

## **FIT 102: ICT Applications – Windows 7/MS Office 2007/OpenOffice.org 3.3**

### **INTRODUCTION**

This course, named as “ICT Applications” is designed and developed to address the literacy and competency required for a knowledge worker in the ICT enabled information society. There are 8 core areas considered in this syllabus and those who follow this course is supposed to complete learning activities of both knowledge and skills to develop the relevant competency. Learning outcomes are described based on 8 modules of the course.

A student could select Microsoft Office (2003 or 2007 version) or OpenOffice.org packages to follow FIT 102: ICT Applications course. Assessment is also based on the relevant office package and version.

### **LEARNING OUTCOMES**

After successfully completing this course, student will be able to:

- Describe the basic concepts and terminology used in ICT enabled personal computing environment
- Carry out basic computing operations in a selected environment of operating system, namely Microsoft Windows 7
- Prepare a word processing document using a word processing package according to given set of instructions
- Prepare a data sheet using a spreadsheet package based on the given instructions
- Prepare a database to store, retrieve and manage data and information using a database management system
- Design a presentation using a presentation package based on the instructions
- Search for information in the Internet using a web browser Communicate through Internet using common tools/applications
- Manage and use a personal computer safely and effectively

### **Assessment Criteria**

Assessment criteria is based on the 8 modules of the course. Formative assessment is an online self-assessment which is supposed to develop the confidence of a learner in the course and they are provided through online learning environment (VLE).

The final course examination consists of an e-test of 2 hours and a practical test of 2 hours. e-Test consists of 50 Multiple Choice Questions of one or more correct answers. The practical test is a lab test which consists of 4 practical questions based on the word processing, presentation, spreadsheet and database tools of a selected office package.

Applicant should select the familiar application environment MS Office or OpenOffice.org when registering for the test.

## OUTLINE OF SYLLABUS

Topic	Average hours*
1. Fundamentals of ICT	24
2. Working with a Computer	30
3. Word Processing	42
4. Spreadsheet Management	42
5. Database Management	42
6. Electronic Presentation	21
7. Internet and Communication	21
8. Managing a Computer	18
<b>Total</b>	<b>240</b>

\* Average hours given above is a kind of a rough guideline for a beginner in the course. However, it may vary depending on the background and other learning abilities.

### RECOMMENDED MATERIAL

Ref1: Introduction to Computers (7<sup>th</sup> Edition) by Peter Norton, Tata McGraw-Hill Edition, ISBN 0-07-067120-6

Ref2: Windows 7 Plain & Simple by Jerry Joyce and Marianne Moon, ISBN-978-81-203-4120-3

Ref3: Using Microsoft Office 2007 by Ed Bott and Woody Leonhard - PEARSON Education low price edition, ISBN 81-317-1354-7

Ref4: OpenOffice.org 3.3 User Guides (PDF)

<http://wiki.openoffice.org/w/images/3/32/0100GS33-GettingStartedOOo33.pdf>

## DETAILED SYLLABUS

### 1. Fundamentals of Information and Communication Technology (ICT) (24 hrs.) [Ref. 1]

#### Instructional Objectives:

- List the factors affecting the performance of a computer with respect to hardware and software
- Describe input, output and storage devices
- Compare and contrast System Software and Application Software while giving some examples
- Explain what a computer system is as well as its parts
- Describe what a computer network is
- Define the terms Internet, Intranet and Extranet together with different options to connect to Internet
- Describe what Information Communication Technology is
- Describe the usage of ICT in different sectors together with examples in everyday life
- Explain health and safety problems due to usage of computers
- Explain how to protect your computer and information
- Recognize privacy issues and security policies

#### 1.1. Basic Concepts

1.1.1. Introduction to computers

1.1.2. Different types of computers (Desktop Computers, Workstations, Notebook Computers, Tablet PCs, Handheld PCs, Smart Phones, Network Servers, Mainframe Computers, Minicomputers, Supercomputers )

1.1.3. Main parts of a computer system & information processing cycle

1.1.4. Components inside the casing/system unit

1.1.5. Certain factors affecting the performance of a computer (Registers, Memory & Computing power, The Computer's Internal Clock, The Bus (Data & Address Buses), Cache memory)

