

**NORTH MAHARASHTRA UNIVERSITY, JALGAON**



NAAC Re-accredited  
'B' (CGPA 2.88)

**Faculty of Commerce and Management**

**Syllabus**

**BACHELOR IN COMPUTER APPLICATION  
(TYBCA)**

**With effect from June- 2016-17**

**STRUCTURE**  
**BACHELOR OF COMPUTER APPLICATION [TYBCA]**  
**W.E.F. 2016-17**

<b>First Year BCA– ( Sem I &amp; II ) w.e.f. 2014-15</b>			
<b>Paper</b>	<b>Semester-I</b>	<b>Paper</b>	<b>Semester-II</b>
BCA 11	Foundation Course for Managers	BCA 21	Financial Accounting & Costing
BCA 12	Professional Communication I	BCA 22	Professional Communication II
BCA 13	Fundamentals of Computer & Internet	BCA 23	Database Management
BCA 14	Programming in C++ Part I	BCA 24	Programming in C++ Part II
BCA 15	Practical on Internet & HTML	BCA 25	Practical on MS-Access & Oracle
BCA 16	Practical on Professional Communication I	BCA 26	Practical on Professional Communication II
BCA 17	Practical on C++ Part I	BCA 27	Practical on C++ Part II

<b>Second Year BCA – ( Sem III &amp; IV ) w.e.f. 2015-16</b>			
<b>Paper</b>	<b>Semester-III</b>	<b>Paper</b>	<b>Semester-IV</b>
BCA31	Mathematics and Statistics for Managers	BCA41	C# .Net
BCA32	Computer Animation Using Flash	BCA42	Stock And Commodity Market
BCA33	Career Management & Counseling	BCA43	Data Structure
BCA34	Java Programming	BCA44	Cyber Crime and Security
BCA35	Practical on Computer Animation	BCA45	Practical on Transaction related to Stock And Commodity
BCA36	Practical on Java	BCA46	Practical on Data Structure using C++
BCA37	Practical on Tally ERP	BCA47	Practical on C# .Net

<b>Third Year BCA – ( Sem V &amp; VI ) w.e.f. 2016-17</b>			
<b>Paper</b>	<b>Semester-V</b>	<b>Paper</b>	<b>Semester-VI</b>
BCA51	Entrepreneurship Development	BCA61	Introduction to ERP and SAP
BCA52	Soft Skills Development	BCA62	System Analysis And Design
BCA53	Linux Operating System	BCA63	Server Side Scripting using PHP
BCA54	Internet Programming with ASP.NET	BCA64	Introduction to Information System Audit
BCA55	Practical on Soft Skills Development	BCA65	Practical on PHP
BCA56	Practical on ASP.net & Linux O.S.	BCA66	Practical on CASE Tool with MS VISIO
BCA57	Field Work	BCA67	Project

**North Maharashtra University, Jalgaon**  
**(NACC Accredited 'A' Grade University)**  
**Faculty of Commerce and Management**  
**T.Y. B.C.A. Sem – V**

**Subject: BCA-51 Entrepreneurship Development**  
**(w.e.f. 2016-2017)**

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

**Total Lectures: 48**

---

Objectives:

- 1.To understand the concept of entrepreneurship.
- 2.To know the qualities of entrepreneur.
3. To describe the types of entrepreneur.
- 4.To identify the new business opportunities.
- 5.To know the Entrepreneurship Development Programme.
- 6.To acquaint with Role of Entrepreneur and Inducement measures.
- 7.To under entrepreneurship development theories and factors affecting.
- 8.To recognize women entrepreneurship.

