GOVERNMENT POLYTECHNIC, NAGPUR.
(An Autonomous Institute of Govt. of Maharashtra)
COURSE CURRICULUM

PROGRAMME : DIPLOMA IN CM/IT.

LEVEL NAME : ENGINEERING SCIENCES AND TECHNICAL ART COURSES

COURSE CODE : CM301E

COURSE TITLE : COMPUTER WORKSHOP

PREREQUISITE : NIL

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

TOTAL CREDITS : 02(TH/TU CREDIT = 00 CLOCK HR., 0 PR CREDIT = 2 CLOCK HR.)

TH. TEE EXAM : NIL

PR. TEE EXAM : 02 HRs (Internal)

PT. EXAM : NIL

❖ **RATIONALE:**

This course is essential for creating awareness of computers for the students. It gives handson experience of computer operation to the students. It introduces basic components of computer and method and means to connect them to the system. It introduces basic knowledge of internet: Web browsing, chatting, exchanging of information. Since the dirt can affect reliability and performance of various components, cleaning of components become one of the essential activity of basic maintenance. This subject demonstrates steps in cleaning and handling various components, handling problems with component connections.

❖ **COURSE OUTCOMES:**

After completing this course students will be able to–

1. Identify basic components of computers.
2. Connect and handle different peripheral devices.
3. Identify different ports on Motherboard.
4. Identify and connect different cards on Motherboard.
5. Maintain different peripheral devices like keyboard, mouse, printers and motherboard.
6. Identify front panel and back panel connections.

❖ **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.	Identify all the peripheral devices.	Introduction to personal Computer.	2
2.	Identify the front and rear panel controls and ports on a PC		4
3.	Identify all components mounted on Motherboard.		2
4.	Assemble PC on desktop.		4
5.	Assemble PC inside of cabinet.		4
6.	Perform system configuration using CMOS setup.		4
7.	Identify different ports such as serial, parallel, PS/2, RJ 45, USB ports.		4
8.	Copy data on CD, DVD	Introduction to external peripheral devices.	2
9.	Perform different printer settings on different types of printers. Write down the function of each switch.		4
10.	Perform printer's self test		2
11.	Connect of speakers and microphones.		2
12.	Identify and distinguish different types of cables in your lab.	Introduction to different cables.	4
13.	Make patch cable (UTP) with RJ-45 connector with help of crimping tool.		4
14.	Follow cleaning procedures of Mouse, Keyboard and Motherboard.	Physical connection of different peripheral devices.	2
15.	Connect scanner, scan documents and pictures on the scanner available in your lab. Sample printout be attached		4
16.	Make jumper settings on hard disk.		4
17.	Identify different types of cards such as graphics card, LAN card, multimedia cards etc.		4
18.	Fix different cards into matching slots on the motherboard.		4
	Skill Assessment		4
	TOTAL		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	Selection, writing steps, installation etc.	10
2	Connection and configuration.	10
3	Performance	20
4	Viva voce	10
	TOTAL	**50**

❖ **MAPPING COURSE OUTCOMES WITH PROGRAM OUTCOMES**

1. Computer Engineering:-

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

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

2. Information Technology:-

❖ **MAPPING COURSE OUTCOMES WITH PROGRAM OUTCOMES**

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

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.	Troubleshooting Your PC	Mr. David Stone & Alfred Poor, Prentice Hall India, 2000	13: 978-073-561490-1
2.	A+ Complete	David Groth, BPB Publication,2006	13: 978-0782128024
3.	Computer Installation and Servicing	Balasubramaniam, Tata McGraw Hill Education Pvt. Ltd, Reprint, 2011	13: 9781259082467
4.	Reference Manuals of PC troubleshooting and maintenance	Manuals	-

❖ **E-REFERENCES:**

- http://www.pcworld.com/article/116583/article.html , **assessed on 29th March 2016**

- http://www.computerstepbystep.com/computer-maintanence.html , **assessed on 29th March2016**

- https://www.youtube.com/watch?v=a0rEXzyX0-8, **assessed on 29th March2016**

❖ **LIST OF MAJOR COMPONENTS/DEVICES WITH THEIR SPECIFICATION.**

1. Operating System(Windows 98/2000/XP/7/8/8.1/10)
2. CPU Intel core i3/i5/i7
3. Fiber optics cable(LSFH Polymer)
4. Unshielded Twisted pairs cable(CAT 1 to CAT5)
5. Connectors(RJ45/BNC/AUI/FIBER)
6. Printers(INK JET/LASER)
7. Scanner(FLAT BED)
8. Crimps, Strips and cut tools(HT-200R, HT-2008R)

❖ **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.
3	Ms. Shifa S. Sayyed	Lecturer in Information Technology	Government Polytechnic, Nagpur.
4	Mrs. V A Raje	System Analyst(Lecturer in Computer Engineering)	Government Polytechnic, Nagpur.
5	Ms. I. G. Lokhande	Lecturer in Information Technology	Government Polytechnic, Nagpur.

6	Mr. Atul Upadhay	COE	Vista computers, Ramnagar, Nagpur
7	Prof N. V Chaudhari	Asst. Professor (CSE)	DBACEO ,Wanadongri, Nagpur
8	Prof. Manoj Jethawa	HOD, Computer Science	ShriDattaMeghe Polytechnic, Nagpur

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