#### 1.2. Essential computer hardware

1.2.1. Input devices

1.2.2. Output devices

1.2.3. Storage devices

1.2.3.1. Magnetic storage and optical storage

1.2.3.2. Flash memory and smart cards

1.2.4. Processing devices

#### 1.3. Software categories and basic operations

- 1.3.1. System & application software
- 1.3.2. Purpose of operating systems
- 1.3.3. Selected types of operating systems (Real-time, Single user/Single-Tasking, Single user/Multi-Tasking)
- 1.3.4. PC operating systems (MS-DOS, Windows 9x, Windows XP, Windows Vista, MAC OS, UNIX, Network Operating Systems)
- 1.3.5. Windows 7
- 1.4. Computer networks
  - 1.4.1. Uses of a network
  - 1.4.2. Local Area Network (LAN)
  - 1.4.3. Wide Area Network (WAN)
  - 1.4.4. Metropolitan Area Network (MAN)
  - 1.4.5. Intranet and Extranet
  - 1.4.6. Internet
- 1.5. Usage of ICT
  - 1.5.1. Computers at work
  - 1.5.2. ICT usage in different sectors
- 1.6. Health, safety and environment
  - 1.6.1. Computer based good working environment
  - 1.6.2. Computer related health problems
  - 1.6.3. Protecting environment
    - 1.6.3.1. What is global warming, causes & prevention
    - 1.6.3.2. What is green computing, practicing green computing
- 1.7. Information security
  - 1.7.1. Need for computer security & basic security concepts
  - 1.7.2. Threats to users
  - 1.7.3. Threats to hardware
  - 1.7.4. Threats to data (Malware, Viruses and Malicious Programs, Cybercrime, Hacking)
  - 1.7.5. Avoiding identity theft (Managing your papers, Guarding personal information, Keeping Marketers at Bay)
  - 1.7.6. Keeping data Secure (Physical access, Using a firewall, Backing up data)
  - 1.7.7. Safeguarding Hardware (Handling Storage Media, Storing Computer Equipment)
- 1.8. Legal regulations
  - 1.8.1. Intellectual property rights
    - 1.8.1.1. Copyright
    - 1.8.1.2. Patents
    - 1.8.1.3. Confidential information
  - 1.8.2. Data protection

- 1.8.2.1. Terminology
- 1.8.2.2. Data protection principles
- 1.8.3. Computer Crimes
  - 1.8.3.1. The Computer crime act, No. 24 of 2007
  - 1.8.3.2. Computer fraud

## **2. Working with a Computer (Windows 7) (30 hrs.) [Ref. 2]**

### **Instructional Objectives:**

- Identify different components in Windows desktop
- Modify basic settings to customize operating system
- List the basic user tasks of operating system
- Know the storage of a computer
- Carry out basic operations of managing and storing data
- Recognize common interface of windows 7 based applications
- Use simple text editing tools to create documents
- Use help and other facilities to learn more things

### 2.1. Working with the computer desktop

- 2.1.1. Operating system and desktop interface in Windows 7
- 2.1.2. Starting up and Leaving your computer

### 2.2. Setting the environment of a computer

#### 2.2.1. Personalizing

- 2.2.1.1. Change theme
- 2.2.1.2. Change the Window Colour
- 2.2.1.3. Enlarging text
- 2.2.1.4. Setting Desktop Background
- 2.2.1.5. Customizing Desktop Icons
- 2.2.1.6. Using a Screen Saver

#### 2.2.2. Keyboard and different key combination

#### 2.2.3. Mouse and selecting different items

#### 2.2.4. Speakers, microphones and changing the volume

#### 2.2.5. Language, date, time and region

#### 2.2.6. Switching among open windows

#### 2.2.7. Hide the window

#### 2.2.8. Managing windows

### 2.3. Storing and managing data

#### 2.3.1. Hard Drives and Disk Drives

- 2.3.2. Files and Folders
- 2.3.3. Basic file operations (Copy, Move, Paste)
- 2.4. Files and folder handling techniques
  - 2.4.1. Text editors
  - 2.4.2. Restoring
  - 2.4.3. Searching
  - 2.4.4. Compressing and uncompressing
- 2.5. Common Interface of Windows 7 based Programs
  - 2.5.1. Using & Customizing the Ribbon
  - 2.5.2. Using & Customizing the Quick Access Toolbar
  - 2.5.3. Create a Document
  - 2.5.4. Format a Document
  - 2.5.5. Saving a Document
  - 2.5.6. Closing a Document
  - 2.5.7. Open a Document
- 2.6. Using help and other facilities to learn more about
  - 2.6.1. Importance of continuous learning
  - 2.6.2. User manuals and quick tours
  - 2.6.3. Help system
  - 2.6.4. Online resources

