System
    c. Hospital System

REFERENCE BOOKS:

1. Whitten, Bentaly and Barlow, "System Analysis and Design Methods", Galgotia Publication.

2. Elias M. Awad, "System Analysis and Design", Galgotia Publication

3. Roger Pressman, "Software Engineering", McGraw Hill

4. K.K. Agrawal and Yogesh Agrawal, "Software Engineering", 2nd Edition New Age International Publishers

5. James A. Senn, "Analysis & design of Information system", McGraw Hill

6. Rahul Mishra, Anshu K. Chauhan, System Analysis & Design, Pragati Prakashan

7. Waman S. Jawadekar, "Software Engineering", Tata McGraw Hill Education (India) Pvt. Ltd.

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

Objective- To prepare students in using and managing databases.

UNIT 1: Database Systems& Data Models [10]
   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

UNIT 2: Relational Database Design [10]
   a. Entity, Attribute, relationship Set
   b. ERD
   c. Keys: Primary, Super, Candidate, Foreign Key
   d. Codd's Rules
   e. Normalization, Normal Form:1 NF, 2 NF, 3 NF

UNIT 3: Introduction to SQL (Structured Query Language) [10]
   a. Types of SQL: DDL, DML, DCL Statements.
   b. Constraints: Not Null, Unique, Primary Key, Check, Referential Integrity.
   c. Clauses: where, group by, having, order by.
   d. Functions: Numeric Functions, Character Functions, Aggregate Functions, Date Functions.

UNIT 4: Nested Queries, Joins &Database Objects: [10]
   a. Nested Queries
   b. Joins: inner join, outer join
   c. Database Objects: Sequence, View, Synonym, Index

UNIT 5: Managing Users: [10]
   a. Creating user,
   b. Granting privileges – Object Level and Database Level
   c. Revoking Privileges – Object Level and Database Level.
   d. Access Matrix

UNIT 6: Concurrency Control & Transaction Management   [10]
  a. Concept of Concurrency Management
  b. Rollback and Commit statements
  c. Types of Locks
  d. Select …for update & Lock table command.
  e. Transaction – Definition ACID properties, state of transaction
  f. Protocols – timestamp protocol, 2 phase locking protocol
  g. Deadlock – concept, prevention and recovery

REFERENCE BOOKS:

1. Abraham Silberschatz, Henry F. Korth & S. Sudarshan, "Database System Concepts", McGraw-Hill

2. Ivan Bayross, "Oracle", BPB Publication

3. "Oracle DBA Certification Guide", Oracle Press OCP Guide

4. Pranab kumar Das Gupta, P. Radhakrishna, "Database Management System Oracle SQL and PL/SQL", PHI publications

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2.5 Object Oriented Programming Using C++

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

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

UNIT 1: Introduction   [10]
    a. History of C++
    b. Structured Vs Object oriented development
    c. OOP's Features-Object, Classes, Data Encapsulation & Abstraction, Delegation, Inheritance, Polymorphism, Message Communication.

UNIT 2: Classes and Objects   [10]
    a. Access Specifier
    b. Class Specification- Defining Members
    c. Creating Objects
    d. Constructors, types of Constructors, destructor
    e. Friend Class and Friend Function

UNIT 3: Polymorphism   [10]
    a. Function overloading,
    b. Operator Overloading- unary, binary operators, using friend functions, without using friend functions
    c. Virtual & Pure Virtual functions

UNIT 4: Inheritance   [10]
    a. Types of Inheritance
    b. Member Accessibility
    c. Visibility Modes
    d. Virtual Base Class
    e. Abstract class.

UNIT 5: Templates & Exception Handling   [10]
    a. Template concepts, Advantages of using templates
    b. Class template
    c. Function template
    d. Exception handling

UNIT 6: Stream Computation [10]

    a. Stream Computation with console
    b. Streams computations with Files.

REFERENCE BOOKS:

1. K R Venugopal, Rajkumar, T Ravishankar, Mastering C++, TMH Publication
2. Yashwant Kanetkar, Exploring C++ , BPB publication
3. W. Balguruswamy, Object Oriented Programming using C++, TMH
4. The C++ Programming Language by
5. Bjarne Stroustrup, C++ Programming Language
6. Steven Holzner, Black Book, Dreamteach publication
7. Herbert Schildt, The Complete reference C++ 4th Edition by McGraw Hill Education (Inda) Pvt. Ltd. New Delhi,

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2.6 Lab III – Practical on RDBMS

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

Practical on RDBMS

1. Create a table, Insert 10 Records into it. Also perform alter table

2. Demonstrate simple SQL queries

3. Demonstrate use of operators IN, OR, AND, BETWEEN, NOT, LIKE, EXISTS

4. Create table with various constraints, insert records and also perform alter, update, delete etc.

5. Demonstrate Aggregate functions, Date functions, String functions,

6. Demonstrate the use of Group By and Having Clause

7. Demonstrate Joins and nested queries.

8. Demonstrate View, Sequence, and Synonym.

9. Create User. Grant and Revoke privileges to and from user.

10. Demonstrate concurrency control.

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2.7 Lab IV – Practical on C++
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

Practical on Object Oriented Programming using C++

1. Write C++ program to demonstrate the use of class and object

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 inheritance.

