

## INTRODUCTION TO PROJECT WORK

Project work is a very important course in all branches of diploma programmes. It offers following opportunities to students of final semester:-

1. To apply the knowledge and skills learnt in previous semesters, to solve real life industrial / engineering / professional problems.
2. To modify/ improve the existing engineering / professional systems
3. To develop systems / components / methods / processes / resources to cater the needs of the nearby small scale / medium industry
4. To develop innovative solutions for prevailing engineering / professional issues / problems / concerns
5. To learn to solve real life engineering / professional problems which often have many aspects to be considered and addressed
6. To learn **skills and abilities** which are otherwise not possible either in classroom or in structured environment of laboratory such as:-
  - **Skill to work in groups or teams,**
  - **Skill to face real life professional problems and to create real life solutions for them,**

- **Skill to take professional decisions under real life constraints and circumstances,**
- **Skill to learn in self directed way to pursue the specific professional projects (Self Directed Learning)**
- **Skill to learn from real life self experiences ( lifelong learning)**
- **Skill to manage the real life engineering / professional projects**
- **Skill to plan and organize the self / group professional work**
- **skills to apply the engineering management principles in real life professional projects**
- **Skill to defend / justify self real life engineering / professional work in front of significant others**
- **Skill to complete the professional tasks / work keeping in view societal, legal and environmental considerations**
- **Skill to collect relevant data in real life situations**
- **Skill to relate engineering / professional knowledge gained in various semesters with real life engineering / professional problems**
- **Skill to estimate the duration and costs in real life engineering / professional work**
- **Skill to assess the theoretical feasibility, financial feasibility and time feasibility of real life engineering / professional tasks**

- **Skill to assess the suitability of available human resources for the given engineering / professional task considering their ability, knowledge, experience, interest etc.**
- **Skill to prepare component specifications, engineering drawings / product specifications / work plans for solving real life engineering / professional problems**
- **Skill to conduct market surveys for purchasing of project related components and for hiring specific engineering / professional expert services etc.**

Many of the above skills which are learnt during the project work are also necessary to fulfill the requirements of NBA for attainment of many Programme Outcomes (POs), which are otherwise not possible to be achieved. These POs are:-

- **Design solutions for well-defined technical problems and assist with the design of systems components or processes to meet specified needs.**
- **Apply modern engineering tools and appropriate technique to conduct standard tests and measurements.**
- **Apply appropriate technology in context of society, sustainability, environment and ethical practices.**

- **Use engineering management principles individually, as a team member or a leader to manage projects and effectively communicate about well-defined engineering activities.**
- **Ability to analyze individual needs and engage in updating in the context of technological changes.**

NBA has put special emphasis on the project work done by students. It has assigned significant marks (35 marks) exclusively for **student's project work** under following heads:-

- **Method of identification of topics for the project work,**
- **Methodologies adopted to complete the projects,**
- **Quality of the projects and report writing,**
- **Process adopted to assess individual and team performances in the project work,**
- **Process of monitoring and evaluation of the student's project work,**
- **Quality of the prototypes made in project work,**
- **Recognition and awards received by the students' projects in state/ national level etc.**

*Therefore, the aim of introducing the course of **PROJECT WORK** is to ensure learning of above mentioned skills and abilities in the students and also to make efforts to earn the maximum of marks allotted by NBA for assessment of practices followed in the student's project work.*

With an objective to ensure the learning of above skills and abilities as well as to earn maximum marks in NBA assessment, the university has developed the following course structure (COs & LOs) of this course.

The Course on Project Work consists of five phases:-

	Description of phases	COs	LOs	Learn Hrs.	Marks
1	Literature / industry's need survey and finalization of topic / title	01	02	20Hrs	25
2	Detailed planning of the project work				
3	Implementing the detailed project plan	01	02	70Hrs	35
4	Managing the project activities				
5	Reporting of the project work output /outcome / prototype	01	03	15Hrs	40
	<b>Total</b>	<b>03</b>	<b>07</b>	<b>105Hrs</b>	<b>100</b>

The details of COs and LOs are as follows:-

**CO1:-** The student will be able to prepare a detailed project plan for solving any real life related engineering / technical / professional / industrial problem

