

**Ramgarhia Polytechnic College,**  
**Phagwara**



**Civil Engineering Department**

Head of Department:	Er. Gurcharan Singh
Name of the Faculty:	Er. Rahul Verma
Discipline:	Civil Engineering Department
Semester:	1 <sup>ST</sup>
Subject:	BIT
Lesson Plan Duration:	16 Weeks

**RATIONALE**

Information technology has great influence on all aspects of life. Primary purpose of using computer is to make the life easier. Almost all work places and living environment are being computerized. The subject introduces the fundamentals of computer system for using various hardware and software










components. In order to prepare diploma holders to work in these environments, it is essential that they are exposed to various aspects of information technology such as understanding the concept of information technology and its scope; operating a computer; use of various tools using MS Office/Open Office/Libre Office using internet etc., form the broad competency profile of diploma holders. This exposure will enable the students to enter their professions with confidence, live in a harmonious way and contribute to the productivity.

### **Learning Outcomes**

After undergoing the subject, students will be able to:

- Identify Computer Hardware Components, Network Components and Peripherals.
- Explain the role of an Operating System. Install System and Application Software.
- Explain the function of the system components including Processor, Motherboard and Input-output devices.
- Use Word Processing Software to prepare document. Use Spreadsheet Software to create workbooks and automate calculation.
- Use Presentation Software to create interactive presentation.
- Perform fundamental tasks common to most application software including print, save, edit, cut, copy, paste, format, spell and grammar check.
- Find and evaluate information on the Web. Install Antivirus. Safeguard against Online Frauds, threats and crimes

PO	⇒	PO1	PO2	PO3	PO4	PO5	PO6	PO7
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CO	↓						
CO1							
CO2							
CO3							
CO4							
CO5							
CO6							
CO7							

### Syllabus

PRACTICAL	Details
1.	Given a PC, name its various components and peripherals. List their functions .
2.	Installing various components of computer system and installing system software and application software

3.	Installation of I/O devices, printers and installation of operating system viz. Windows/BOSS/ LINUX
4.	<p>Features of Windows as an operating system</p> <p>Start♣ Shut down and restore♣ Creating and operating on the icons♣ Opening, closing and sizing the windows and working with windows♣ interfacing elements (option buttons, checkbox, scroll etc.) 38 Using elementary job commands like – creating, saving, modifying,♣ renaming, finding and deleting a file and folders Changing settings like, date, time, colour (back ground and fore ground etc.)♣ Using short cuts♣ Using on line help♣</p>
5.	<p>Word Processing (MS Office/Open Office) a) File Management: Opening, creating and saving a document, locating files, copying contents♣ in some different file(s), protecting files, giving password protection for a file b) Page set up: Setting margins, tab setting, ruler, indenting♣ c) Editing a document: Entering text, cut, copy, paste using tool- bars♣ d) Formatting a document: Using different fonts, changing font size and colour, changing the♣ appearance through bold/italic/underlined, highlighting a text, changing case, using subscript and superscript, using different underline methods Aligning of text in a document, justification of document, inserting bullets♣ and numbering Formatting paragraph, inserting page breaks and column breaks, line♣ spacing Use of headers, footers: Inserting footnote, end note, use of comments,♣ autotext Inserting date, time, special symbols, importing graphic images, drawing♣ tools e) Tables and Borders: Creating a table, formatting cells, use of different border styles, shading in♣ tables, merging of cells, partition of cells, inserting and deleting a row in a table Print preview, zoom,</p>

	<p>page set up, printing options♣ Using find, replace options♣ f) Using Tools like: Spell checker, help, use of macros, mail merge, thesaurus word content♣ and statistics, printing envelopes and labels Using shapes and drawing toolbar,♣ Working with more than one window</p>
6.	<p>Spread Sheet Processing (MS Office/Open Office)</p> <p>a) Starting excel, open worksheet, enter, edit, data, formulae to calculate values, format data, save worksheet, switching between different spread sheets 39 b) Menu commands: Create, format charts, organise, manage data, solving problem by analyzing data. Programming with Excel Work Sheet, getting information while working c) Work books: Managing workbooks (create, open, close, save), working in work books, selecting the cells, choosing commands, data entry techniques, formula creation and links, controlling calculations Editing a worksheet, copying, moving cells, pasting, inserting, deletion cells, rows, columns, find and replace text, numbers of cells, formatting worksheet, conditional formatting d) Creating a chart: Working with chart types, changing data in chart, formatting a chart, use chart to analyze data Using a list to organize data, sorting and filtering data in list e) Retrieve data with query: Create a pivot table, customizing a pivot table. Statistical analysis of data f) Exchange data with other application: Embedding objects, linking to other applications, import, export document.</p>