6. Write a C++ program to demonstrate multilevel and hierarchical inheritance

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.

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3.1 CRM and Digital Marketing

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

Objective: To aware the students with the concepts of customer relationship management and digital marketing

Unit 1: Customer Relationship Management- Overview   **[10]**
   a. Need of CRM, Importance of CRM, Characteristics of CRM,
   b. Pareto's Law, Types of CRM,
   c. CRM implementation issues- Challenges & Barriers
   d. CRM and Marketing department
   e. Variations of CRM

Unit 2: Customer Loyalty and Retention   **[10]**
   a. Customer loyalty & customer retention definition & meaning
   b. Factors influencing satisfaction and loyalty
   c. Relationship between customer loyalty and company profitability
   d. Loyalty programs
   e. Loyalty segments

Unit 3: Service and complaint management   **[10]**
   a. Principles of complaint handling
   b. Introduction to service, challenges to service as business
   c. Service level management in CRM context
   d. Concept of e-CRM, & sales force automation
   e. CRM in retail sector.

Unit 4: Digital Marketing   **[10]**
   a. Concept of E- Marketing scope and advantages
   b. Online marketing mix – Segmentation, Targeting and positioning
   c. Behavioural targeting and contextual targeting
   d. Web 2.0 and marketing
   e. Dynamics of online consumer visit

Unit 5: Digital marketing drivers   **[10]**
   a. Social media: Mckinsey model, Media analytics, Tools

b. Online Branding: Cyber branding, Brand experience, Brands and emotions
c. Traffic building: Search marketing methods, Keyword advertising, websites and marketing
d. E-commerce: Online market prices, online distribution and procurement
e. Revenue benefits: Role of internet in impacting consumer price sensitivity, Price effects in online domain.
f. Web business models: Customer value analysis and internet, Value of customer contact.

Unit 5: Integrating Online Communication into IMC Process - Online Advertising   [10]
a. Email Marketing and Viral Marketing
b. Affiliate Marketing - Participatory
c. Communication Networks - Social Media Communities, Face book-Twitter etc
d. Consumer Engagement
e. Sentiment mining
f. Uses of games as marketing tools
.

REFERENCE BOOKS:

1. Mukesh Chaturvedi and Abhinav Chaturvedi, "Customer Relationship Management, An Indian Perspective", Excel Books, 2008
2. Ekta Rastogi, "Customer Relationship Management, Text and Cases, Excel Books", 2011
3. Seema Girdhar, "Understanding CRM", Excel Books, 2013
4. C Bhattacharjee, "Services Marketing", Excel Books, 2010
5. Alok Kumar Rai, "Customer Relationship Management", 2012
6. Strauss Judy, "E-Marketing", Prentice Hall, India
7. Kotler, P., Armstrong, G., Brown, L., Chandler, S. A. (1998), "Marketing", (4th edn), Prentice Hall, Sydney.
8. Vandana Ahuja, "Digital Marketing", Oxford university press
9. Damian Ryan, Calvin Jone. Kogan Page, "Understanding Digital Marketing: Marketing Strategies for Engaging the Digital Generation"
10. William M. Pride, O. C. Ferrell, "Marketing 2012" Cengage Learning.

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3.2 Cyber Security and IT Act

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

Objective:

• To introduce the student with information security, security threats and control.

• To study and understand the basic concepts of cryptography, network security and cyber laws.

UNIT 1: Introduction to Information Security   [10]

    a. History of Information Systems and its Importance, basics of IS
    b. Nature of Information Systems
    c. Basic Principles of Information Security

UNIT 2: Security Threats and Controls   [10]

    a. Information System Threats and attacks
    b. Security Threats to E Commerce
    c. Business Transactions on Web
    d. E-Governance
    e. Concepts in Electronics payment systems, Internet Banking, E-Cash, Credit/Debit Cards.
    f. Physical Security- Needs, Disaster and Controls
    g. Access Control- Biometrics, Benefits of Biometrics Systems and Criteria for selection of Biometrics, Finger Prints.