### **3. Word Processing (42 hrs.) [Ref. 3, Ref. 4]**

#### **Instructional Objectives:**

- List different word processing applications
- List the main features of commonly used word processing applications
- Perform basic operations in a given word processing package
- Adjust settings of a word processing package to optimize its use
- Insert text, symbols and equations in to a given place in the word processing document
- Format text or paragraph of a word processing document for a given requirement
- Insert and format graphics to a word processing document
- Change the page appearance of a document
- Increase the security of a document
- Print a document for a given requirement
- Use the mail-merge wizard to link a document

- 3.1. Introduction
  - 3.1.1. What is word processing?
  - 3.1.2. Different word processing applications
- 3.2. Getting started with MS Word/OO Writer
  - 3.2.1. Starting MS Word/OO Writer
  - 3.2.2. The MS Word/OO Writer interface
  - 3.2.3. Using help
  - 3.2.4. Exiting MS Word/OO Writer
- 3.3. Creating your first document
  - 3.3.1. Starting a document
  - 3.3.2. Saving a document
  - 3.3.3. Closing documents
  - 3.3.4. Opening documents
- 3.4. Adjusting environment settings
  - 3.4.1. Page views
  - 3.4.2. Zoom tool
  - 3.4.3. Viewing/hiding non printing characters
- 3.5. Entering text and symbols
  - 3.5.1. Inserting symbols and special characters
  - 3.5.2. Inserting equations
  - 3.5.3. Inserting watermarks
- 3.6. Editing text
  - 3.6.1. Insert/overtyping mode
  - 3.6.2. Selection techniques
  - 3.6.3. Cut/copy/paste
  - 3.6.4. Finding and replacing
- 3.7. Formatting text
  - 3.7.1. Applying different attributes
  - 3.7.2. Using Drop cap
  - 3.7.3. Changing case
  - 3.7.4. Wrapping text
- 3.8. Formatting paragraphs
  - 3.8.1. Setting up paragraphs
  - 3.8.2. Bullets and numbering
  - 3.8.3. Column settings
- 3.9. Working with tables
  - 3.9.1. Creating tables
  - 3.9.2. Modifying table structure

- 3.9.3. Table properties
- 3.9.4. Using formulas
- 3.9.5. Sorting your information
- 3.10. Working with graphics and charts
  - 3.10.1. Basic shapes
  - 3.10.2. WordArt/Fontwork
  - 3.10.3. Charts
  - 3.10.4. Inserting pictures
- 3.11. Setting up pages
  - 3.11.1. Page layout
  - 3.11.2. Page orientation
  - 3.11.3. Page numbers
  - 3.11.4. Headers and footers
  - 3.11.5. Page breaks/section breaks
  - 3.11.6. Insert a password
- 3.12. Printing documents
  - 3.12.1. Print preview
  - 3.12.2. Printing documents
- 3.13. Using mail merge

#### **4. Spreadsheet Management (42 hrs.) [Ref. 3, Ref. 4]**

##### **Instructional Objectives:**

- List different spreadsheet management applications
- List the main features of commonly used spreadsheet management applications
- Carry out basic operations in the given spreadsheet application
- Adjust settings of spreadsheet application to optimize its use
- Enter text, data, and formulas to cells in a spreadsheet
- Use mathematical and logical functions to create formulas and to interpret values in a spreadsheet
- Organize worksheets by editing rows, columns and selected areas
- Format numbers and text content for a given requirements
- Analyze and interpret data based on a given worksheet
- Create different charts for given conditions
- Modify page settings to print worksheets properly
- Protect data and worksheets in a spreadsheet application



## 4.1. Introduction

- 4.1.1. What is spreadsheet management?
- 4.1.2. Different spreadsheet management applications

## 4.2. Getting started with MS Excel/OO Calc

- 4.2.1. Starting MS Excel/OO Calc
- 4.2.2. MS Excel/OO Calc interface
- 4.2.3. MS Excel/OO Calc terminology
- 4.2.4. Moving the cell pointer
- 4.2.5. Entering data