**LO1:-** The student / group will be able to present / justify / defend its project proposal (10 marks)

**LO2:- The student group will be able to prepare a detailed activity based plan & activity schedule chart to complete the project (15 marks)**

**CO2:- The student will be able to implement the project plan and manage the project**

**LO1:- The student / group will be able to revise / update / re-schedule / re-allocate the activities / resources in the project plan according to their day to day local contingencies (20 marks)**

**LO2:- The student / group will be able to prepare a daily logbook of project activities performed (15 marks)**

**CO3:- The student will be able to present the completed project work**

**LO1:- The student / group will be able to present the prototype / output /outcome of the project work and to defend/ justify methodology implemented as well as the quality of prototype / output / outcome of the project work (15 marks)**

**LO2:- The student / group will be able to prepare the project report in the prescribed format (15 marks)**

**LO3:- The student will be able to prepare a reflective learning portfolio about the informal self-learning while working for the project (10 marks)**

## **General Guidelines for Project Work**

- The project topics should be related to concerned branch of engineering / profession, but, should not be the exact content of the curriculum taught in the discipline.
- Student's project topics should be preferably 'real life' topics. It means the project topics should have substantial element of uncertainty, complexity and multi-disciplinary-ness which can be coped up by the students. These elements offer opportunities to students to apply engineering/ professional knowledge in real life settings, solve real life problems and to take real life decisions. As a project guide, concerned teacher should ensure these by suitably altering / framing / reframing the statement of topic / title.
- The project topics should be such that students can get opportunity to refer IS codes, Manuals, Handbooks, norms and standards, opportunity to conduct standard tests, and opportunity to operate modern laboratory equipments following SOPs.
- For student's interest, active participation and ownership in the project work, their self-motivation is necessary. Therefore, students should be actively involved in finalizing the topic of project.
- Students should be asked to conduct a brief review of literature for problems and issues in their engineering / professional areas of interest, where they think they can contribute effectively. The project guide should facilitate them in this regard, through his/her expertise and experience.

Every student group should be asked to propose at least three topics of their interest.

- The topics proposed by student project groups should be assessed by the facilitator-teacher on following three criteria:-
  - **The work on the topic should be theoretically and practically feasible**
  - **The project work on the topic should be completed within approx. two and half months**
  - **Availability of required resources should be certain. Cost of project work should also be bearable.**
- Normally, students' project works should be carried out in small groups (3 to 5 students).
- All faculty members of department should be engaged as project guides. Every faculty member should be project guide of at least one student project group.
- Normally, project guides should be assigned to the students through lottery system and students under each faculty should be asked to form their small groups.



## **Role of a project guide**

- The project guide should review the topics of interests of student project groups for enough scope in their project work to inculcate skills and abilities aimed to be developed in students through their project work. Accordingly, he/she should appropriately alter or revise the topics proposed by the student groups. This can also be ensured by reframing, altering or recomposing the statement of the title of the project work and mentioning of specific concepts, specific procedures, specific conditions, specific tests and other specifications in the title of project work.
- The project guide should work as an expert facilitator for students. It means he/she should not be a spoon feeder to the student project group. He/she should facilitate the students through his/her expert knowledge, experience and information, advices, suggestions, clues, hints as and when required by the students' project group.
- As a facilitator, instead of providing readymade solutions to project related problems, he/she should prefer to encourage and facilitate students to face problems, search possible solutions and to choose most appropriate solution. Although, at times of crisis, when he/she observes that students are unable to deal with the complexity of the situation, he/she should also work as savvier.
- Normally, ee/she should not take project related decisions on behalf of students. Rather, he/she should encourage and support students to

take decisions. In exceptional situations, when he/she observes that students are unable to control the project, he /she may take decision or correct decisions taken by them, or direct them so that project could be sailed smoothly.

- The project guide should regularly arrange project progress review meetings with the student groups. He/ she should regularly check their project work logbook. Apart from facilitating them in their project work, he/she should also observe the progress of their variety of project related learning, which is the main objective of the student project work.
- The project guide should appropriately treat the slow learners.