UNIT 3: Cryptography   [10]

    a. Model of Cryptographic Systems
    b. Issues in Documents Security
    c. Digital Signature, Requirement of Digital Signature System

UNIT 4: Network Security   [10]

    a. Network Security- Basic Concepts, Dimensions, Perimeter for Network Protection
    b. Network Attacks
    c. Need of Intrusion Monitoring and Detection, Intrusion Detection System
    d. Virtual Private Networks- Need, Use of Tunneling with VPN, Authentication Mechanisms, Types of VPNs and their Usage, Security Concerns in VPN

UNIT 5: Cyber Crime [10]

    a. Cyber Crime Introduction
    b. Email Tracing and Tracking, Email Spoofing
    c. Mobile Number Hacking
    d. Data Recovery
    e. Cyber Fraud Detection, Hack Website
    f. Web Server/ISP
    g. Web & DOS Attacks
    h. Security Policy

UNIT 6: Cyber Law & IT Act 2000 [10]

    a. Fundamentals of Cyber Law,
    b. Introduction to Indian Cyber Law: Information Technology Act 2000, Main features of the IT Act2000, Information Technology Amendment Act 2008 and its major strengths.

REFERENCE BOOKS:

1. Godbole," Information Systems Security", Willey

2. Merkov, Breithaupt," Information Security", Pearson Education

3. Yadav, "Foundations of Information Technology", New Age, Delhi

4. Schou, Shoemaker, "Information Assurance for the Enterprise", Tata McGraw Hill

5. Sood,"Cyber Laws Simplified", McGraw Hill

6. Furnell, "Computer Insecurity", Springer 7. IT Act 2000

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3.3 Graphics and Animation
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: **60 hours**]

Objective: To prepare students to acquire the required skills to create animations and graphics, this can be helpful in building commercial websites.

UNIT 1: Introduction to Animation [10]
    a. What is Animation, History of Animation
    b. Principle of Animation
    c. Types of Animation & Animation Tech.
    d. Classical Animation, Stop Animation, Clay animation, Frame Animation
    e. Cell Animation.
    f. Components used for designing animation such as light box, Live Shooting, Love
    g. Photography, Croma Shoot
    h. Techniques of story boarding for digital film making
    i. Understanding vector animation
    j. Use of Animation in Industries
    k. Concept of 2D, 3D animation

Getting Started with Flash CS3
    a. Welcome Screen
    b. Creating new movies
    c. Touring the interface
    d. Panels
    e. Toolbox
    f. Saving flash files.

UNIT 2: Working with Graphics [10]
    a. Grouping of Elements –
    b. Combine Objects – Delete Envelope, Union, Intersect, Punch, Crop.
    c. Working with Text
    d. Creating a static text field, Creating a Dynamic text field, Creating a Input text field,
    e. Editing Text Field-Scrolling the Text, Breaking Apart The Text
    f. Working with Library - Importing Library , Library properties, Common Library, Creating own Library
    g. Working with Colors - Color mixer, creating gradients, opacity of gradients, creating custom gradients
    h. Working with graphics
    i. Importing & working with Bitmaps, Jpeg, gif, etc, Break apart

Creating Flash Elements:
    a. Working With Object

b. Drawings, creating, moving, drag, cutting, copying, and selecting objects.
c. Arrange and align objects
d. Transforming Objects - Transforming an object freely, Distorting an object, Modifying an object with envelope modifier, Scaling an object, Rotating & skew an object, Flipping an object, restoring a transformed object.
e. Working With Symbol & Instances - About the symbol, creating and deleting symbols, duplicate and modify an instance of a symbol
f. Types of Symbol- Movie clip, Button, Graphic
g. Creating Dynamic Buttons, editing buttons, converting an existing into a movie clip, placing movie clip symbol inside the button symbol.
h. Marking Positions - What is Onion Skinning & its Types & uses.

UNIT 3: Working with Flash CS3   [10]
a) Working with Layers
a. Introduction to layers, Hide & Show Layers ,Lock a Layer, Add and name layer, change the orders of layers, organize layers in folder.
b. Type of Layers-Guide layer, Mask layer, layer properties
c. Masking Animation, Masking Frame by Frame
b) Tweened Animation
a. Motion Tween Animation
b. Creating motion tween-setting the property of tweening object, additional tween on existing layer
c. Editing the motion path of an tween – changing the position, location, deleting the motion path, applying motion preset,
d. Shape tween Animation: Creating shape tween-setting the property of tweening object, additional tween on existing layer
e. Applying Path, orient to path
f. Frame by Frame Animation:Creating frame by frame animation
c) Flash CS3: Effects
a. Timelines Effect
b. Using filters - Alpha, Blur, Glow, Bevel, Drop Shadow etc.
c. Adding effects to Buttons

