Government Polytechnic, Pune

'180 OB' – Scheme

Programme	**Diploma in Information Technology Diploma in Computer Engineering**
Programme Code	**01/02/03/04/05/06/07/08/16/17/21/22/23/24/26**
Name of the Course	**Project**
Course Code	**CM4102**
Prerequisite Course Code and Name	**90 credits & Level - 1 passed**
Class Declaration	**YES**

1. TEACHING AND EXAMINATION SCHEME

Teaching Scheme (In Hours)			Total Credits (L+T+P)		Examination Scheme				
					Theory		Practical		Total Marks
L	T	P	C		ESE	PA	$ESE	PA	100
00	00	04	04	**Marks**	**NA**	**NA**	**50**	**50**	

Legends: L- Lecture, P- Practical, T- Tutorial, C- Credit, ESE-End Semester Examination, PA- Progressive Assessment (Test I, II/Term Work), *- Practical Exam, $- Oral Exam, #- Online Examination each Lecture/Practical period is of one clock hour;

2. RATIONALE

This course tends to mould students towards integrating the knowledge acquired throughout and applying it to the real-life projects, in order to gain the confidence of acquiring Engineering skills and thus fulfil the objective of Diploma Programme. Projects mainly serve the purpose of developing learning-to-learn skills.

3. COMPETENCY

The course should be taught and implemented with the aim to develop the required course outcomes (COs) so that students will acquire following competency needed by the industry:

- **The discipline of planning, organizing, and managing resources to bring about the successful completion of a specific project.**

4. COURSE OUTCOMES (COs)

After undergoing this course, the student will demonstrate the following Course Outcomes:

1. Analyze and define the real-life problem from Project development point of view.
2. Apply appropriate design methodology to the Projects.
3. Make use of designing tools.
4. Conduct feasibility study and cost estimation
5. Create test and debug working model.
6. Compile and Write a Project Report
7. Communicate effectively and confidently as a member /and leader of team.

5. GUIDELINES FOR UNDERTAKING A PROJECT:

I. During the guidance and supervision of the project work, faculty should ensure that students acquire following ***learning outcomes*** (depending upon the nature of the project work some of these learning outcomes may not be applicable):

a) Identify the problems in the area related to their programme based on the competencies acquired since inception into the programme.
b) Identifytheinformationsuggestingthecauseoftheproblemandpossiblesolutions.
c) Assessthefeasibilityofdifferentsolutionsandthefinancialimplications: ,
d) Collect relevant data from different sources (books/internet/market/suppliers/experts etc. through surveys/interviews).
e) Prepare required drawings and detailed plan for execution of the work.
f) Prepare seminar presentations to present findings/features of the project.

II. In case of Industry sponsored/guided project, implementation stages may vary as per industry requirements but same format of project report, diary, demonstration and RUBRICs will be required to be fulfilled.

Sr. No.	General Guidelines
1	Project can be Hardware or Software or Combination of Both. It must involve logic building and application of various technologies learnt during Diploma Completion
2	Project has to be done in a group of 3-4 students under the guidance of allotted faculty
3	Faculty may Form a team of students as per industry roles- Requirement Gathering, Developers, testers, Business Analysts, Project managers. Assign this team a project. Each group is to be assigned a guide faculty. Project titles are to be decided in co-ordination with Faculty.
4	Students are required to prepare working model of the Project and simultaneously prepare a report. In general project can be - i. Prototype (design, make, test and evaluate). ii. Application development using hardware/software.
5	Students Must Submit One Hard copy and one Soft copy each of Project Report and soft-copy of the project code or the working model.
6	Generically these titles are to be covered in Project Report: a. Problem Definition b. Platform and/Hardware Specifications c. Feasibility Study: Cost Estimation, Time Estimation d. Various Design UML charts/diagrams as applicable like Use Case Diagram, Activity Charts, Class Hierarchy, DFD, CFD, ER-Diagrams, Dependency charts or any other e. Important project Code f. Testing details g. Limitations h. Future Scope/Extendibility i. Books/References/Websites (Other titles may be added and used as applicable, based on the nature of project)

7	Student should maintain a project diary and note down all the progress steps and details in the diary. Faculty should check the diary each week and accordingly interact with students based on the progress shown and keep proper notings.Impart proper guidance. This will assist in proper evaluation of students. Format of cover page of diary is as Annexure IV. Project diary may contain not more than 5-10 pages.

