Course Contents for Subjects with Code: COMP

This document only contains details of courses having code COMP.
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<tbody>
<tr>
<td>COMP-101</td>
<td>Computer-I</td>
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<tbody>
<tr>
<td>1</td>
<td>Statistics-II, Islamic Education</td>
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Course will contain the topics:
- Introduction to computers
- History and types of computers
- Introduction to Computer Communication
- Hardware Introduction
- IO devices
- Storage devices
- Memory and types
- Introduction to Software
- Introduction to MS Office
- Electronic documentation using MS Word
- Building presentation using MS Power Point
- Creating spread sheets using MS Excel
- Database management using MS Access
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<tr>
<td>COMP-102</td>
<td>Computer Lab-I</td>
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Practical Work:
- How to use computers
- How to use accessories in Operating System
- What is MS. Office
- MS. Word, MS. Power Point, MS Excel Practical in lab sessions

**Recommended Book:**
1. Discovering Computers by Shelly Cashman, Computer application in business by Dr. Liaqat
2. Peter Norton's Introduction to Computers, 6/e
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1. **Introduction:**
   a. Data, Processing & Information
   b. Data Item/Entity, Record, File, Metadata, Database
   c. Files and its types
   d. Traditional File Processing Systems and its disadvantages

2. **Database**
   a. Database Systems
   b. Database Objectives
   c. Database Management Systems
   d. Components of the DBMS
   e. Types of DBMS
   f. Database Applications
   g. Advantages of Database System
   h. Disadvantages of Database System

3. **Database Development**
   a. Database development with information system
   b. Database development process
   c. 3-Schema Architecture

4. **Data Associations**
   a. Entity, Attribute & Associations
   b. Entity, Attribute & Associations
   c. Types of Associations
   d. Entity-Relation Model

5. **Relation & its Characteristics**
   a. Relation
   b. Properties of Relations
   c. Key and its types

6. **Normalization**
   a. Normalization and its steps
   b. Types of Normalization
   c. Effects for Normalization

7. **Database Design**
   a. Logical Database Design
   b. Physical Database
   c. Database Administration
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<tr>
<td>COMP-104</td>
<td>Computer Lab-II</td>
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1. **Database Implementation**
   a. Using access
   b. Creating relations
   c. Forming attributes and fields
   d. Selecting record by using query
   e. Command introduction
   f. DBMS introduction in market

2. **SQL**
   a. Structured query language of relational DBMS
   b. Data definition language (DDL)
   c. Data manipulation Language (DML)
   d. DCL

3. **DBMS Usage:**
   a. How to switch among database management systems
   b. Similarities and dissimilarities of DBMS
   c. Interacting querying, updating, manipulating DBMS
   d. Maintenance of Database Management System

4. **Queries**
   a. Introduction of query
   b. Writing query
   c. Sub query
   d. Joins and queries

5. **Practical Issues:**
   a. Database connectivity and its issues (ODBC)
   b. Two tier and thee tier architecture issues
   c. Business rules and constraints and implementation in DBMS
   d. DBA

**Recommended Books:**
1. Discovering Computers by Shelly Cashman, Computer application in business by Dr. Liaqat
2. Peter Norton's Introduction to Computers, 6/e
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<tr>
<td>COMP-111</td>
<td>Computer (Introduction and Applications)</td>
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**Year**


Introduction to computers, Characteristics of computers, Components of computers, Computer applications/uses in society, Components of system unit; Presenting the Internet, Communicating through the Internet; Interacting with the computer (Input devices), Using the Keyboard and Mouse; Seeing, Hearing, and Printing Data (Output devices), Video and Sound, Printing; Processing Data, Transforming Data into Information; Storing Data, Types of Storage Devices; Operating Systems, Operating System Basics, Survey of PC and Network Operating Systems; Working with Application Software, Productivity Software, Graphics and Multimedia Software; Networks, Types of computer networks, Data communication; Database Management, Database Management Systems, Survey of Database Systems; Development of Information Systems, Basics of Information Systems; Information Assurance: Security, Privacy, and Ethics