UNIT 4: Flash CS3: Action Script   [10]
a. Introduction to Flash Action Script
b. Add a script to button by using script assist mode
c. Add frame scripts to timeline by using script assist mode
d. Add a frame script to the title movie clip
e. Action Script: Adding Interactivity
f. Setting up your workspace
g. Name button instances, Add a scene, Move between buttons with the stop() action .
h. Link the buttons to the scene
i. User behaviour to play an MP3 file

UNIT 5: Create a form with conditional logic   [10]
a. Add an input text field to collect from data
b. Add submit button to the form
c. Add an error() message
d. Add a confirmation message
e. Add a stop() action
f. Add conditional logic for the submit button
g. Write a function for Try Again button Working with Sound & Video
h. Working with sound: Importing Sound file, adding sound to the timeline, adding sound to
i. button, editing sounds,
j. Working with Video: Importing & Editing a video file

UNIT 6: Flash CS3: Flash Web Templates [10]
  a. Creating Interactive Webpage
  b. Optimizing Movies & Exporting movies for the web exporting files
  Publish flash documents
  a. Using different publishing formats
  b. Using publishing profiles
  c. Adding flash player detection
  d. Publishing for deployment

REFERENCE BOOKS:
  1. "Flash CS3 in Simple Steps" – Kogent Learning Solutions – Dreamtech Press
  2. Dinesh Maidasani. "Flash 8-Straight to Point", Firewall Media Publisher
  3. Jay Armstrong, Jen deHaan, "Macromedia Flash 8: A Tutorial Guide", BPB Publisher
  4. "Flash MX BIBLE", By BPB Publisher

WEBSITES
1. http://www.bestdesignservices.com/flash-banners.html
2. http://www.flash-design-marketing.com/tutorials/free-fla-files/flash-graphics.shtml
3. http://www.flashfridge.com
4. http://www.flashvault.net
5. http://logolitic.com/40-animation-flash-tutorials/
6. http://www.flasheff.com
7. http://www.flashwonderland.com/adobe-flash-interesting-flash-animation-tutorials.html

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3.4 Web Scripting with PHP and MySQL
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100
[Required Lectures: **60 hours**]

Objective: To impart the knowledge of Website development using PHP among student.

UNIT 1: Scripting Language Basics [10]
    a. Meaning of Scripting Language
    b. Types of Scripting – client side and server side scripting
    c. Scripting Language vs. programming Language
    d. Differences between client-side and server-side scripting
    e. Advantages and Disadvantages of Scripting Languages

UNIT 2: Introduction to Web Development [10]
    a. Web architecture
    b. Web Server (IIS Server, Apache server)
    c. Web Browser
    d. Open Source, Proprietary Technologies

UNIT 3: Programming with PHP [10]
    a. PHP Structure and Syntax
    b. Embedding PHP in HTML
    c. Constants and Variables
    d. Passing Variable between Pages
    e. Using if/else, Switch
    f. Loops
    g. String
    h. Operators
    i. Includes
    j. Functions
    k. Arrays
    l. Using PHP $_GET, PHP $_POST

UNIT 4: Working with Forms [10]
    a. Processing Forms
    b. Form Files & Directories
    c. PHP SESSION
    d. PHP Cookies

UNIT 5: Introduction to MYSQL [10]
    a. Introduction to MySQL
    b. Data type in MySQL
    c. Interacting with Databases using PhpMyAdmin

d. Modifying Database Records Using PHP
   e. MySQL Connect, Create, Insert, select, Where, Orderby, Update, Delete using PHP
   f. Import Export MySQL Database.

UNIT 6: OOPs Concept and Advanced PHP   **[10]**
   a. Introduction, Advantages
   b. Class & object, data member, data fields.
   c. Inheritance, constructor & destructor, abstract classes, final classes.
   d. Exception handling
   e. Emailing in PHP
   f. File uploading
   g. Loading PHP application on web server By FTP.

REFERENCE BOOKS:

1. Dave Mercer, Allan Kent, Steven Nowicki, David Mercer, Dan Squier, Wankyu Choi, "Beginning PHP5", Wiley Publishing(Wrox) ISBN: 0-7645-5783-1
2. Michael K. Glass, Yann Le Scouarnec, Elizabeth Naramore, Gary Mailer, Jeremy Stolz, Jason Gerner, "Beginning PHP, Apache, MySQL Web Development", Wiley Publishing(WROX),March 2004, ISBN: 978-0-7645-5744-6
3. Luke Welling, Laura Thompson, Sams, "PHP, MySql Web Development", second edition
4. Ivan Bayross, Sharanam Shah, THE X Team , "PHP for Beginners", SPD
5. www.w3schools.com
6. www.basicphpprogramming.com

3.5 C#.NET Programming

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

Objective: To impart the knowledge of object oriented programming using C# among student.

