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# Course Outline

for

# Introduction to Computer Applications

Version 1.0

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Organization: NTI

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# Table of Contents

<b>Table of Contents .....</b>	<b>ii</b>
<b>1. Introduction .....</b>	<b>1</b>
1.1 Abstract .....	1
1.2 About the Instructor .....	1
1.3 Introduction .....	1
1.4 Learning Objectives .....	1
1.5 Web References .....	2
<b>2. Course Plan .....</b>	<b>2</b>
2.1 Course Contents .....	2
2.2 Teaching Methodology .....	4
2.3 Recommended Text .....	5
2.4 Course Material .....	5
2.5 Evaluation Criteria .....	5

# 1. Introduction

## 1.1 Abstract

The primary objective of this document is to specify the course outline for the **Introduction to Computer Applications** course.

## 1.2 About the Instructor

Fawad Ishaq Ch is currently working as System Analyst at Acrologix (PVT) Ltd. one of the leading software house in the country. He obtained his MCS degree from the Hamdard University, Karachi. His teaching experience includes 7 years as lecturer computer science and information technology at various leading universities in the country. He also has an industry experience of 3 years as system analyst, one of which was spend as Manager IT.

## 1.3 Introduction

Computer Literacy entails having knowledge and understanding of computers and its uses. As computers become an increasingly important part of daily living, many people believe that computer literacy is vital to success. You may interact directly with computers in fields such as education, finance, government, health care, science, publishing, travel and industry. Computers are now a primary means of communication for all types of people. People in today's modern world use computers for different reasons.

## 1.4 Learning Objectives

- Explain the importance of computers in today's society.
- Describe how computers are used in various section of our society.
- Identify different categories of computers in use.
- Identify different components of a computer.
- Explain the importance of Internet and WWW in today's society.
- Identify various services provided by the Internet.
- Identify the techniques for using a computer.
- Explain the importance of software in today's society.
- Identify different categories of software in use.

- Explain the importance of database and DBMS.
- Explain different programming languages and their use.
- Explain mobile technologies in use.
- Enable the student to use the computers.
- Enable the student to create various types of electronic documents.
- Enable the student to create electronic presentations.
- Enable the student to manage data and perform calculations.
- Enable the student to perform data administration.
- Enable the student to design and development Web pages.

## 1.5 Web References

- <http://www40.brinkster.com/fawadishaq/>
- <http://www.howstuffworks.com/>

## 2. Course Plan

### 2.1 Course Contents

#### Part - I

- *Importance of computers*  
**Topics:** uses of computers, computer literacy, computer application areas  
**Activities:** Reading assignment.
- *Introduction to computers*  
**Topics:** computer defined, data vs. information, characteristics, categories of computer, computer applications & uses  
**Activities:** Reading assignment.
- *Components of computer*  
**Topics:** input devices, output devices, system unit, storage devices, communication devices, serial ports, parallel ports, USB ports, firewire port, midi port, SCSI port, IrDA port, system bus, drive bays  
**Activities:** Quiz, Reading assignment.
- *Computer software*  
**Topics:** defined, characteristics, applications & uses, categories & classification  
**Activities:** Quiz, Reading assignment
- *Application software*

**Topics:** basics, business application software, graphics and multimedia application software, home/personal/educational application software, communications application software, Web application software

**Activities:** Quiz, Reading assignment

- *System software*

**Topics:** basics, operating systems, operating system functions, operating system utility programs, types of operating system, stand-alone operating systems, network operating systems, embedded operating systems

**Activities:** Quiz, Reading assignment

- *Computer Memory*

**Topics:** data presentation, memory explained, RAM, cache, ROM, flash memory, CMOS, memory cards

**Activities:** Quiz, Reading assignment

- *Computer Storage*

**Topics:** basics, floppy disks, zip disks, hard disks, CDs and DVDs, tape, PC cards, mobile storage media, enterprise storage

**Activities:** Quiz, Reading assignment

- *Database management systems*

**Topics:** basics, data and information, hierarchy of data, maintaining data, file processing, database management systems, relational database management systems, object-oriented database management system, Web databases, database administration

**Activities:** Quiz, Reading assignment

- *Computer networks*

**Topics:** communications, analog & digital communications, uses of computer communications, networks basics, types of networks, network architectures, communication channels, physical transmission media, and wireless transmission media

**Activities:** Quiz, Reading assignment

- *Internet & WWW*

**Topics:** history, services, uses, architecture, HTML, HTTP, Web page, Web site, URL, types of Web sites

**Activities:** Quiz, Reading assignment.

- *Development of information systems*  
**Topics:** system development cycle, analysis phase, design phase, implementation phase, support phase  
**Activities:** Quiz, Reading
- *Software programming and development*  
**Topics:** programming explained, program development life cycle, categories of programming languages, high-level languages, scripting languages  
**Activities:** Quiz # 12, Read handout, Read Book.

## **Part – II**

- *Using Microsoft Windows XP*  
**Activities:** Lab exercises
- *Using Microsoft Office Word 2003*  
**Activities:** Lab exercises
- *Using Microsoft Office PowerPoint 2003*  
**Activities:** Lab exercises
- *Using Microsoft Office Excel 2003*  
**Activities:** Lab exercises, Project
- *Using Microsoft Office Access 2003*  
**Activities:** Lab exercises, Project
- *Using Microsoft Office FrontPage 2003*  
**Activities:** Lab exercises, Project
- *Using Microsoft Office Outlook 2003*  
**Activities:** Lab exercises

## **2.2 Teaching Methodology**

- *Classroom-based teaching*
- *Classroom-based training*
- *Group activities & discussions*
- *Classroom-based presentations*
- *Q & A sessions*

## 2.3 Recommended Text

- *Introduction to Computers, Peter Norton, sixth edition*
- *Discovering Computer, Shelly Cashman Series, complete edition*
- *Microsoft Office Word 2003 Step-by-Step, Microsoft Press Series*
- *Microsoft Office PowerPoint 2003 Step-by-Step, Microsoft Press Series*
- *Microsoft Office Excel 2003 Step-by-Step, Microsoft Press Series*
- *Microsoft Office Access 2003 Step-by-Step, Microsoft Press Series*
- *Microsoft Office FrontPage 2003 Step-by-Step, Microsoft Press Series*
- *Microsoft Office Outlook 2003 Step-by-Step, Microsoft Press Series*

## 2.4 Course Material

- *Instructor handouts*
- *Lab exercises*
- *Internet exercises*
- *Web references*
- *Magazine reviews*

## 2.5 Evaluation Criteria

*Evaluation is strictly based on how well the student will perform in class activities, Lab activities, and other activities. Performance will be monitored throughout the semester. Following are the tools used to measure the competency level of the candidate:*

- *Class quizzes (MCQ type). Normally conducted at the end of each unit.*
- *Class presentation. Each candidate is required to present on latest technology related topic. There will be at least one presentation per candidate.*
- *Lab exercises*
- *Home Assignments*
- *Projects*