## 4.3. Basic file operations

- 4.3.1. Creating workbooks
- 4.3.2. Saving a workbook
- 4.3.3. Opening/closing workbook

## 4.4. Customizing settings

- 4.4.1. Zooming in on a worksheet
- 4.4.2. Maximizing usable space in the program window
- 4.4.3. Splitting and freezing panes

## 4.5. Working with cells

- 4.5.1. Selecting a cell/cells
- 4.5.2. Entering different types of data into cells
- 4.5.3. Sorting and Filtering Data

## 4.6. Formatting cells and worksheets

- 4.6.1. Formatting cell/cells
- 4.6.2. Conditional formatting
- 4.6.3. Adjusting row height/column width
- 4.6.4. Defining styles
- 4.6.5. Applying workbook themes
- 4.6.6. Inserting/deleting rows/columns
- 4.6.7. Locking Cells and Hiding Formulas

## 4.7. Working with functions

- 4.7.1. Entering formulas/functions into cells
- 4.7.2. Using different types of functions
- 4.7.3. Using different cell references

## 4.8. Formatting/modifying charts

- 4.8.1. Creating charts
- 4.8.2. Formatting/modifying charts

## 4.9. Setting up pages

- 4.9.1. Page setup

4.9.2. Adding title rows/columns and headers/footers

4.10. Printing worksheets and charts

4.10.1. Setting/clearing the print area

4.10.2. Previewing the worksheet

4.10.3. Print

## 5. Database Management (42 hrs.) [Ref. 3, Ref. 4]

### **Instructional Objectives:**

- Describe what database management is
- List different database management applications
- List the main features of commonly used database management applications
- Create a database for a given requirement
- Carry out basic table operations in the given database application
- Create queries to retrieve data for a given conditions
- Create forms to enter data easily for given tables
- Create reports based on given conditions
- Adjust basic settings of database application
- Protect database using basic security functions of the application

5.1. Introduction

5.1.1. What is database management?

5.1.2. Different database management applications

5.2. Getting started with MS Access/OO Base

5.2.1. Starting MS Access/OO Base

5.2.2. MS Access/OO Base interface

5.2.3. MS Access/OO Base objects

5.3. Planning and creating databases

5.3.1. Creating a database

5.3.2. Opening/closing a database

5.4. Creating/modifying tables

5.4.1. Using Table Wizard

5.4.2. Using Design View

5.4.3. Modifying table structure(s)

5.4.4. Creating relationships

5.5. Creating queries

5.5.1. Introduction to queries

- 5.5.2. Using Query Wizard
- 5.5.3. Using Design View
- 5.6. Creating Forms
  - 5.6.1. Using Form Wizard
  - 5.6.2. Using Design View
  - 5.6.3. Formatting Forms
- 5.7. Creating Reports
  - 5.7.1. Using Report Wizard
  - 5.7.2. Formatting Reports

## 6. Electronic Presentation (21 hrs.) [Ref. 3, Ref. 4]

### **Instructional Objectives:**

- Describe what a presentation is
- List different presentation application packages
- List the main features of commonly used presentation applications
- Create, modify and format presentation slides for given requirements
- Use different features to view presentation slides
- Create and format text, graphics and charts in a presentation slides
- Apply animation and transition effects to slides
- Insert and modify multimedia objects to presentation slides
- Create a narration for a presentation
- Save, print and pre-review a set of slides

### 6.1. Introduction

- 6.1.1. What is a presentation?
- 6.1.2. Different presentation application packages

### 6.2. Getting started with MS PowerPoint/OO Impress

- 6.2.1. Starting MS PowerPoint/OO Impress
- 6.2.2. MS PowerPoint/OO Impress interface
- 6.2.3. Creating a new presentation using blank presentation pages
- 6.2.4. Viewing the presentation

### 6.3. Modifying presentations

- 6.3.1. Adding/deleting slides
- 6.3.2. Changing the order of slides
- 6.3.3. Hiding the slides
- 6.3.4. Working in slide sorter view
- 6.3.5. Adding and formatting notes