<b>RGPV (Diploma Wing ) Bhopal</b>		<b>SCHEME FOR LEARNING OUTCOME</b>			Branch Code			Course Code			CO Code	LO Code	Format No.
								6 0 4			1	1	<b>4</b>
<b>COURSE NAME</b>	<b>Project Work</b>												
<b>CO Description</b>	<b>The student will be able to prepare a detailed project plan for solving any real life related engineering / technical / professional / industrial problem</b>												
<b>LO Description</b>	<b>The student / group will be able to present / justify / defend its project proposal</b>												
<b>SCHEME OF STUDY</b>													
<b>S. No</b>	<b>Learning Content</b>	<b>Teaching – Learning Method</b>	<b>Description of T-L Process</b>	<b>Teach Hrs.</b>	<b>Pract. /Tut Hrs.</b>	<b>LRs Required</b>	<b>Remarks</b>						
1	Preliminary survey of literature/industry for problems for project work, evaluation of the potential project topics, finalizing project topic/title, preparation of project proposal presentation/defending project proposal	Guided learning activity	Project guide will guide student group for literature review, provide industry’s problems which can be worked upon as project, guide the groups to evaluate the topics and finalize project topic, guide the group for preparing project proposal, guide group to present / defend their project proposal.	-	08	Handout, video film*	*Teacher will suggest a suitable online video to be viewed by students						
<b>SCHEME OF ASSESSMENT</b>													
<b>S. No</b>	<b>Method of Assessment</b>	<b>Description of Assessment</b>				<b>Maximum Marks</b>	<b>Resources Required</b>	<b>External / Internal</b>					
1	Student group assignment+ student group activity	Every student group will submit project proposal in prescribed format. A departmental seminar will be organized in which different students’ groups will present their proposal in front of students of second and third year and faculty members and will justify/ defend their project proposal.				10	Rating Scale	Internal					
<b>ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)</b>													
1.	The project topics should be related to concerned branch of engineering / profession, but, should not be the exact content of the curriculum taught in the discipline.												

2. For student's interest, active participation and ownership in the project work, their self-motivation is necessary. Therefore, students should be actively involved in finalizing the topic of project.
3. Students should be asked to conduct a brief review of literature for problems and issues in their engineering/ industrial / professional areas of interest, where they think they can contribute effectively. Guide should facilitate them in this regard, through his/her expertise and experience. Every student group should be asked to propose at least three topics of their interest.
4. The topics proposed by student project groups should be assessed by the guide on following three criteria:-
  - a. **The project work on the topic should be theoretically and practically feasible**
  - b. **The project work on the topic should be completed within approx. three months**
  - c. **The required resources should be available to students. Cost associated with the project work should also be bearable.**
5. Project topic / title should be finalized by student groups after due consultation with their project guides.
6. Student's project topics should be preferably 'real life' topics. It means the project topics should have substantial element of uncertainty, complexity and multi-disciplinary-ness which can be handled by the students. These elements offer opportunities to students to apply engineering knowledge in real life settings, in solving real life problems and in taking real life decisions. Project guide should ensure these by suitably altering / framing / reframing the statement of topic / title.
7. The project topics should be preferably such that students can get opportunity to refer, study and apply IS codes, Manuals, Handbooks, norms and standards; get opportunity to conduct standard tests; get opportunity to operate modern laboratory equipments following SOPs.

#### **8. PROJECT PROPOSAL FORMAT:-**

1. **Project title:-**
2. **Relevance, need and importance of the project:-**
3. **Project Output / Outcome:-**
4. **Expected time to complete the project:-**
5. **Start date & finish date:-**
6. **Methodology:-**

- 7. Major resources required:-**
- 8. Estimated cost of project:-**
- 9. Potential problems and challenges associated with the project**
- 10. Strategy to deal with the potential problems and challenges**

**9. Assessment criteria:-**

**(A) Assessment of project proposal:-**

- a. Extent of relevance, need of the project and benefits of the project (2 marks)
- b. Extent of feasibility of the project work in principle (2 marks)
- c. Extent of feasibility of the project work in semester duration (2 marks)
- d. Extent of feasibility of project in terms of project cost & availability of resources (2marks)