UNIT 1: The .Net framework [10]
    a. Introduction to .NET framework
    b. The Origin of .Net Technology
    c. Common Language Runtime (CLR)
    d. Microsoft Intermediate Language (MSIL)
    e. Just-In –Time Compilation (JIT)
    f. Introduction to C #
    g. Advantages & Disadvantages of C#

UNIT 2: Programming using C# [10]
    a. Programming Structure of C#
    b. Basic Constructs – Variables, Data types, Operators, arrays, functions
    c. Control Statements (if statement, if...else statement, nesting of if...else statement, the else if ladder, switch statement)
    d. Looping Construct (while statement, do statement, for statement)

UNIT 3: Object Oriented Programming in C# [10]
    a. Class and Object
    b. Constructors and Destructors
    c. Inheritance
    d. Interfaces
    e. Access modifiers: Public, Private, Protected
    a. Polymorphism
    b. Overloading and Overriding
    a. Sealed Classes
    b. Types of errors
    c. Try and catch block ,Multiple Catch Blocks

UNIT 4: Windows Applications in C#.NET [10]
    a. Introduction to GUI Programming
    b. GUI Components/ Controls (Windows Forms, Text Boxes, Buttons, Labels, Check Boxes, Radio Buttons, List Boxes, Combo Boxes, Picture Boxes, Timer, Scrollbars, Menus, Built-in Dialogs, Image List, Tree Views, List Views)

UNIT 5: ADO.NET [10]
    a. Introduction to ADO.NET
    b. Components of ADO.NET

      c.   ADO.NET Data Providers
      d.   Working with Disconnected Data

UNIT 6: Crystal Report   [10]
      a.   Introduction to crystal report
      b.   Crystal report viewer
      c.   Simple crystal report
      d.   Parameterized crystal report

REFERENCE BOOKS:
    1. Solis, "Illustrated C# 2008", Publication APRESS, ISBN 978-81-8128-958-2
    2. Christian Nagel, Bill Evjen, Jay Glynn, Karli Watson, Morgan Skinner, WROX , "Professional C# 4.0 and .NET 4"
    3. Dan Clark , "Beginning C# Object-Oriented Programming" Apress
    4. Peter D. Blackburn, "ADO.NET Examples and Best Practices for C# Programmers", Apress
    5. Carsten Thomsen, "Database Programming with C#", Apress

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3.6 Lab V – Practical on Graphics & Animation and PHP
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

Objective: To practically train students in Graphics using Flash and programming in PHP

Practical on Graphics and Animation
1. Creating scene with an cartoon drawing
2. Demonstrating use of frame by frame Animation.
3. Demonstrating use of symbols and Filters.(Use Motion Tween Animation)
4. Drawing a house with a pencil.(Use Shape Tween Animation)
5. Demonstrating use of Guide Layer & Mask Layer.
6. Creating an e-Card of Birthday Wishes.
7. Create a banner for Website.
8. Demonstrating Motion of Animal (Any Animal Walking, Running etc.)
9. Creating Animation facial expression with the help of smiley.
10. Create multiple scenes and animate it.
11. Create a web advertisement.
12. Create a Flash presentation on any current issues. (Global warming, air pollution, no smoking, save trees etc.)
13. Create an attractive web advertisement and publish it on webpage.

Practical on PHP and MySQL

1. Write a PHP script to demonstrate use of $_GET and $_POST.
2. Write a PHP Script to display Resume on web browser.
3. Write a PHP script to display table of a number.
4. Write a PHP script to calculate factorial of a number.
5. Write a PHP script to create a Simple Login Window with validation.
6. Write a PHP script to Demonstrate inbuilt functions.
7. Write a PHP script to demonstrate use of user defined Function.
8. Creation of MySql database demonstration of various SQL queries(create table,insert, update, delete)
9. Accessing MySql data from PHP script: Displaying tables and fields along with their types and constraints, table data in tabular format.
10. Write a PHP script to Demonstrate OOPS Concept In PHP.