Course Implementation Stages:

1. **Orientation Session:** Portfolio Incharge faculty has to coordinate conduction of Project orientation session during last week of fifth semester.
2. **Problem Search and problem statement finalization:** Students have to undergo survey activity under the guidance of faculty . This activity maybe started during earlier semester in parallel with Seminar activity and **completed during first week of semester start.**
3. **Requirement Gathering :** One week to be utilized for gathering detailed project requirements including human resource, technical requirements/resources (software and hardware platforms), feasibility study and cost requirements. Presented to the faculty.
4. **Planning: Next week** must be utilized towards prepare a detailed project proposal and plan which must be executed or implemented within the time allocated. **Planning includes resources required, work allocation, time estimations and cost estimations.** Decide the development model to be implemented.
5. Outcome to be published under **project proposal .** May only be submitted in softcopy.
6. **Project Development, Testing& Report preparations:** Project development to proceed under faculty guidance as per planned.
7. **Project Demonstration:** Phase wise demonstration to faculty is done. The project would have to go through minimum two demonstrations :
    a. Preliminary demonstration (Given to faculty guide)
    b. Final Demonstration: During ESE final demonstration of working model is to be presented.

Note:

i. Student must be maintaining a project diary simultaneously as well as preparing a project report, periodically monitored and assessed by the teacher as per provided RUBRICS.

ii. Some stages maybe done recursively.

6. ASSESSMENT OF PROJECT WORK

A. Progressive Assessment (PA) Guidelines and criteria

The assessment of the students in the fifth semester Progressive Assessment (PA) for 50 marks is to be done based on following criteria.

Sr. No.	Criteria	Marks
1	Topic Selection & Problem definition	10
2	Requirement Gathering	10
3	Stage wise progress as per discussion	10
4	Involvement in project development	10
5	Report Writing	10

B. End Semester Exam Assessment (ESE) criteria/Term Work assessment criteria

The assessment of the students in the fifth semester End-Semester-Examination (ESE)for 50 marks is to be done based on following criteria. Thisassessment shall be done by the Faculty.

Sr. No.	Criteria	Marks
1	Knowledge	20
2	Development	20
3	Innovation	5
4	Presentation	5

7. THEORY COMPONENTS

NA

8. SUGGESTED SPECIFICATION TABLE FOR QUESTION PAPER DESIGN

NA

9. SUGGESTED STUDENT ACTIVITIES

NA

10. SUGGESTED SPECIAL INSTRUCTIONAL STRATEGIES (if any)

As per the guidelines mentioned in Annexure-I or any other guidelines given by faculty.

11. SUGGESTED MICRO-PROJECTS

NA

12. SUGGESTED LEARNING RESOURCES

As per the guidelines mentioned in Annexure-I or any other guidelines given by faculty.

13. SOFTWARE/LEARNING WEBSITES

NA

14. 14.PO - COMPETENCY- CO MAPPING

- **Mapping Course Outcomes with Program Outcomes:**

	PO1	PO2	PO3	PO4	PO5	PO6	PO7
CO1	3	3	3	-	2	3	3
CO2	3	3	3	3	2	3	3
CO3	3	3	3	3	2	3	3
CO4	3	3	3	2	2	3	3
CO5	3	3	3	3	2	3	3
CO6	2	-	3	1	2	3	3
CO7	-	-	-	-	-	3	3

- **Mapping Course Outcomes with Program Specific Outcomes:**

CO /PSO	PSO1	PSO2
CO1	3	3
CO2	3	3
CO3	3	3
CO4	3	3
CO5	3	3
CO6	3	3
CO7	3	3

Annexure-II
Major Project Report

After completion of the project work, every student will submit a project report which should contain the following:

