GOVERNMENT POLYTECHNIC, NAGPUR.

(An Autonomous Institute of Govt. of Maharashtra)

COURSE CURRICULUM

PROGRAMME   : **DIPLOMA IN CM/ IT**

LEVEL NAME   : **BASIC SCIENCE COURSES**

COURSE CODE   : **CM201E**

COURSE TITLE   : **COMPUTER   FUNDAMENTALS**

PREREQUISITE   : **NIL**

TEACHING SCHEME : **TH: 00; TU: 00; PR: 04 (CLOCK HRs.)**

TOTAL CREDITS   : **02(1 TH/TU CREDIT = 1 CLOCK HR., 1 PR CREDIT = 2 CLOCK HR.)**

TH. TEE EXAM   : **NIL**

PR. TEE EXAM   : **02 HRs (Internal)**

PT. EXAM   : **NIL**

❖ RATIONALE:

Engineering students should know the basics of handling the computers. This course describes the basics of word processing, table handling, power point presentations for the understanding of elementary knowledge related to IT applications. It also describes basics of Internet and basics of logic development. It is very useful course for understanding the higher level knowledge in the field of IT applications and software engineering.

❖ COURSE OUTCOMES:

After completing this course students will be able to–

1. Use various formatting tools available in Word processing.
2. Manipulate data in tables using formulae / functions and present in form of graphs.
3. Draw block diagrams, figures using Open office
4. Write formulas, add tables using LATEX and generate project report.
5. Use Internet efficiently.
6. Draw a flow chart and write an algorithm for solving the given problem.

❖ **COURSE DETAILS:**

A. THEORY :

Units	Specific Learning Outcomes (Cognitive Domain)	Topics and subtopics	Hrs.
NIL			

B. LIST OF PRACTICALS/LABORATORY EXPERIENCES/ASSIGNMENTS:

Practicals	Specific Learning Outcomes (Psychomotor Domain)	Units	Hrs.
1.	Create new document , open existing document and perform various operations on text like Font setting , delete, select, insert, copy- paste, cut- paste, find and replace.	Word Processing	2
2	Perform various page setup operations like paragraph setting, page margin, size, orientation, watermark, page borders.		2
3	Insert and remove Picture/ Image, Tables, Hyperlink, page break, Headers-Footers, bulleted lists in document.		2
4	Perform Mail merge operation.		2
5	• Open blank /existing worksheet and perform operations like select, delete, insert, copy- paste, cut- paste, find and replace text / data in cell and range of cells. • Perform various formatting operations like, Data Alignment, Wrap text, merge / unmerge cells, change column width , row height, setting page margin, size, orientation, print area.	Spreadsheet	2
6	• Insert and remove Picture/ Image, Hyperlink, page break, Headers-Footers, in worksheet. • Insert and remove cells, rows, columns. Draw various types of graphs / charts.		2
7	Perform various Functions like sum, average, count, countif, countblank, min, max, upper, lower, len, trim, left, right, mid, date, day, today, month, year, abs, int, exp, floor, sign, sum, sumif, sqrt and formulae like calculating simple interest, compound interest etc. on data in a worksheet.		4
8	• Sort data in ascending and descending order, on one and more than one field. • Apply Filter and obtain desired data.		2
9	Create new presentation, add /delete slides, insert / delete tables, wordArt, header/footer ,slide number, cliparts, images in slide, hyperlink.	Presentation	2
10	Apply various slide transition methods, apply animation effect, setup slide show, for selected slides.		4

11	Draw diagrams in a slide, using various available shapes, insert / modify/ delete charts in slide.	Presentation	**4**
12	• Draw block diagrams, circuit diagrams etc. • Save diagrams in jpg/ TIFF formats • Insert saved diagrams in documents	Drawing Tool	**4**
13	• Open LATEX document • Write simple mathematical equations in LATEX document • Insert figures and tables in LATEX document • Generate the reports using templates	Latex	**4**
14	• Create icons, folders & shortcut. • Arrange icons by name, type on desktop • Perform operations using options of Taskbar, Start button and My computer. • Manage files / folders like Copy, move, delete, search, rename files, and folders, • Install / uninstall the APPLICATION software. • SET firewall settings.	Fundamentals Of General Purpose Applications	**4**
15	• Create e-mail account on Web-mail, configuring e-mail account on POP-mail. • Navigate the web, send and receive information on email, , send and receive pictures and other data using email attachment. • Manage Calendar, Contacts, Tasks. • Search and download the Information from Internet.	Internet	**4**
16	• Write and execute two simple C programs using standard formatted I/O functions . • Write and execute two simple C programs using various operators and typecasting	Fundamentals Of Programming	**4**
17	• Write and execute two programs each using if else, nested if- else and switch statement.		**6**
18	• Write and execute two programs each using for loop and while loop.		**6**
		Skill Assessment	**4**
		Total Hrs	**64**