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3.7 Lab VI – Practical on C#.NET Programming
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

Objective: To practically train students in programming in C#.NET

Practical on C#.NET Programming

1. Write a program to print "Teach One, Each One, Tree One" given number of times
2. Write a program to show use of different operators
3. Write a program to show use of Looping Constructs
4. Write a program to show use of Constructor
5. Write a program to demonstrate Inheritance
6. Write a program to show use of Exception Handling
7. Create a simple C# application using Label, TextBox, Button control
8. Create a C# application using ListBox, ComboBox control
9. Demonstrate the use of Timer control in C#
10. Create a C# application using PictureBox, ScrollBar control
11. Demonstrate Simple Database Connectivity using wizard.

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4.1 Human Resource Management

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

Objectives:

- To understand importance of Human Resource Management.
- To provide essential knowledge of important function of HRM.
- To get acquainted about latest trends & practices of HRM

UNIT 1: Introduction to Human Resource Management (HRM)   [10]
   a. Definitions, Nature, Scope, Objectives & Functions of HRM
   b. HRM Vs. Personnel Management, HRM Vs. HRD
   c. Role of HR Management
   d. Qualities of HR Manager
   e. Future Challenges before HRM

UNIT 2:   Human Resource Planning   [10]
   a. Concept, Need of HRP
   b. Factors Affecting HRP
   c. Process of Human Resource Planning
   d. Methods of HR Forecasting
   e. Requirements of Effective HRP
   f. Barriers to HRP

UNIT 3: Recruitment, Selection, Placement, Induction   [10]
   a. Concept, Purpose &Factors Affecting Recruitment
   b. Sources of Recruitment
   c. Concept of Selection, selection process
   d. barriers of selection
   e. Concept & Problems of placement
   f. Concept and Objective of induction

UNIT 4: Training & Development   [10]
   a. Meaning, Need and Objective of Training,
   b. Difference between Training and development
   c. Methods of Training : On the Job & Off the Job
   d. Evaluation of Training

UNIT 5: Performance appraisal [10]
   a. Definitions, Objective & Process of Performance Appraisal
   b. Methods of Performance Appraisal – Traditional and Modern
   c. Problems with Performance Appraisal

UNIT 6: Trends in HRM: [10]
   a. Human Resource Audit
   b. Human Resource Information System
   c. Human Resource Accounting
   d. HR Balance score card
   e. Emotional Intelligence
   f. Flexi-time & Flexi-work
   g. e-HRM : e-recruitment, e-selection, e-training & e-learning.

REFERENCE BOOKS:

1. Mathis, Jackson, Tripathi, "Human Resource Management: A south Asian Perspective", Cengage Learning
2. GarvyDessler, "Human Resource Management" Pearson
3. Dr K. Ashwathappa, "Human Resource Management" Tata McGraw Hill
4. Lathi, Narkhede, "Human Resource Management", Prashant Publications
5. Seema Sanghi, "Human Resource Management", Macmillion
6. S.S.Khanka, "Human Resource Management",S Chand & Sons
7. Snell, Bohalender, Vohra, "Human Resource Management: A south Asian Perspective", Cengage Learning
8. P. SubbaRao, "Essentials of Human Resource Management", Himalaya Publishing House
9. Pravin Durai, "Comprehensive Human Resource Management", Pearson
10. Wayne Mondy, "Human Resource Management", Pearson
11. Pande/ Basak, "Human Resource Management : Text and Cases", 1st Edition, Pearson
12. Dr. C.B. Gupta, "Human Resource Management", Sultand Chand & Sons
13. Dr. V.S.P Rao, "Human Resource Management", Text & Cases, Excel Books

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4.2 E-Commerce and M-Commerce

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

Objective: To prepare students to acquire the knowledge of recent trends in e-commerce. Also students are prepared for website management which can helpful in industry.

UNIT 1: An overview of E- Commerce   **[10]**
   a. Fundamentals of ecommerce, Advantages of ecommerce, Comparison between Traditional and e-Commerce
   b. Types of E Commerce Solutions, Obstacles in adopting ecommerce Applications
   c. Future of E Commerce
   d. Electronic data Interchange (EDI).

UNIT 2: Applications of Electronic Commerce   **[10]**
   a. Application of E Commerce in Direct Marketing and Selling
   b. Value Chain Integration
   c. Supply Chain Management
   d. Financial and Information Services

UNIT 3: Security in E-Commerce   **[10]**
   a. Security Threats, cryptography, methods of encryption, Certificate Authority, Digital Certificate
   b. Secure electronic transition (SET), Secure Socket Layer (SSL)
   c. Firewall
   d. Virtual private network.