1. Cover Page (as per annexure 1)
2. Title page (as per annexure 2)
3. Certificate by the Guide (as per annexure3)
4. Acknowledgment (The candidate may thank all those who helped in the execution of the project.)
5. Abstract (It should be in one page and include the purpose of the study; the methodology used.)
6. Table of Contents(as per general guidelines):Detailed description of the project (This should be split in various chapters/sections with each chapter/section describing a project activity in totality). This portion of report should contain all relevant diagrams, tables, flow charts, which are properly labeled.
7. Conclusion
8. References (The listing of references should be typed 2 spaces below the heading "REFERENCES" in alphabetical order in single spacing left – justified. It should be numbered consecutively (in square [ ] brackets, throughout the text and should be collected together in the reference list at the end of the report. The references should be numbered in the order they are used in the text. The name of the author/authors should be immediately followed by the year and other details). Typical examples of the references are given below:

Report Specifications:

1. Project Report's Cover Type: Hard-bound
2. Color of Project Report Cover: Black only with golden alphabets (as per annexure 1)
3. Number of Copies: 5 (Individual copies(each per student) + Departmental Copy(one))
4. Paper Size (orientation): A4 (portrait)
5. Margins: 1" top / bottom / right and 1.5" left
6. Font Type: Times New Roman
7. Font Size: 16 bold for chapter names, 14 bold for headings and 12 for normal text
8. Line Spacing: 1.5 throughout
9. Page Numbering: Bottom center of page in the format – Page 1 of N

NOTE: Project report must contain only a relevant and short mention – technology or platform or OS or tools used . It must be more focussed on project work carried out and its implementation details without including any source code.

Details of Softcopy to be submitted:

CD of the project work is required to be pasted on the back cover of the project report in clear packet, which should include the following folders and contents:

1. **Presentation** (should include a PPT about project in not more than 15 slides)
2. **Documentation** (should include a word file of the project report)
3. **SourceCode** (full source code of the project with libraries used)
4. **Program** (final copy of the project executable)
5. **Support** (any third party tools used or runtime environment setups that are required to run the project)
6. **Help** (user manual on how to run the project)

NOTE: CD must be checked for any harmful viruses before submission. Source Code and Program folders can be combined into single folder **Project** if it's a web project etc.

Annexure-III

Government Polytechnic,Pune

(An Autonomous Institute of Government of Maharashtra)

CERTIFICATE

This is to certify that

1)Name Of Student Enrollment Number

2)Name Of Student Enrollment Number

3)Name Of Student Enrollment Number

4)Name Of Student Enrollment Number

Has completed the necessary project work and prepared the bonafide on

"Project Title"

In a satisfactory manner as a partial fulfillment of requirement of the

THIRD YEAR DIPLOMA IN

INFORMATION TECHNOLOGY

FOR THE ACADEMIC YEAR

2017-2018

(H.O.D) **(Principal)**

(Internal Guide) **(External Examiner)**

Table of Contents

***Students can add/remove/edit chapter names as per the discussion with their guide**

Annexure-IV

PROJECT DIARY

Name of the Student: _____ Name of Guide (Faculty) : _____

Enrollment Number: _____ Semester: _____Project batch Number: _____

Date	Discussion Topics/Activity Details	Work Allotted Till Next Session/Corrections Suggested/Faculty Remarks	Dated Signature of Faculty

Dated Signature of Faculty **Dated Signature of HOD**

Annexure-V

Rubrics

Progressive Assessment					Project Presentation			
Topic Selection & Problem definition (10)	**Requirement Gathering (10)**	**Stage wise progress as per discussion (10)**	**Involvement in project development (10)**	**Report Writing (10)**	**Knowledge (20)**	**Development (20)**	**Innovation (5)**	**Presentation (5)**

Sign: Name: A.B.Bhusagare (Course Expert/s)	Sign: Name: U. V. Kokate Dr. S. B. Nikam (Head of the Department)
Sign: Name: Mr.U.V.Kokate Dr. S. B. Nikam (Programme Head)	Sign: Name: Mr. A.S.Zanpure (CDC In-charge)