Microsoft Office: introduction to word, creating, saving, closing and opening a file, difference between save and save, moving through the word document, selecting, cut, copy and paste through shortcuts and edit menu, undo and repeat, word menu bar and drop down menu, tool bar and status bar. Formatting using menu and formatting bar, paragraph formatting, borders and shading, spell checking, creating and manipulating table; introduction to Excel, creating, saving closing and opening a worksheet, entering data, calculations using operators, using Functions, IF statement, creating and manipulating charts; Introduction to Power Point, presentations, creating a new blank presentation, presentation type, different view icons, new, outline, slide and slide show, slide animations, animation effect, slide timings, picture and backgrounds, drawing tools, selecting object, grouping and ungrouping, resizing and rotating objects.

**Text Books:**

1. Peter Norton's Introduction to Computers, 6th Edition

**Recommended Books:**

1. Computer Fundamentals (Paperback) by P. K. Sinha
This course is designed in view of the application of computers in wide range of areas. This course would familiarize students with basics of computer. The course will cover introduction to computer hardware and software related to psychology. After having completed this course students would be able to use window software such as MS office including MS Excel, MS Word and Power point.

Course Contents
Introduction to Computers
History of Computer Development
Uses and Limitations
Basic Units of Personal Computers

Introduction to Windows
Why Windows?
Basic features of Windows
Starting up
Using Applications
Managing Files and Folders
Managing the Desktop
Change Settings

Introduction to MS Word
Basic features of MS Word
Typing, editing, formatting text
Saving and printing
Making Tables in Word

Introduction to MS Excel
Basic features
Everyday Worksheet Tasks
Creating and Formatting Charts
Printing Worksheet

Pedagogy
This is a practical course which will be conducted in computer laboratory with hands-on instructions and guidance. Students will be given assignments in various applications such as MS Word and MS Excel.

Recommended Books
This course is designed in view of the application of computers in wide range of areas. This course would familiarize students with basics of computer. The course will cover introduction to computer hardware and software and software related to psychology. After having completed this course students would be able to use window software such as MS office including MS Excel, MS Word and Power point.

**Course Contents**
1. Everyday Worksheet Tasks
2. Creating and Formatting Charts
3. Printing Worksheet
4. Introduction to Power Point
   a. Basic Features
   b. Preparing presentations using Power Point
5. Pedagogy

This is a practical course which will be conducted in computer laboratory with hands-on instructions and guidance. Students will be given assignments in various applications such as MS Word, Power point and MS Excel.

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<td>COMP-121</td>
<td>Computer Applications in Business</td>
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**Computer**
- Characteristics of Computers
- History of Computer
- Generation of Computer
- Types of Computer
- Classification of Digital Computer
- Computer Hardware and Software
- Basic Architecture of Computer System
- Microprocessor
- Types of Memory
- Input/output Devices
- Computer Software
- Programming Languages

**Data Communication, Networks, and Data Processing**
- Network
- Types of Network
- Analog and Digital Transmission
- Data Processing
- Data Processing Cycle
- Data Processing as a Business Need

**Operating Systems**
- Desktop/Interface
- Taskbar and Properties

**WINDOWS XP Professional**

**Word Processing MS-Word (2007)**
- All Menus

**Spreadsheet Microsoft Excel (2007)**
- All Menus

**Microsoft Power Point (2007)**
- All Menus

**Internet**
- History of Internet, Surfing the net, services, terms, terminologies of Internet.

**Recommended Books:**
5. Robert A. Szmaski. Introduction to Computer & Information System.
8. Microsoft Office.
9. Computers by H.L.Capron
10. Computers by Nancy Long
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<td>Statistics-II, Islamic Education</td>
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1. **Static WWW**
   
   a. What does dynamic mean
   
   b. What are pros and cons of static www
   
   c. Uses of Static www
   
   d. Developing static web sites using HTML

2. **Dynamic WWW**
   
   a. What does dynamic mean
   
   b. What are pros and cons of dynamic www
   
   c. Uses of dynamic www
   
   d. Developing dynamic web sites using Java script

3. **Introduction to tools and Technology**
   
   a. What is Tool
   
   b. What Technology?
   