**1. Introduction**

**Lectures: 10**

- 1.1 Meaning, Definition and Concept
- 1.2 Nature and Importance of Entrepreneurship
- 1.3 Features of Entrepreneurship
- 1.4 1.5 Functions of an Entrepreneur
- 1.6 Qualities of Entrepreneurship
- 1.7 Distinction between an Entrepreneur and a Manager.
- 1.8 Types of Entrepreneur

**2. Role of Entrepreneur**

**Lectures 08**

- 2.1 Entrepreneurship Development in India
  - a) Before Independence Period
  - b) Post Independence Period
- 2.2 Role of Entrepreneur in Economic Growth and Development
- 2.3 Role in Developed and Underdeveloped Economies
- 2.4 Impact of Globalization, Liberalization & Privatization on Entrepreneurship

**3. Entrepreneurship Development Programme**

**Lectures: 10**

- 2.1 Concept of EDP
- 2.2 Phases of EDP
- 2.3 Importance of EDP
- 2.4 Objectives of EDP
- 2.5 Success of EDP
- 2.6 Shortcomings of EDP

**4. Entrepreneurial Development Theories**

**Lectures: 8**

- 4.1 Psychological Model
- 4.2 Social Model

4.3 Economic Model

4.4 Integrated Model

## **5. Entrepreneurship Environment & Problem**

**Lectures: 6**

5.1 Responsibilities of Entrepreneurs

5.2 Challenges before Indian Entrepreneur

5.3 Problems of Entrepreneurship

## **6. Project Report and Government Institutions**

**Lectures: 6**

6.1 Project Report – Meaning, Importance

6.2 Format of Project Report  
6.3 DIC, MIDC, MSFC, MSSIDC, MITCON, MCED, SIDBI, SISI, MUDRA

## **Reference Books**

1. Entrepreneurship Development - Lall & Sahai : Excell Books
2. Entrepreneurship & Small Scale Business - Dr. M.V. Despande
3. Dynamics For Entrepreneurs - Vasant Desai
4. Entrepreneurship Development VOL-I,II,III - Vasant Desai
5. Fundamentals of Entrepreneurship - Sangram K.Mohanty, PHI
6. Business Environment & Entrepreneurship - C.G.Vaidya & P.M.Bhagwat, Narendra Prakashan.
7. Business Environment & Entrepreneurship - Pratibha Joshi & A.G.Gosavi, Suvichar Prakashan.
8. Innovation and Entrepreneurship - Peter F Drucker
9. Entrepreneurship - Donald F Kuratke Thomson Press
10. Entrepreneurship Development - S.Anil Kumar, S.C.Poornima, New Age International Publishers
11. Entrepreneurship Development In India - Dr.C.B.Gupta & Dr.N.P. Shrinivasan, Sultan Chan & Co.
12. Entrepreneurship Development - Kuratko & Harloetts, Thompsons Press
13. Entrepreneurship Development - S.S.Khanka ,S.Chand & Co.
14. Entrepreneurial Development - Manish Nora, Anmol Publications
15. Entrepreneurship Management - Kailnd Arora, Vikas Publishing House



# North Maharashtra University, Jalgaon

(NACC Re-Accredited 'A' Grade University)

## FACULTY OF COMMERCE & MANAGEMENT

### T.Y.B.C.A. Semester-V

### BCA 52 Soft Skills Development

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

---

**Objective :** To impart the soft skills in students.

#### 1. Basic Human Skills

(Lectures:8)

- a. Introduction To Human Skills
- b. Types Of Human Skills, -Reading, Writing, Learning - Basic Abilities
- c. Classification Of Skills: Technical, Human And Conceptual, Social, Inter-Personal Skills
- d. Business Etiquettes, Negotiation Skills.

#### 2. Power of positive thinking

(Lectures:8)

- a. Nurturing creativity, decision-making and problem solving.
- b. Thinking power- seven steps for dealing with doubt
- c. Traits of positive thinkers and high achievers
- d. Goals and techniques for positive thinking
- e. Enhancement of concentration through positive thinking
- f. Practicing a positive life style.

#### 3. Interview Technique

(Lectures:8)

- a. Appearing For The Purposes Of Interview To Be Given
- b. Pre, During & Post –Interview – Behavior Mind-Set
- c. Appearance & Dress –Essential To Make The Interview Successful

• (Conducting Mock Interview By The Teacher, Or Arranging Campus Interview With The Support From Commercial Organization Or NGO's , For Different Purposes Like – Selection , Promotion, Performance Appraisal, Exit Opinions, Counseling Etc, The Student Shall Write The Report Based On The Interview Given In The Journal.)