- 6.3.6. Adding hyperlinks
- 6.4. Formatting presentations
  - 6.4.1. Formatting fonts and paragraphs
  - 6.4.2. Working with bulleted and numbered lists
  - 6.4.3. Formatting backgrounds
  - 6.4.4. Using the slide master
- 6.5. Working with drawings, graphics and charts
  - 6.5.1. Adding/modifying drawing objects
  - 6.5.2. Inserting/formatting images
  - 6.5.3. Creating/modifying graphs/charts
- 6.6. Delivering the presentations
  - 6.6.1. Slide transitions
  - 6.6.2. Custom animations
  - 6.6.3. Rehearsing slide show
  - 6.6.4. Creating custom shows
  - 6.6.5. Saving a file
  - 6.6.6. Saving a presentation in other formats
  - 6.6.7. Saving as a web page
- 6.7. Working with multimedia
  - 6.7.1. Inserting sounds/video clips
  - 6.7.2. Adding narrations
- 6.8. Printing
  - 6.8.1. Setting the printing options
  - 6.8.2. Previewing

## **7. Internet and Communication (21 hrs.) [Ref. 1]**

### **Instructional Objectives:**

- Describe what Internet is
- List facilities and benefits of Internet
- Identify different ways to connect to Internet
- Use a web browser to surf the Internet
- Use search engines to find information on the Internet
- Create/use an e-mail account
- Describe the security and risks involved in Internet
- Describe the concept of e-Commerce and e-Learning
- Discuss the future of Internet

## 7.1. Introduction

7.1.1. What is Internet?

7.1.2. The history of Internet

7.1.3. Differences between Internet and World Wide Web

7.1.4. Introducing the Internet buzz words

## 7.2. Identifying facilities/benefits of Internet

## 7.3. Connecting to Internet

7.3.1. Describing the different connecting methods

7.3.2. List the advantages and disadvantages of connecting methods

## 7.4. Web Browsers

7.4.1. Introducing different web browsers

7.4.2. Interfaces of Web Browsers

7.4.3. Setting up browser's home page

7.4.4. Saving the contents opened from the web browser

7.4.5. Downloading different contents from the Internet

## 7.5. Search Engines

7.5.1. Introducing different search engines

7.5.2. Finding information using search engines

## 7.6. e-mail

7.6.1. Describe different e-mailing methods

7.6.2. List e-mail client software

7.6.3. Creating a free e-mail account

7.6.4. Sending/receiving e-mails

7.6.5. Sending/receiving attachments

## 7.7. Security and risk in Internet

7.7.1. Security settings in web browsers/e-mail client software

7.7.2. Taking the precautions when using the Internet

## 7.8. e-Commerce

7.8.1. What is e-Commerce?

7.8.2. Common e-Commerce web sites

## 7.9. e-Learning

7.9.1. What is e-Learning?

7.9.2. Advantages of e-Learning

## 7.10. Future of Internet

## 8. Managing a Computer (18 hrs.) [Ref. 1]

### Instructional Objectives:

- Identify different ports and their functions in a computer
- Describe the steps of installing and uninstalling an application
- Install and use a printer to a computer
- Describe preventive maintenance procedures
- Create different user accounts with different privileges
- Use other languages in windows 7
- Practice to use the finger positions correctly on the keyboard and shortcut keys to speed up typing

#### 8.1. Connecting peripheral devices to the computer

##### 8.1.1. Ports available in a PC

##### 8.1.2. Functions of important ports in a PC

#### 8.2. Installing applications

##### 8.2.1. Minimum requirements to install applications

##### 8.2.2. Different methods of installing applications (autorun setup)

#### 8.3. Uninstalling applications

##### 8.3.1. Reasons for uninstalling an application

##### 8.3.2. The method of uninstalling an application

###### 8.3.2.1. Using uninstall program

###### 8.3.2.2. Using control panel

#### 8.4. Using printer(s)

##### 8.4.1. Installing printer(s)

##### 8.4.2. Changing the default printer

##### 8.4.3. Viewing, pausing and deleting print jobs

#### 8.5. Preventive maintenance (PM)

##### 8.5.1. Importance/benefits of PM

##### 8.5.2. PM procedures

###### 8.5.2.1. Cleaning

###### 8.5.2.2. Disk checkup and Defragmenting

###### 8.5.2.3. Protecting using antivirus/ firewall and security software

###### 8.5.2.4. Data Backup

#### 8.6. Manage user accounts

##### 8.6.1. Account types

##### 8.6.2. Add/update/delete a user

#### 8.7. Using language packs

#### 8.8. Improving keyboard skills (Typing speed, Shortcut keys)