7.	PowerPoint Presentation (MS Office/Open Office) a) Introduction to PowerPoint - How to start PowerPoint - Working environment: concept of toolbars, slide layout & templates. - Opening a new/existing presentation - Different views for viewing slides in a presentation: normal, slide sorter. b) Addition, deletion and saving of slides c) Insertion of multimedia elements - Adding text boxes - Adding/importing pictures - Adding movies and sound - Adding tables and charts etc. - Adding organizational chart - Editing objects - Working with Clip Art d) Formatting slides - Using slide master - Text formatting - Changing slide layout - Changing slide colour scheme - Changing background - Applying design template 40 e) How to view the slide show? - Viewing the presentation using slide navigator - Slide transition - Animation effects, timing, order etc. f) Use of Pack and Go Options.
8	Internet and its Applications a) Establishing an internet connection. b) Browsing and down loading of information from internet. c) Sending and receiving e-mail - Creating a message - Creating an address book - Attaching a file with e-mail message - Receiving a message - Deleting a message d) Assigning IP Addresses to computers and use of domain names.
9	Functioning of Antivirus a) Installation and updation of an antivirus. b) How to scan and remove the virus.

### Reference Books:

- .Fundamentals of Computer by V Rajaraman; Prentice Hall of India Pvt. Ltd., New Delhi
- Information Technology for Management by Henery Lucas, Tata McGraw Hills, New Delhi
- Computers Fundamentals Architecture and Organisation by B Ram, revised Edition, New Age International Publishers, New Delhi

- Computers Today by SK Basandara, Galgotia publication Pvt Ltd. Daryaganj, New Delhi.
- Internet for Every One by Alexis Leon and Mathews Leon; Vikas Publishing House Pvt. Ltd., Jungpura, New Delhi
- A First Course in Computer by Sanjay Saxena; Vikas Publishing House Pvt. Ltd., Jungpura, New Delhi
- Computer Fundamentals by PK Sinha; BPB Publication, New Delhi
- Fundamentals of Information Technology by Leon and Leon; Vikas Publishing House Pvt. Ltd., Jungpura, New Delhi
- On Your Marks - Net...Set...Go... Surviving in an e-world by Anushka Wirasinha, Prentice Hall of India Pvt. Ltd., New Delhi
- Fundamentals of Information Technology by Vipin Arora, Eagle Parkashan, Jalandhar

### **Delivery/Instructional Methodologies**

Sr.No.	Description
1.	Chalk and Talk
2.	PowerPoint Presentation

### **Assessment Methodologies**

Sr. No.	Description	Type
1.	Student Assignment	Direct
2.	Test	Direct
3.	Board Examination	Direct
4.	Student Feedback	Direct

**Gaps in the syllabus - to meet industry/profession requirements**

S.NO.	DESCRIPTION	PROPOSED ACTIONS	PO MAPPING
	N/A	N/A	N/A

**Topics beyond syllabus/advanced topics**

Units	Details	Hours
N/A	N/A	N/A

**Web Source References**

Sr. No.	URL
1.	<a href="https://nptel.ac.in/">https://nptel.ac.in/</a>

**Lesson Plan**

Week	Practical Day	
1 <sup>st</sup>	1.	Given a PC, name its various components and peripherals. List their functions .



2 <sup>nd</sup>	2.	Installing various components of computer system and installing system software and application software
3 <sup>rd</sup>	3	Installation of I/O devices, printers and installation of operating system viz. Windows/BOSS/ LINUX
4 <sup>th</sup>	4	Features of Windows as an operating system Start♣ Shut down and restore♣ Creating and operating on the icons♣ Opening, closing and sizing the windows and working with windows♣ interfacing elements (option buttons, checkbox, scroll etc.) Using elementary job commands like – creating, saving, modifying,♣ renaming, finding and deleting a file and folders Changing settings like, date, time, colour (back ground and fore ground etc.)♣ Using short cuts♣ Using on line help♣
5 <sup>th</sup>	5	Word Processing (MS Office/Open Office) a) File Management: Opening, creating and saving a document, locating files, copying contents♣ in some different file(s), protecting files, giving password protection for a file b) Page set up: Setting margins, tab setting, ruler, indenting♣ c) Editing a document: Entering text, cut, copy, paste using tool- bars♣ d) Formatting a document: Using different fonts, changing font size and colour, changing the♣ appearance through