#### 4. Group Discussion

(Lectures: 6)

- a. Definition And Process
- b. Scientific & Participative Tool Of Decision Making
- c. Collective Wisdom ,Opinion Pooling ,Culmination In To Consensus
- d. Criteria For Judging The Performance Of Participant.
- e. Helpful Expressions – Evolution.

- Two Groups Should Be Of 10 Students. In One Practical Two G.D Of 15 Minutes Each Is Arranged.
- Every Student Is Expected To Take Part In G.D. As Per The Instructions Of A Teacher.
- Every Student Should Have To Observe All G.D. Conducted In The Classroom.
- Every Student Is Expected To Write A Report Of At Least Two G.D. (Observed By Him) In His Journal.

#### 5. Oral Communication Skills, Presentation Skills and Seminar

(Lectures:10)

- a. Giving Speeches & Oral presentation
- b. Preparing to speak

- c. Developing formal Speeches & Presentation
- d. Extempore Speech.
- e. Importance Of Presentation Skills
- f. Capturing Data, Preparation for Seminar
- g. Voice & Voice Modulation, Body Language
- h. Picture Integration, Graphics
- i. Audience Awareness
- j. Presentation Plan and Visual Aids
- k. Forms Of Layout
- l. Styles of Presentation. i. Oral ii. Model Building iii. Using Electronic Devices iv. Using Print Material.

(A student is expected to present his views on any one topic selected out of the topics given to them, The duration of the presentation of paper should be maximum 15 minutes. The list of his presentation is to be written in journal. The student should make at least One/ Two presentation relating to a specific topic before the class during the year & write the report based on the presentation in the journal, which shall form part of the practical examination.)

### **6. Report Writing**

(Lectures : 8)

- a. Effective written communication, Significance and Contents
- b. Form and Purposes of report
- c. Process of report writing
- d. Expected Audience
- e. Reader Guidelines for Reporting
- f. Presentation of the report
- g. Criteria for judging the effective report Writing.

(The student shall write the report in the Journal based on the issues arising around the world including the economic activities, relating to a specific subject after gathering the facts, figures, information & other relevant material, relating to the issue under study such as Technical Reports, Management Reports, Search Reports, Fact finding Reports etc.)

### **References:**

1. Communication for Business – Taylor & Chandra – Pearson
2. Business Communication – Rai&Rai - Himalaya
3. Business Communication for Managers By Penrose / Rasberry / Myers, Cenage Learning.
4. Business Communication by Raman & Singh, Oxford Publication.
5. Basics of Business Communication – Lesikar&Flatley – Tata McGraw Hills
6. Business Communication – C.S. Raydu – Himalaya Publishing House
7. Business Communication Today – Bovee, Thill, Schatzman – Pearson
8. Essential Communication Skills – Shalini Agrawal- Ane book



# North Maharashtra University, Jalgaon

(NACC Accredited 'A' Grade University)

## FACULTY OF COMMERCE & MANAGEMENT

### B.C.A. Semester V

## BCA-53 Linux Operating System

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

[Total Lectures: 48 ]

---

### Objective:

1. To make students understand the features of Linux operating system
2. To make students learn the components of Linux
3. To learn basic Linux commands, and printing Linux documents.

<b>1. History and Development Of Linux</b>	<b>06</b>
A Brief History Of Linux, Basic features of Linux OS, components of Linux System, Benefits Of Linux, Acquiring And Using Linux, Examining Linux Distributions.	
<b>2. System Access</b>	<b>04</b>
Logging In And Using The Linux System, Linux Commands	
<b>3. User Accounts</b>	<b>02</b>
Creating Additional User Accounts, Creating & Managing Groups, Managing Users.	
<b>4. Introduction to The File System</b>	<b>06</b>
File System Navigation, Managing The File System	
<b>5. Working with Linux Permissions</b>	<b>06</b>
Understanding Permissions, Changing File And Directory Permissions, Changing Default Permissions And Ownership	
<b>6. Creating and Viewing Files</b>	<b>07</b>
Using The Vi Editor, Using Other Editors, Examining File Contents, Redirection.	
<b>7. Archiving Files</b>	<b>06</b>
Archiving Files With Tar, Archiving Files With CPIO, Archiving Files With Other Utilities, Zipping Files	
<b>8. Working In X Windows</b>	<b>08</b>
Introduction To X Windows And GNOME, Managing Files And File Systems, Customizing X Windows, Choosing And Changing Window Managers And Desktops Remote X Window Access,	
<b>9. Printing Files</b>	<b>03</b>
Configuring A Printer, Printing, Managing Print Spools And Queues	