**(B) Assessment of project proposal; quality of presentation / justification/ defense ( 2 marks)**

RGPV (Diploma Wing ) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No.
								6	0	4	1	2	4
COURSE NAME		Project Work											
CO Description		The student will be able to prepare a detailed project plan for solving any real life related engineering / technical / professional / industrial problem											
LO Description		The student group will be able to prepare a detailed activity based plan & activity schedule chart to complete the project											
SCHEME OF STUDY													
S. No	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	Need of detailed project plan, creation of activities, logically sequencing of activities, assigning responsibilities of activities, assessing resource requirements of every activity, activity scheduling, activity schedule chart and its application	Guided learning activity	Project guide will guide student group for breaking the project into activities, will guide them to prepare activity specifications, will guide them to arranging activities in logical sequence, will guide them to schedule the activities, will guide them to prepare activity schedule chart	-	12	Handout, video film*	*Teacher will suggest a suitable online video to be viewed by students						
SCHEME OF ASSESSMENT													
S. No	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal								
1	Student group assignment	Every student group will submit its detailed activity based plan and activity schedule chart for their project work. These will be assessed through following criteria	10+ 05	Rating Scale	Internal								
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
<p>1. For systematic, efficient and effective project work, project work should be planned before starting working on the project.</p> <p>2. In project planning, project work is broken into different project activities. Activity specifications are prepared. Then, different activities are logically</p>													

sequence, activity numbers are assigned to activities and their start date as well as finish dates are decided.

3. Activity specifications are the details prepared about the activity. The description of specification elements is as below:-

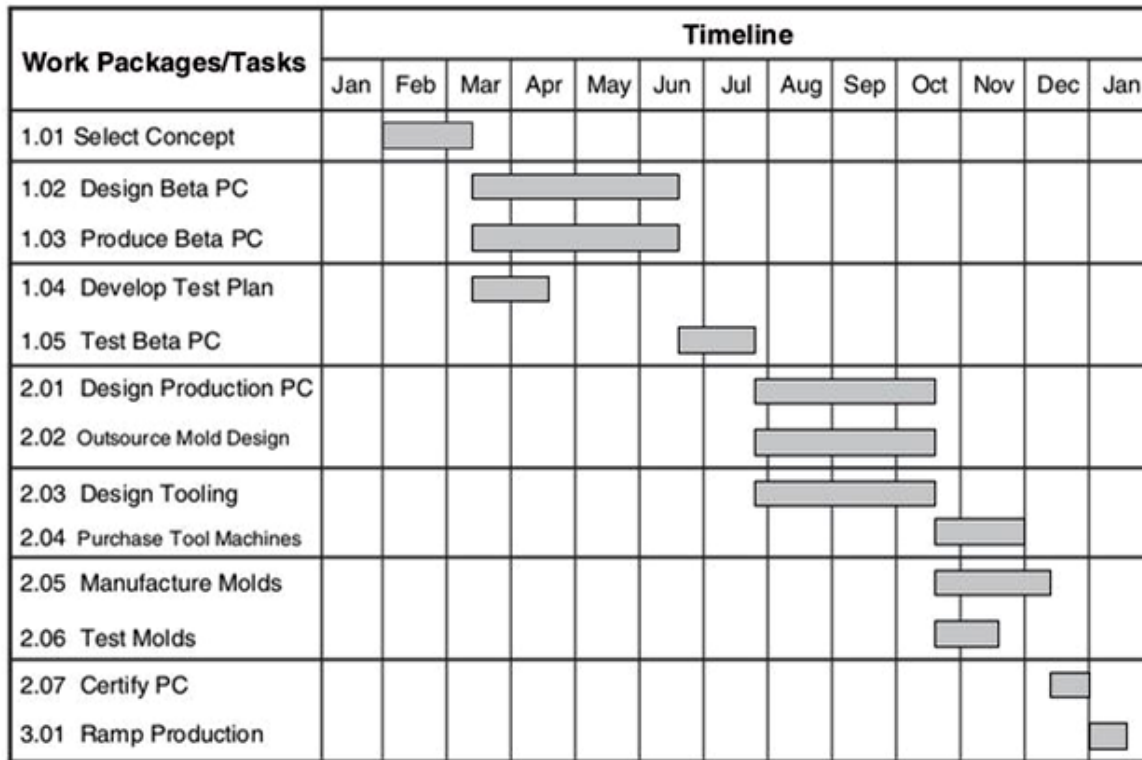
- a. Activity description
- b. Activity duration (estimated)
- c. Name of group member responsible for the activity
- d. Pre-requisite information or prior knowledge required to carry out of the activity
- e. List of resources required to complete the activity
- f. Estimated expenditure on the activity