❖ **SPECIFICATION TABLE FOR THEORY PAPER:** Nil

❖ **QUESTION PAPER PROFILE FOR THEORY PAPER:** Nil

❖ **ASSESSMENT AND EVALUATION SCHEME:**

		What	To Whom	Frequency	Max Marks	Min Marks	Evidence Collected	Course Outcomes
Direct Assessment Theory	**CA (Continuous Assessment)**	Progressive Test (PT)	Students	Two PT (average of two tests will be computed)	--	--	--	--
		Assignments		Continuous	--	--	--	--
	TEE (Term End Examination)	End Exam	Students	End Of the Course	--	--	--	--
				Total	**--**	**--**	--	--
Direct Assessment Practical	**CA (Continuous Assessment)**	Skill Assessment	Students	Continuous	20	--	Rubrics & Assessment Sheets	1, 2, 3, 4,5,6
		Journal Writing		Continuous	05	--	Journal	1, 2, 3, 4,5,6
				TOTAL	**25**	**10**		
	TEE (Term End Examination)	End Exam	Students	End Of the Course	**50**	**20**	Rubrics & Practical Answer Sheets	1, 2, 3, 4,5,6
Indirect Assessment		Student Feedback on course	Students	After First Progressive Test	Student Feedback Form			1, 2, 3, 4,5,6
		End Of Course		End Of The Course	Questionnaires			

❖ **SCHEME OF PRACTICAL EVALUATION:**

S.N.	Description	Max. Marks
1	Activities/ Writing program and Drawing flow chart	20
2	Performance / Execution of program	20
3	Viva voice	10
	TOTAL	**50**

❖ **MAPPING COURSE OUTCOMES WITH PROGRAM OUTCOMES:**

1. Computer Engineering:-

Course Outcomes (COs)	Program Outcomes (POs)										PSOs	
	1	2	3	4	5	6	7	8	9	10	1	2
1	3	3	3	3	-	-	-	3	3	3	2	2
2	3	3	3	3	-	-	-	3	3	3	-	-
3	3	3	3	3	-	-	-	3	3	3	-	-
4	3	3	3	3	-	-	-	3	3	3	-	-
5	3	3	3	3	-	-	-	3	3	3	-	-
6	3	3	3	3	-	-	-	3	3	3	2	2

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

2. Information Technology:-

Course Outcomes (COs)	Program Outcomes (POs)										PSOs	
	1	2	3	4	5	6	7	8	9	10	1	2
1	3	3	3	3	-	-	-	3	3	3	2	2
2	3	3	3	3	-	-	-	3	3	3	-	-
3	3	3	3	3	-	-	-	3	3	3	-	-
4	3	3	3	3	-	-	-	3	3	3	-	-
5	3	3	3	3	-	-	-	3	3	3	-	-
6	3	3	3	3	-	-	-	3	3	3	2	2

1: Slight (Low) 2: Moderate (Medium) 3: Substantial (High)

❖ **REFERENCE & TEXT BOOKS:**

S.N.	Title	Author, Publisher, Edition and Year Of publication	ISBN Number
1.	Programming in ANSI 'C'	E. Balagurusamy , Publication Mc Graw Hill Education , 6th Edition, 2012	13: 9781259004612
2.	Let us C	YashwantKanetkar BPB Publication , 13th Edition,2015	13: 9788183331630

❖ **E-REFERENCES:**

- **http://www.computer-pdf.com/programming/c-cpp/284-c-programming-book.html accessed on 30th March 2016**
- **http://www.w3schools.org.in accessed on 30th March 2016**
- **https://www.latex-tutorial.com/tutorials/ accessed on 11/4/2016**
- **http://www1.maths.leeds.ac.uk/LaTeX/TableHelp1.pdf accessed on 11/4/2016**
- **showmedo.com/videotutorials/openoffice accessed on 29/4/2016**
- **www.tutorialsforopenoffice.org accessed on 29/4/2016**

❖ **LIST OF MAJOR EQUIPMENTS/INSTRUMENTS WITH SPECIFICATION**

1. Computer (Dual CORE and above) with Internet connection.
2. Network printer.
3. Office Suite
4. C compiler

❖ **LIST OF EXPERTS & TEACHERS WHO CONTRIBUTED FOR THIS CURRICULUM:**

S.N.	Name	Designation	Institute / Industry
1.	Mr. S.P. Lambhade	Head of Computer Engineering	Government Polytechnic, Nagpur.
2.	Dr. Mrs. A.R. Mahajan	Head of Information Technology	Government Polytechnic, Nagpur.
1.	Ms.V.A. Raje	Lecturer in Computer Engineering	Government Polytechnic, Nagpur.
2.	Ms.D.M. Shirke	Lecturer in Computer Engineering	Government Polytechnic, Nagpur.
3	Ms.G. B. Chavan	Lecturer in Computer Engineering	Government Polytechnic, Nagpur.
4	Shri. Atul Upadhyay	CEO	Vista Computers , Ram Nagar, Nagpur
5	Shri. N. V. Chaudhari	Asst. Professor (CSE)	DBACEO, Wanadongri, Nagpur
6	Shri. Manoj Jethawa	HOD Computer Science	Shri Datta Meghe Polytechnic, Nagpur

_____ _____

(Member Secretary PBOS)   **(Chairman PBOS)**