UNIT 4: Electronic Payment Systems   [**10**]
   a. Internet Payment Process, electronic payments systems, ecash(Customer to Merchant Payments, Peer to Peer Payments, Security). E-wallets, Debit card, Credit card, Smart card
   b. Electronic Banking, Electronic Fund Transfers.
   c. Website Management

UNIT 5: E-commerce Infrastructure   **[10]**
   a. Need for an Intelligent Website, technology Infrastructure Required
   b. Basic Web Languages for Web Designing
   c. Corporate Strategic Infrastructure Required
   d. Miscellaneous Website Design Tips

UNIT 6: Basics of M-Commerce [**10**]

      a. Overview of M-Commerce - Wireless Application Protocol (WAP), Generations of Mobile Wireless Technology
      b. Components of Mobile Commerce
      c. Networking Standards for Mobiles

REFERENCES BOOKS:

1. C S V Murthy, "E Commerce-Concepts-Models-Strategies" Himalaya Publishing House, 2002
2. Kenneth Laudon Carol GuercioTraver, Azimuth Interactive, "E-Commerce", 6th Edition, Prentice Hall
3. Henry Chan (The Hong KongPolytechnic Uni), Raymond Lee(The Hong Kong Polytechnic Univ.), TharamDillon (The Hong Kong Polytechnic Univ.), Elizabeth Chang (The Univ. ofNewcastle, Australia), "E-Commerce: Fundamentals and Applications", ISBN: 978-0-47149303-7
4. P. Candance Deans, "E-commerce and M-commerce Technologies", IRM Press, ISBN : 9781591405665

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4.3 Internet Computing with ASP.NET

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

[Required Lectures: **60 hours**]

Objective - To prepare students to acquire knowledge of creating interactive websites using ASP.Net. The students will be ready to develop the dynamic commercial websites with the industry required latest technology.

UNIT 1: Introduction [10]
   a) **Introduction to ASP.NET**
- a. What is ASP.NET?
- b. ASP vs. ASP.NET
- c. Upgrading HTML Pages to ASP.NET
- d. Upgrading ASP Pages to ASP.NET

   b) **Essentials of ASP.NET**
- a. Types of web sites in Visual Web Developer
- b. ASP.Net Web Page Model (Single Page Model, Two Page Model)
- c. Server Side Script Execution

UNIT 2: Objects and Controls [10]
- a. Working with Web form controls
- b. HTML Server Controls
- c. Validation Controls
- d. AdRotator Controls
- e. Detect Browser Capabilities
- f. Page Level Errors and Application Level Errors
- g. Control Events, Connect Multiple Event to Single Event Handler

Intrinsic Objects
- a. Request Object
- b. Response Object
- c. Session Object
- d. Application Object
- e. Server Object

UNIT 3: State Management [10]
   a. Page Level - ViewState
   b. User Level - Session
   c. Application Level - Application
   d. Website Level - Cookies
   e. Cleaning the Session State
   f. Global Application Class (global.asax)
   g. Web Configuration File (web.config)

UNIT 4: Data Access with ADO.NET [10]
   a. Overview of ADO.NET Objects,
   b. Create and retrieve Database Connections
   c. SqlDataSource Controls
   d. ASP.NET Data-Bound Controls
   e. GridView, Repeater, DataList, Details View, Form View

UNIT 5: Master Pages & skins [10]
   a. Master Page overview
   b. How to Create Master Page
   c. Configure Content Page
   d. Themes and Skins in ASP.NET

UNIT 6: Security and Configuration [10]
   a. Using the CreateUserWizard control
   b. Using the LoginStatus control
   c. Using the Login control
   d. Using the LoginView control
   e. Web.Config vs. Machine.Config

REFERENCE BOOKS:

1.   Crouch Matt J, "ASP.NET and VB.NET Web Programming", Addison Wesley 2002.
2.   J.Liberty, D.Hurwitz, "Programming ASP.NET", 3rd Edition, O'REILLY, 2006
3.   SAMS Publication Series
4.   www.asp.net
5.   www.w3schools.com

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4.4 Java Programming

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

Objective - To prepare students to acquire knowledge of programming language using Java. The students will be able to create applications in Java

UNIT 1: Introduction [10]
   a) Introduction to JAVA
   a. Features of Java
   b. Java Virtual Machine
   c. Comparison between C++ and Java
      b)   Programming Concepts of Basic Java
         a.   Identifiers and Keywords
         b.   Data Types in Java
         c.   Input Output in Java
         d.   Control structures, decision making statements
         e.   Arrays
         f.   String and its methods

UNIT 2: Objects and Classes [10]
   a) Object Oriented Features
   a. Structure of class
   b. Constructors
   c. Inheritance with its types
   d. Access modifiers
   e. Polymorphism (Function Overloading and Overriding)
   b) Language Features
      a. Abstract Class, static, final
      b. Interfaces
      c. Packages, built in & user defined packages