**Reference Book :**

1. Mccallister, Suse Linus-10, Pearson Education, 2006.
2. Ball, Using Linux, PHI, 1998.
3. Das, Unix: Concepts And Applications (4th Ed), TMH, 2006.
4. Foster Johnson, Welch, Anderson, Beginning Shell Scripting, Wiley India (Wrox), 2006.
5. Neil Mathew, Richard Stones, Beginning Linux Programming (3rd Ed), Wiley India (Wrox),  
2006.
6. Peterson, Linux: Complete Reference (5th Ed), Peterson, TMH.





# North Maharashtra University, Jalgaon

(NACC Re-Accredited 'A' Grade University)

FACULTY OF COMMERCE & MANAGEMENT

T.Y.B.C.A. Semester-V

**BCA 54 Internet Programming with ASP.NET**

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

---

**Objective :** To impart the knowledge of web development in students in by using ASP.NET

## 1. Introduction to ASP.NET

[8]

- What is ASP.NET?
- Difference between ASP and ASP.NET
- Types of web sites in Visual Web Developer
- ASP.NET Web Pages Model(Single Page Model, Two Page Model)
- Advantages of Single Page Model, Advantages Code Behind Page Model

## 2. Objects and Controls

[8]

- ASP.NET Life Cycle
- Working with Basic Web Form Controls
- HTML Server Controls
- Control Events
- Validation Controls(Required Field Validator, Range Validator, Compare Validator)
- AdRotator Controls
- Detect Browser Capabilities
- Intrinsic Objects (Request Object, Response Object, Session Object, Application Object, Server Object)

## 3. State Management

[8]

- Page Level- View State
- User Level- Session
- Application Level-Application
- Website Level –Cookies
- Global Application Class (global.asax)
- Web Configuration File (Web.config)

## 4. Data Access with ADO.NET

[8]

- Overview of ADO.NET Objects
- Create and retrieve Database Connections
- SqlDataSource Controls
- ASP.NET Data-Bound Controls
- GridView, Repeater, DataList, Details View, Form View

**5. Master Pages** **[8]**

- Master Page overview
- How to Create Master Page
- Configure Content Page

**6. Security and Configuration** **[8]**

- Using the CreateUserWizard control
- Using the LoginStatus control
- Using the Login control
- Using the LoginView control

**Reference Books:**

1. ASP.NET - The Complete Reference, Matthew MacDonald
2. ASP.NET 4.5 IN SIMPLE STEPS (SIMPLE STEPS series), KOGENT LEARNING SOLUTIONS INC., 2013
3. Programming ASP.NET, J.Liberty, D.Hurwitz, (3<sup>rd</sup>Ed), O'REILLY, 2006
4. ASP.NET and VB.NET Web Programming, by Crouch Matt J, Addison Wesley 2002.
5. [www.asp.net](http://www.asp.net)
6. <http://www.w3schools.com/>



# North Maharashtra University, Jalgaon

(NACC Accredited 'A' Grade University)

## FACULTY OF COMMERCE & MANAGEMENT

### T.Y.B.C.A. Semester –V

### BCA-55 Practical on Soft Skills Development

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

[ Total Lectures: 48 ]

---

**Objective:** To train students to use the soft skills efficiently

- Two practicals of 03 hours each based on each unit of the Theory Paper shall be performed by the student under supervision of the subject teacher. The student shall maintain a journal of the practicals performed.
- Internal assessment - 40 marks: The students will be assessed by the subject teacher on a continuous basis and the journals maintained by the students.
- External Examination - 60 marks: An external teacher shall be appointed as per the guidelines of the University by the Principal of the concerned college as an external examiner for conducting Viva Voce and the subject teacher shall function as the Internal Examiner.
- The subject teacher is free to innovate practical exercises for improving students' performance and provide them a better learning experience.