4. FORMAT FOR DETAILED PROJECT PLAN

S. No.	Activity No.	Activity description	Activity Duration	Start date	Finish date	Responsible member	Pre-requisite information or knowledge	Resources required	Estimated expenditure

5. A pictorial presentation of the scheduling of the activities is also prepared. It is also called Gantt chart. It is useful to visualize how the activities will proceed in relation to each other. In the chart, scale on X-axis represents time line which may be hours or days or dates. Y axis represents sequential list of the activities. Activity duration is marked by drawing rectangular horizontal bars of different lengths.

6. An example of activity schedule chart:-



**7. Assessment criteria:-**

**a. Assessment of submitted detailed project plan (10 marks)**

- i. Extent of appropriateness of activity descriptions (3 marks)
- ii. Extent of appropriateness of activity sequence/ activity durations (3 marks)
- iii. Extent of Appropriateness of estimation of required resources / prior information / knowledge (3 marks)
- iv. Extent of provisions for contingencies ie delays/ uncertainties /waiting time etc. (1mark)

**b. Assessment of submitted activity schedule chart (5marks)**

- i. Extent of correctness of the chart according to detailed project plan (3marks)
- ii. Extent of chart quality in the activity schedule chart (2marks)





RGPV (Diploma Wing ) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No.
								6	0	4	2	1	4
COURSE NAME		Project Work											
CO Description		The student will be able to implement the project plan and manage the project											
LO Description		The student / group will be able to revise / update / re-schedule / re-allocate the activities / resources in the project plan according to their day to day local contingencies											
SCHEME OF STUDY													
S. No	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	Implementation of project plan, conducting project activities, Need to update the plan, deviations from plan, reasons for deviations, daily contingencies, assessing, revising/updating/re-scheduling/re-allocation activities / resources, revising the project schedule diagram	Guided learning activity	Project guide will guide student group to implement its project plan, guide them to assess, review, revise, update, reschedule the plan/activities, reallocating resources to different activities , guide the group to revise the project schedule diagram	-	60	Handout, video film*	*Teacher will suggest a suitable online video to be viewed by students						
SCHEME OF ASSESSMENT													
S. No	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal								
1	Student group assignment	Every student group will submit time to time updated / revised project plans and project schedule diagrams along with list of details of revisions made and corresponding reasons/justifications to revise the project plan / project schedule diagrams.	20	Rating Scale	Internal								
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
1. Project plans are prepared by prior estimations about different project activities. Quality of project plan depends on the accuracy of estimation. During real life implementation of project plans, student project groups face contingencies and project does not necessarily proceed exactly													

according to plan. There may be contingencies like delays in start / finish of activities, non-availability of resources, delays in availability of resources, availability of better resources etc.

2. Student project group should be able to time to time (weekly) review the plan in the light of circumstances and contingencies, and it should be able to revise the project plan
3. Project guide should guide them in their periodic review of the project plan. Students should prepare the lists of changes to be made in the plan along with reasons or justifications for such changes. According, plan should be revised and in future revised plan should be implemented.
4. **Suggested format for details of revision:-**

S. No.	Date	Revised Plan No.	Description of revisions made	Description of reason / justification
1				
2				
3				
4				

5. Guide should assess extent of improvement done in the plan by the student group considering time to time arising different contingencies.
6. **Assessment criteria:-**
  - a. Extent of improvement done related to activities (5 marks)
  - b. Extent of improvement done related to in charge-ship of activities (5marks)
  - c. Extent of improvement done related to resource allocations to different activities (5 marks)
  - d. Extent of improvement done in other misc. ways (5 marks)

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							6	0	4	2	2	<b>4</b>

<b>COURSE NAME</b>	<b>Project Work</b>
<b>CO Description</b>	<b>The student will be able to implement the project plan and manage the project work</b>
<b>LO Description</b>	<b>The student / group will be able to prepare a daily logbook of project activities performed</b>