UNIT 3: Exception Handling [6]
   a. Types of Exceptions
   b. Handling Exceptions using try, catch, throws, finally

UNIT 4: Applets [6]

a. Applet Life cycle
b. Applet Tag and its attributes
c. Creating Applets

UNIT 5 : Event Handling [16]
a. Event Delegation Model
b. Events (action event, Event Sources & Listeners)

AWT and Swing component
a. Containers, Frames and Panel
b. FlowLayout, BorderLayout, GridLayout
c. MVC Model, Swing Components (JTextbox, JButton, JRadioButton, JCheckbox)

UNIT 6: JDBC [12]
a. JDBC Model
b. JDBC divers
c. Establishing connection with database

REFERENCES BOOKS:

1. Cay S Horstmann, "Core JAVA" 2 Vol-1 & Vol-2, Gary Cornell
2. "Java by Example 1.2" -The Sun Micro Systems Press, New Delhi
3. E. Balguruswamy, "Programming with Java A Primer"
4. Deitel and Deitel, "Java How toProgram", Prentice Hall
5. Herbarte Scildt, "Complete Reference Java -2", 5th Edition, McGraw Hill
6. "Java-2 Black Box",Tata McGraw Hill

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4.5 Project Work
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

1. Students Group Project is not allowed.
2. Use of CASE tool and testing tools is desirable.
3. Students have to submit Project Report in hard copies as well as in pdf format to the college & college should submit it to university.
4. Marks are Out of 100 (Convert to out of 40 for internal and to out of 60 for external)
5. Project Marking Scheme for MMS (Computer Management) as follow

Criterion	Performance	Scale Of Marking	Total marks	Marks Given
Quantum of Work	Not enough for Project	0	06	
	Just right	2		
	Good amount of work done	4		
	Very-good amount of work	6		
Understanding of project/task objectives	No understanding of project/task objectives	0	06	
	Fair amount of understanding	2		
	Clear understanding of various aspects	4		
	Detailed understanding of the all aspects of the project	6		
Approach adopted	Technically inept, with no motivation to improve	0	06	
	Reasonable level of skills demonstrated	2		
	Technical competence demonstrated	4		
	Outstanding demonstration of technical skills, creative approach	6		
Effort	No evidence of interest in the work	0	06	
	Reasonably good effort	2		
	Conscientious effort	4		
	Excellent amount of effort	6		
Initiative and	No Evidence	0	06	

Criterion	Performance	Scale Of Marking	Total marks	Marks Given
self-motivation	Evidence of some contribution of ideas	2		
	Significant contribution towards developing/refining/doing the task allocated	4		
	Sufficient evidence of handling the tasks independently and efficiently	6		
Achievement of objectives	Not much progress	0	06	
	Adequate but not enough	2		
	Good progress and made best use of the opportunities present	4		
	Outstanding performance	6		
Report Content	Not Submitted	0	06	
	Mostly sound but a lot of scope of improvement	2		
	A very well structured report	4		
	Comprehensive and detailed report	6		
Presentation	Not presented	0	10	
	Okay, but not an overall understanding of what constitutes a presentation	3		
	Well presented	6		
	Very well presented, with clear understanding of goals	10		
Q & A	Not participated	0	08	
	Could handle but confused	2		
	Could handle competently	5		
	Could handle professionally	08		

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MMS (Computer Management) Semester-IV

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4.6 Lab VII – Practical on ASP.NET

60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

Practical on ASP.NET

1. Demonstration of creating a simple web form
2. Demonstrate how to handle Application Level Errors.
3. Demonstrate how to check Browser Capabilities.
4. Demonstrate the use of Server.Transfer and Query String
5. Demonstrate how to use SiteMapPath control.
6. Demonstrate how to use TreeView control.
7. Demonstrate use of Master Pages.
8. Demonstrate use of global.asax
9. Demonstration of GridView Data Control.
10. Demonstration of ASP.NET objects (HTTPApplicationState, HTTPSessionState)

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4.7 Lab VIII – Practical on Java Programming
60 + 40 Pattern: External Marks 60 + Internal Marks 40 = Maximum Total Marks: 100

Practical on 4.4 JAVA Programming

1. Create and execute java program to demonstrate use of array.
2. Create and execute java program to demonstrate string methods.
3. Create a program to demonstrate user define package.
4. Create and execute java program to demonstrate exception handling in java
5. Create and execute java program to demonstrate use of inheritance.
6. Create and execute java program to demonstrate implementation of interface.
7. Create and execute java program to display different shapes on an applet.
8. Create java program to demonstrate button event to display HELLO WORLD on Frame
9. Write a program to demonstrate swing components.
10. Create java program to demonstrate Database connectivity