#### Practicals

1. Preparation and delivering a motivational speech
2. SWOT Analysis of self and a peer
3. Time Management through examples, cases, role plays, group discussions, and panel discussions
4. Preparation of 'To-do' list and action plan
5. Identifying causes and symptoms of stress of a given real/fictitious person
6. Stress Management Activity
7. Group Tasks: Two Problem Solving Tasks be given to groups of students
8. Team building activities: organizing and conducting an extempore competition (teams of students to participate in the competition)
9. Choose a contemporary leader/ any person with leadership qualities and conduct a personal interview to identify the leadership qualities and enlist them.
10. Creation of a Professional networking group using electronic media and other possible means
11. Memorizing Activities
12. Preparing a Mind Map/ Case study



## North Maharashtra University, Jalgaon

(NACC Re-Accredited 'A' Grade University)

**FACULTY OF COMMERCE & MANAGEMENT**

**T.Y.B.C.A. Semester-V**

**BCA 56 Practical on ASP.Net & Linux O.S.**

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

---

**Objective :** To practically train students in developing web pages using ASP.NET and to familiar them with Linux Operating System.

### **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 QueryString
5. Demonstrate how to use Data Bound controls.
6. Demonstrate use of Master Pages.
7. Demonstration of GridView Data Control.
8. Demonstration of ASP.NET objects (HTTPApplicationState, HTTPSessionState)

### **Practical on Linux OS**

1. **Access:** Logging In. Linux Commands. Getting Help. Obtaining Information about Your System.
2. **Starting and Stopping Linux:** Shutting Down a Linux System, Booting a Linux System.
3. **File and File Permission:** Creation of Files, and changing their permission (Cat,vi, Chmod)
4. **Demonstration of Linux commands** with attributes: - pwd, cd, ls, more, less, echo, clear, kill, ps, man, cal, date, who, who am I, wc, mkdir, rmdir, rm, sort, tar,
5. Write a **shell script** to display first 20 terms of Fibonacci series.
6. Write a **shell script** to calculate factorial of a number
7. **Archiving Files:** Archiving Files with tar
8. Introduction **Working in X Windows:** Gedit, Gcalc, Xclock, Choosing and Changing Desktops & properties etc
9. **Using filters & redirections:** create new processed files  
(Using Head, tail, cut, paste etc. create resultsheet/salariesheet)
10. **Shell Script** to read username and check he is login or not and send Wel-Come message to him. (using write)



# North Maharashtra University, Jalgaon

(NACC Re-Accredited 'A' Grade University)

**FACULTY OF COMMERCE & MANAGEMENT**

**T.Y.B.C.A. Semester-V**

**BCA 57 FIELD WORK**

External Marks 50 + Internal Marks 50 = Maximum Total Marks: 100

---

**Objective: – To understand the social issues in the society by carrying out a real life social project using research methodology.**

## **FIELD WORK**

1. Each student shall have to undergo a field work during 5<sup>TH</sup> Semester.
2. In the 5<sup>th</sup> semester examination student are required to carry out a Field Work individually or by group of two students. It should be compulsorily based on social problems as mentioned in the point 3. The topic should be decided with consultation and guidance of internal teacher of the Institute. The field work should be necessarily Research oriented, Innovative and Problem solving.
3. The field work should be related (Not restricted) to social issues such as -Education, Sanitation, Health, Village/cottage industry, watershed management, problems of slum area, Tribal upliftment, Rehabilitation, Andhashraddha etc....
4. The student has to write a report based on the actual Field work, get it certified by the concerned Guide/teacher that the fieldwork has been satisfactorily completed and submit TWO typed copies of the same to the Head / Director of the institute /Principal of the college. One copy of the report submitted by the student shall be forwarded to the University by the Institute.
5. Field work shall be strictly based on primary data. The Sample Size shall be minimum 100. The students are encouraged to use advance excel or spss software.
6. Field work viva shall be conducted at the end of Semester V
7. Viva Voce for one student shall be of minimum 15 minutes. The Student has to prepare Power Point presentation based on field work to be presented at the time of Viva voce.
8. The field work will carry maximum 100 marks, of which internal teacher shall award marks out of maximum 50 marks on the basis of work done by the student. Remaining marks shall be awarded out of maximum 50 marks by examining the student during Viva-voce, by the External examiner.