		<p>bold/italic/underlined, highlighting a text, changing case, using subscript and superscript, using different underline methods Aligning of text in a document, justification of document, inserting bullets♣ and numbering Formatting paragraph, inserting page breaks and column breaks, line♣ spacing Use of headers, footers: Inserting footnote, end note, use of comments,♣ autotext Inserting date, time, special symbols, importing graphic images, drawing♣ tools e) Tables and Borders: Creating a table, formatting cells, use of different border styles, shading in♣ tables, merging of cells, partition of cells, inserting and deleting a row in a table Print preview, zoom, page set up, printing options♣ Using find, replace options♣ f) Using Tools like: Spell checker, help, use of macros, mail merge, thesaurus word content♣ and statistics, printing envelopes and lables Using shapes and drawing toolbar,♣ Working with more than one window</p>
6 <sup>th</sup>	6	<p>Spread Sheet Processing (MS Office/Open Office) a) Starting excel, open worksheet, enter, edit, data, formulae to calculate values, format data, save worksheet, switching between different spread sheets 39 b) Menu commands: Create, format charts, organise, manage data, solving problem by analyzing data. Programming with Excel Work Sheet, getting information while working c) Work books: Managing workbooks (create, open, close, save), working in work books, selecting the cells, choosing commands, data entry</p>

		<p>techniques, formula creation and links, controlling calculations Editing a worksheet, copying, moving cells, pasting, inserting, deletion cells, rows, columns, find and replace text, numbers of cells, formatting worksheet, conditional formatting d) Creating a chart: Working with chart types, changing data in chart, formatting a chart, use chart to analyze data Using a list to organize data, sorting and filtering data in list e) Retrieve data with query: Create a pivot table, customizing a pivot table. Statistical analysis of data f) Exchange data with other application: Embedding objects, linking to other applications, import, export document.</p>
7 <sup>th</sup>	7	<p>Internet and its Applications a) Establishing an internet connection. b) Browsing and down loading of information from internet. c) Sending and receiving e-mail - Creating a message - Creating an address book - Attaching a file with e-mail message - Receiving a message - Deleting a message d) Assigning IP Addresses to computers and use of domain names.</p>
8 <sup>th</sup>	8	<p>Internet and its Applications a) Establishing an internet connection. b) Browsing and down loading of information from internet. c) Sending and receiving e-mail - Creating a message - Creating an address book - Attaching a file with e-mail message - Receiving a message - Deleting a message d) Assigning IP Addresses to computers and use of domain names.</p>
9 <sup>th</sup>	9	

		Functioning of Antivirus a) Installation and updation of an antivirus. b) How to scan and remove the virus.
10 <sup>th</sup>	10	Internet and its Applications a) Establishing an internet connection. b) Browsing and down loading of information from internet. c) Sending and receiving e-mail - Creating a message - Creating an address book - Attaching a file with e-mail message - Receiving a message - Deleting a message d) Assigning IP Addresses to computers and use of domain names.
11 <sup>th</sup>	11	Spread Sheet Processing (MS Office/Open Office) a) Starting excel, open worksheet, enter, edit, data, formulae to calculate values, format data, save worksheet, switching between different spread sheets 39 b) Menu commands: Create, format charts, organise, manage data, solving problem by analyzing data. Programming with Excel Work Sheet, getting information while working c) Work books: Managing workbooks (create, open, close, save), working in work books, selecting the cells, choosing commands, data entry techniques, formula creation and links, controlling calculations Editing a worksheet, copying, moving cells, pasting, inserting, deletion cells, rows, columns, find and replace text, numbers of cells, formatting worksheet, conditional formatting d) Creating a chart: Working with chart types, changing data in chart, formatting a chart, use chart to analyze data Using a list to organize data, sorting and filtering

		data in list e) Retrieve data with query: Create a pivot table, customizing a pivot table. Statistical analysis of data f) Exchange data with other application: Embedding objects, linking to other applications, import, export document.
12 <sup>th</sup>	12	Installation of I/O devices, printers and installation of operating system viz. Windows/BOSS/ LINUX
13 <sup>th</sup>	13	Given a PC, name its various components and peripherals. List their functions
14 <sup>th</sup>	14	Installation of I/O devices, printers and installation of operating system viz. Windows/BOSS/ LINUX
15 <sup>th</sup>	15	Installation of I/O devices, printers and installation of operating system viz. Windows/BOSS/ LINUX
16 <sup>th</sup>	16	VIVA

**NBA has defined the following seven POs for an Engineering diploma graduate:**

- i) **Basic and Discipline specific knowledge:** Apply knowledge of basic mathematics, science and engineering fundamentals and engineering specialization to solve the engineering problems.
- ii) **Problem analysis:** Identify and analyze well-defined engineering problems using codified standard methods.
- iii) **Design/ development of solutions:** Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.

iv) **Engineering Tools, Experimentation and Testing:** Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.

v) **Engineering practices for society, sustainability and environment:** Apply appropriate technology in context of society, sustainability, environment and ethical practices.

vi) **Project Management:** Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.

vii) **Life-long learning:** Ability to analyze individual needs and engage in updating in the context of technological changes.

### **Program Specific Outcomes (PSOs)**

PSOs are a statement that describes what students are expected to know and be able to do in a specialized area of discipline upon graduation from a program. Program may specify 2-4 program specific outcomes, if required.

These are the statements, which are specific to the particular 11 program. They are beyond POs. Program Curriculum and other activities during the program must help in the achievement of PSOs along with POs.