   c. Language introduction and OOP concepts
   
   d. What is Java
   
   e. Introduction of JSP

4. **Database and Database Connectivity**
   
   a. What is database
   
   b. What is connection
   
   c. Database connectivity and its need
   
   d. How JAVA provides database connectivity using JSP

**Recommended Books:**

- Java 2 complete reference
BS (4 Years) for Affiliated Colleges

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Year | Discipline
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2    | Statistics-II

1. **Static WWW**
   a. HTML
   b. Macromedia Flash
   c. Dream weaver and Front Page
   d. Dynamic WWW
   e. Java Script
   f. Java and JSP
   g. JDBC (Java Database Connectivity)

**Recommended Books:**
1. Java 2 complete reference
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1. **Visual Programming:**
   a. Visual components of VB IDE
   b. Interpreter and compiler
   c. VB Project
   d. Logical and syntax errors

2. **Forms**
   a. Components of forms
   b. Events and methods
   c. VB MDI

3. **VB Basics**
   a. Data and data types
   b. Variables
   c. Operators
   d. Build-in functions

4. **Input and Output**
   a. Dialog and output
   b. Message Box
   c. Modality

5. **Arrays**
   a. Types of arrays
   b. Declaring arrays
   c. Entering data in arrays
   d. Multi dimensional array

6. **Control Statements**
   a. Types of Control Statement s
   b. Go to statement, if then, if then else; nested if, seek structure
   c. Loop structure
   d. Do while until loops
   e. Do while until loops
   f. Nested loops

7. **Basic Actives Controls**
   a. Introduction of controls
   b. Command button, label control, the timer, text box, check boxes, option buttons, frames, list box control, combo box control, scroll bar control, file controls

8. **Database programming**

**Recommended Books:**
1. Mastering VB by BOP publication, Aikman series VB Program
BS (4 Years) for Affiliated Colleges

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<td>Statistics-II</td>
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**Building a project in VB IDE**

1. Building forms  
2. Database connectivity in forms  
3. Taking input and giving output in projects  
4. Using Control statement in projects  
5. Using Actives controls  
6. Using Arrays  
7. Forming project using VB which has practical applications  
8. Implementing database in project (DAO, SQL)

**Recommended Books:**  
1. Mastering VB by Bpb publication, Aikman series VB Program
### Subject Title

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<td>COMP-211</td>
<td>Computer Science-I</td>
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**Year** | **Discipline**
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2 | Physics

Fundamentals of a digital computer, hardware and software concepts, operating systems (DOS, Windows, Unix). Algorithm development, introduction to a scientific language (FORTRAN or C++) and lab for writing small programs.

**Books Recommended:**

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<td>Physics</td>
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Computer as a tool, arithmetic and algebra, functions and procedures, calculus, graphics, problems in general physics: projectile motion, electricity and magnetism, electric circuit analysis, oscillating systems, Lagrangians and Hamiltonians, electrostatics, quantum mechanics, relativity and cosmology.

**Recommended Books:**
BS (4 Years) for Affiliated Colleges

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<td>COMP-121</td>
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**Course Objectives**

This course is designed in view of the application of computers in wide range of areas. This course would familiarize students with basics of computer. The course will cover introduction to computer software related to psychology.

**Course Outcome**

After having completed this course students would be able to use window software such as MS office including MS Excel, MS Word and Power point.

**Course Contents**

**Introduction to Computers**
- History of Computer Development
- Uses and Limitations
- Basic Units of Personal Computers

**Introduction to Windows**
- Why Windows?
- Basic features of Windows
- Starting up
- Using Applications
- Managing Files and Folders
- Managing the Desktop
- Change Settings

**Introduction to MS Word**
- Basic features of MS Word
- Typing, editing, formatting text
- Saving and printing
- Making Tables in Word

**Introduction to MS Excel**
- Basic features
- Everyday Worksheet Tasks
- Creating and Formatting Charts
- Printing Worksheet

**Introduction to Power Point**
- Basic Features
- Preparing presentations using Power Point
Using Computer for online Literature Search
E-books
E-journals
Data Bases

Recommended Books