# North Maharashtra University, Jalgaon

Faculty of Commerce and Management

Syllabus for

T.Y.B.C.A. Semester – VI

**Subject: BCA 61 Introduction to ERP and SAP**

w.e.f. 2016-17

Total Lectures: 48

[Total Marks: 60 External + 40 Internal =100 Marks]

## Objectives:

- Provide hands-on experience for students by embedding SAP software and resources to enhance their learning of ERP and CRM concepts, an integral part of global business.
- Build relevant ERP, CRM and SAP skills for students to create competitive hiring advantage.
- To Aware the students about Current scenario for ERP in market and The current version of ERP

### 1 Enterprise: An Overview Lectures 08

- Business Functions and Business Processes,
- importance of Information: Characteristics of information;
- Types of information,
- Information System: Components of an information system;
- Different types of information systems;
- Management information system,
- Enterprise Resource Planning: Business modelling;
- Integrated data model

### 2. Introduction to ERP Lectures 08

- Defining ERP,
- Origin and Need for an ERP System,
- Benefits of an ERP System,
- Reasons for the Growth of ERP Market,
- Reasons for the Failure of ERP Implementation:
- Roadmap for successful ERP implementation

### 3. ERP and Related Technologies Lectures 10

- Business Process Re-engineering,
- Management Information systems,
- Decision Support Systems,
- Executive Information Systems- Advantages of EIS;
- Disadvantages of EIS, Data Warehousing,
- Data Mining, On-Line Analytical Processing,
- Product Life Cycle Management,
- Supply Chain Management,
- ERP Security

### 4. ERP and Related Technologies Lectures 10

- ERP Tools and Software,
- ERP Selection Methods and Criteria,

- c. ERP Selection Process,
- d. ERP Vendor Selection,
- e. ERP Implementation Lifecycle,
- f. Pros and cons of ERP implementation,
- g. Factors for the Success of an ERP Implementation

## **5. ERP Software Overview**

Lectures 06

- a. SAP
- b. BAAN
- c. Oracle

## **6. Introduction to SAP**

Lectures 06

- a. Evolution of SAP
- b. Meaning of SAP
- c. Advantages and disadvantages of SAP
- d. Different versions of SAP
- e. SAP R/3 Architecture and Application Modules

### Reference Books-

1. Enterprise Resource Planning-Alexix Leon (TATA McGraw Publication)
2. ERP Ware: ERP implementation Framework (V.K.Garg & N.K.Venkitakrishnan)



# North Maharashtra University, Jalgaon

(NACC Re-Accredited 'A' Grade University)

FACULTY OF COMMERCE & MANAGEMENT

T.Y.B.C.A. Semester-VI

## BCA 62 System Analysis And Design

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

---

**OBJECTIVES:** The course has been designed to provide a solid foundation of systems principles and an understanding of how business functions, while heighten students may understand the issues and responsibility of analysts.

### 1. Introduction [ 8 ]

- **System definition and concepts:** Characteristics and types of system, Manual and automated systems
- **Real-life Business sub-systems:** Production, Marketing, Personal, Material, Finance
- **Systems models types of models:** Systems environment and boundaries, Real-time and distributed systems, Basic principles of successful systems

### 2. Systems Analyst [ 6 ]

- Role and need of systems analyst
- Qualifications and responsibilities
- Systems Analyst as an Agent of change

### 3. System Development cycle [ 8 ]

- Introduction of Systems Development Life Cycle (SDLC)
- **Various phases of development :** Analysis, Design, Development, Implementation, Maintenance
- **Systems documentation considerations:** Principles of systems documentation , Types of documentation and their importance, Enforcing documentation discipline in an organization
- **SDLC Models :** Waterfall Model, Spiral and RAD

