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

COURSE CURRICULUM

PROGRAMME   **: DIPLOMA IN COMPUTER ENGINEERING**

LEVEL NAME   **: PROFESSIONAL COURSES**

COURSE CODE   **: CM415E** [$]

COURSE TITLE   **: INDUSTRIAL PROJECT**

PREREQUISITE   **: 90 CREDITS**

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 (External)**

PT. EXAM   **: NIL**

❖ **RATIONALE:**

      Industrial project course is the manifestation of technical knowledge acquired by the student during their course of work. This course provides an opportunity to the students to identify and solve real life problem of the industries /research organization / society. Students also get opportunity to provide innovative, economic and technological viable solution to the world of work.

❖ **COURSE OUTCOMES:**

After completing this course students will be able to–

1 Carryout market survey /Literature survey

2 Select project and Prepare planning

3 Perform project work in group

4 Test project work

5 Prepare project report

6 Present project work

❖ **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.	Perform introductory Task • Form project batch of four-five students • Select project as per area of interest • Select topic / industrial problem / work by consulting the guide from following list 1. Advanced Computer Architecture 2. Artificial Intelligence 3. Automated Software Engineering 4. Business Data Analytics 5. Cloud Computing 6. Computer Networks 7. Computer Security 8. Data Communication 9. Data Compression 10. Data Mining 11. Database Systems 12. Distributed Computing 13. Human Computer Interaction 14. Image Processing 15. Internet and Web Applications 16. Mobile Computing Perform Literature Survey • Refer various Periodicals, Journals, Books, Internet literature related to project topic • Note down findings • Prepare database of collected literature on the basis of title, area of work, methodology used, type of work • Analyze industrial need • Prepare brief report	Introductory Task and Literature Survey	**12**
2	Plan project • Prepare Synopsis in standard format which includes following. Title Page: Project Title, Purpose of submission, Institute logo, Students Name, Guide Name, Department and Institute Name • Use Latex for preparing synopsis. • Submit the Synopsis to guide.	Planning	**8**

	• Approve synopsis from guide • Prepare action plan of project activities • Submit the action plan to guide. • Approve action plan from guide		
3	Perform Project work • Present the overview of the complete system using block diagrams. • Specify design parameters for the system. • Discuss the design and its associated properties. • Discuss all the dependencies in a system design. • Present each module with its associated flowcharts. • Draw E-R Diagrams and Data Flow Diagrams. • Implement the code and give validation rules.	Project Work	16
4	Test Project work	Testing	12
5	Prepare project report in standard format, which includes following. • Title Page which includes: Project Title, Purpose of submission, Institute logo, Students Name, Guide Name, Department and Institute Name • Certificates: Student declaration, Certificate from guide • Acknowledgement • Table of contents • List of Tables • List of Figures • List of abbreviations and acronyms (if any) • Text 1. Introduction, objectives 2. Literature Survey 3. Methodology/Materials/Methods/Estimate. 4. Results 5. Summary/Conclusion. 6. References Use Latex for preparing report. Perform plagiarism check from free internet site. • Submit report of plagiarism check to the guide with project report	Project Writing	8
6	Present project work • Prepare power point presentation of work done. • Prepare yourself to handle examiner questions after presentation. • Practice group presentation. • Present before guide.	Presentation	4
		Skill Assessment	**04**
		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	40	--	Project Report and work done	1.2,3,4,5,6
		Journal Writing		Continuous	10	--	Project Report and work done	1.2,3,4,5,6
				TOTAL	**50**	**20**		
	TEE (Term End Examination)	End Exam	Students	End Of the Course	**100**	**40**	Project Report and work done	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 of topic	10
2	Literature survey	10
3	Project planning and implementation	10
4	Work done, Feasibility of work, Results	50
5	Report writing	10
6	Presentation of work and viva voce	10
	Total	**100**

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

Course Outcomes (COs)	Program Outcomes (POs)										PSOs	
	1	2	3	4	5	6	7	8	9	10	1	2
1	-	3	3	-	2	1	-	3	3	3	-	-
2	-	3	3	-	2	-	-	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	-	-
6	-	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.	Computer-Based Construction Project Management	Tarek Hegazy, Pearson Education, Limited, 1st Edition, 2013	10: 1292027126
2.	Successful Project Management: A Step-by-Step Approach with Practical Examples	Milton D. Rosenau, Gregory D. Githens, John Wiley & Sons, Inc, 4th Edition, 2013	13: 9780471680321

❖ **E-REFERENCES:**
- https://www.ieee.org/publications_standards/publications/periodicals/journals_magazines.html accessed on 29th August 2016
- http://people.csail.mit.edu/billf/publications/How_To_Do_Research.pdf accessed on 30th August 2016
- http://www.duluth.umn.edu/~hrallis/guides/researching/litreview.html accessed on 30th August 2016
- http://library.bcu.ac.uk/learner/writingguides/1.04.htm accessed on 4th September 2016

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

1. Computer System with latest configuration

2. Latex (for writing project report)

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

S.N.	Name	Designation	Institute / Industry
1.	Mr. S. P. Lambhade	HOD, Computer Engineering	Government Polytechnic, Nagpur.
2.	Dr. A. R. Mahajan	HOD, Information Technology	Government Polytechnic, Nagpur.
3.	Mr. S. A. Khatri	Lecturer, Computer Engineering	Government Polytechnic, Nagpur.
4.	Mr. R. L. Meshram	Lecturer, Information Technology	Government Polytechnic, Nagpur.
6	Mr. Atul Upadhya	CEO	Vista Computers , Ram Nagar, Nagpur
7	Mr. N. V. Chaudhari	Asst. Professor (CSE)	DBACEO, Wanadongri, Nagpur
8	Mr. Manoj Jethawa	HOD Computer Science	Shri Datta Meghe Polytechnic, Nagpur

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