### 4. System Planning [ 8 ]

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

### 5. Systems Design and modeling [ 10 ]



- Process modeling
- Logical and physical design
- Systems flowcharts & Data flow diagrams
- Common diagramming conventions and guidelines using DFD and ERD diagrams
- Tools for Structured Analysis : Data Dictionary, Decision Tree and Decision Tables, Structured English

## 6. Input / Output and Testing

[ 8 ]

- **Classification of forms:** Input/output forms design
- User-interface design
- Graphical interfaces
- **Brief Introduction to :** Testing, Types of Testing – White Box Testing, Black Box Testing

### References: -

1. System Analysis and Design Methods, Whitten, Bentley and Barlow, Galgotia Publication.
2. System Analysis and Design Elias M. Awad, Galgotia Publication
3. Modern System Analysis and Design, Jeffrey A. Hofer Joey F. George Joseph S. Valacich Addison Weseley.



# North Maharashtra University, Jalgaon

(NACC Accredited 'A' Grade University)

## FACULTY OF COMMERCE & MANAGEMENT

### B.C.A. Semester VI

#### BCA-63 Server side Scripting using PHP

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

*[Total Lectures: 48]*

---

#### Objectives:

1. To provide the knowledge of basic PHP object oriented programming concepts
2. To provide knowledge of PHP scripting
3. To provide knowledge of database connectivity with PHP

#### UNIT - I : Introduction to PHP:

08

A Brief History of PHP, Installing PHP, PHP Language Basics: Data Types, Variables, Expressions and Operators, Flow-Control Statements, Including Code, Embedding PHP in Web Pages, Installing and Configuring PHP on Windows and Linux Platforms

#### UNIT - II : Functions & OOP:

10

Calling a Function, Defining a Function, Variable Scope, Function Parameters, Return Values, Variable Functions, Anonymous Functions, String functions.

Class & Object, constructor ,destructor, Inheritance, function Overloading

#### UNIT - III : Arrays:

04

Indexed Versus Associative Arrays, Identifying Elements of an Array, Storing Data in Arrays, Multidimensional Arrays. Looping with associative array using each() and foreach() , Some useful Library functions.

#### UNIT – IV Exception Handling:

04

Understanding Exception and error, Try, catch, throw

#### UNIT – V Working with file and Directories:

06

Understanding file& directory, Opening and closing a file, Copying ,renaming and deleting a file ,Working with directories

#### UNIT - VI Handling Html Form With PHP

08

Using PHP \$\_GET, PHP \$\_POST Working with Forms: Processing Forms, Data Linking Form Together Text Fields, Text Areas, Check Boxes, Radio Buttons, List Boxes, Password Controls, Hidden Controls, File Uploads, Submit Buttons as HTML Buttons.

#### Unit VII - Using PHP with MySQL:

08

Connection with mysql database, Fetching data, Saving and updating data ,Deleting data

**Reference Books:**

1. PHP 5.1 for beginners by Evan Bayross and Sharman Shah, SPD Publications
2. PHP 5.2 The Complete Reference by Steven Holzner, Mc Graw Hill Edition 2008.
3. Programming PHP by Rasmus Lerdorf and Kevin Tatroe, Orilly Publications



# North Maharashtra University, Jalgaon

(NACC Re-Accredited 'A' Grade University)

**FACULTY OF COMMERCE & MANAGEMENT**

**T.Y.B.C.A. Semester-VI**

## **BCA 64 Introduction to Information System Audit**

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

---

**Objective : To impart the knowledge and importance of Information System and Audit among students for Quality Management.**

### **1) Overview Of Information System Auditing**

**Lectures:8**

- a) Introduction
- b) Need For Control And Audit Of Computers
- c) Effects Of Computers On Internal Control
- d) Effects Of Computers On Auditing
- e) Foundations Of Information System Audit

### **2) Conducting An Information System Audit**

**Lectures:8**

- a) Introduction
- b) Nature Of Controls
- c) Audit Risks
- d) Types Of Audit Procedures
- e) Steps In An Audit
- f) Auditing Around Or Through The Computer

### **3) Data Management Controls –**

**Lectures:8**

- a) Functions and motivations of DA and DBA roles
- b) Organizational Issues
- c) Data Repository Systems
- d) Control over DA and DBA

### **4) Information System Audit Management**

**Lectures:8**

- a) Introduction
- b) Managing The Information System Audit Function
- c) Planning Function
- d) Organising Function

- e) Staffing Function
- f) Leading Function
- g) Control Information

**5) BCP and Cyber Crimes –**

**Lectures:8**

- a) Difference between BCP and DRP
- b) Social Engineering
- c) Data Diddling
- d) Denial of Service attack
- e) Sniffing
- f) Man in Middle attack
- g) Identity Theft and spoofing – Phishing, Pharming
- h) SQL Injection, Zeroth Day Attacks

**6) ISA Professionalism**

**Lectures:8**

- a) Information System Audit Professionalism
- b) Future Of Information System Auditing

***Reference Book –***

1. Information System Control and Audit – Ron Weber – Pearson Education
2. Information System Audit and Assurance – D.P. Dube and V.P. Gulati – Tata McGraw Hill
3. ISACAs IT Audit standards –



# North Maharashtra University, Jalgaon

(NACC Accredited 'A' Grade University)

## FACULTY OF COMMERCE & MANAGEMENT

### B.C.A. Semester VI

### BCA-65 Practicals on PHP

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

[ Total Lectures: 48 ]

---

### Practicals

1. PHP installation on Windows, configuration with IIS
2. Demonstration of array functions for single & multidimensional arrays, sorting etc
3. Printing of HTML form data on server
4. Use of global variables
5. Demonstration of session management with cookies, \$\_Session, hidden fields
6. Displaying file/Directory attributes
7. File & directory explorer
8. Creation of MySQL database from command prompt, demonstration of various SQL queries
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 Demonstration \$\_GET & \$\_POST Method.



# North Maharashtra University, Jalgaon

(NACC Re-Accredited 'A' Grade University)

**FACULTY OF COMMERCE & MANAGEMENT**

**T.Y.B.C.A. Semester-VI**

**BCA 66 Practical on CASE Tool with MS VISIO**

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

---

**Objective :** To practically train students in Computer Aided Software Engineering Tools.

Study following systems in detail

1. Admission System
2. Sales/Purchase Order Processing System
3. Library System

Perform following for above systems and using CASE Tool

- Draw DFD
- Draw ERD
- Draw UML Class Diagram
- Generate table structures with constraints in MS Access

**Note: Study of other business systems is also desirable.**



# North Maharashtra University, Jalgaon

(NACC Re-Accredited 'A' Grade University)

## FACULTY OF COMMERCE & MANAGEMENT

### T.Y.B.C.A. Semester-VI

#### BCA 67 Project

External Marks 50 + Internal Marks 50 = Maximum Total Marks: 100

---

**Objective: – To prepare students to use applications of the theory and practical learned during the course. .**

### PROJECT WORK

1. Each student shall have to carry out the project work based on System Development which may include Application Program, Database Management System, Web Based Application, Smart phone Application, System Tools, Network System Application, etc. A project may be carried out at any outside organization or on a sub system of an organization.
2. The project work should be carried out individually. No group work is allowed in the Project work. The project title should not be repeated.
3. The topic of the project should be decided with the consultation & guidance of an internal guide-teacher of the institute/college. The project should be necessarily innovative and problem solving. No teacher shall be entrusted with more than 15 students for guidance and supervision.
4. The student should clearly mention the need of project , database(s), files required for the project, DFD , Normalization, ERD, software used for the project, reasons for selection of that software, inputs required, outputs produced etc.
5. The application should be menu driven and should provide the facilities of storage of data, modifications in existing data, deletion of unwanted data, and viewing of data.
6. The student has to write a report based on the actual work undertaken during the vacations at the specific selected enterprise/ organization or sub system and get it certified by the concerned teacher that the Project report has been satisfactorily completed and submit TWO typed copies of the same to the Head / Director of the institute /Principal of the college.
7. One copy of the report submitted by the student shall be forwarded to the University by the Institute.
8. No student will be permitted to appear for Viva-Voce examinations, unless and until the project report is submitted within the stipulated time.