**SCHEME OF STUDY**

S. No	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks
1	Project log book, its need and importance in project work, contents of the log book, filling in the log book, use of log book in retrieving project related useful information from log book	Guided learning activity	Project Guide will teach the need and benefits of project log book, will guide the students to prepare and regularly fill in the project log book along with project work, will time to time inspect the project logbook and provide feedback to improve the quality of entries	-	10	Handout, video film*	*Teacher will suggest a suitable online video to be viewed by students

**SCHEME OF ASSESSMENT**

S. No	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal
1	Student group assignment	At the end of their project work, every project group will submit their completed project work log book to the project guide. The project guides will assess the Log book on basis of assessment criteria	15	Rating Scale	Internal

**ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)**

1. A project work Logbook is a record of important events in project management. It is the written record showing all the work from start to finish. It provides evidence of work. It is important to track actions taken, changes made, decisions taken, problems and issues faced while managing a project. All required information is recorded in a logical manner.

2. It is maintained and filled by the project group members.
3. The log book should be filled in at least daily
4. Project work logbook may be maintained either in hard copy or in soft copy.
5. Project guide teacher should guide the students to fill the entries in the log book. He/she should time to time inspect group's project work log book.
6. Following is the suggested format for the log book page:-

<b>PROJECT WORK LOG BOOK</b>		<b>COLLEGE</b>				<b>YEAR</b>	
<b>DEPARTMENT</b>		<b>PROJECT GROUP NO.</b>		<b>DATE</b>		<b>SHEET NO.</b>	
<b>PROJECT TITLE</b>							
<b>ACTIVITIES FINISHED</b>	<i>DESCRIPTION</i>						
<b>PROGRESS IN ONGOING ACTIVITIES</b>	<i>DESCRIPTION</i>						
<b>NEW ACTIVITIES STARTED</b>	<i>DESCRIPTION</i>						
<b>DELAYS OCCURED AND REASONS FOR DELAYS</b>	<i>DESCRIPTION</i>						
<b>PROBLEMS / ISSUES FACED AND SOLVED</b>	<i>DESCRIPTION</i>						
<b>UNSOLVED PROBLEMS</b>	<i>DESCRIPTION</i>						
<b>DECISIONS TAKEN</b>	<i>DESCRIPTION</i>						
<b>Signature of students</b>	<b>SIGN-1</b>					<b>SIGN-2</b>	

**7. Assessment criteria:-**

- a. Extent of regularity of maintaining the log book (5marks)**
- b. Extent of number of entries made in the logbook (5 marks)**
- c. Extent of quality of entries made in the logbook (5 marks)**

RGPV (Diploma Wing ) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No.
								6	0	4	3	1	4
<b>COURSE NAME</b>		Project Work											
<b>CO Description</b>		The student will be able to present the completed project work											
<b>LO Description</b>		The student / group will be able to present the prototype / output /outcome of the project work and to defend/ justify methodology implemented as well as the quality of prototype / output / outcome of the project work											
SCHEME OF STUDY													
S. No	Learning Content	Teaching – Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	Importance of project work presentation, preparation for presentation, defending / justifying the presentation, practice and rehearsal	Guided learning activity	Project guides will guide respective student project groups in preparation of power point / physical presentation, project guides will guide the groups to prepare for defending/ justifying the methodology adopted and quality of the project work prototype/ output/ outcome, group practice and rehearsal	-	04	Handout, video film*	*Teacher will suggest a suitable online video to be viewed by students						
SCHEME OF ASSESSMENT													
S. No	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal								
1	Student group presentation	The department will arrange a seminar. All second year and final year students, project guides and external examiner will be present in the seminar, student group will present the prototype/output/outcome of its project work through power point presentation as well as through physical presentation and there will be question answer session after the presentation	15	Rating Scale	External								
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
1. <b>Assessment criteria:-</b>													
a. Extent of completion of the project work (2 marks)													

**b.** Quality of project prototype/ output/ outcome ( 5marks)

c. Extent to which the student (group member) appropriately answered the questions of external examiner ( 8 marks)



RGPV (Diploma Wing ) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No.
								6	0	4	3	2	4
<b>COURSE NAME</b>		Project Work											
<b>CO Description</b>		The student will be able to present the completed project work											
<b>LO Description</b>		The student / group will be able to prepare the project report in the prescribed format											
SCHEME OF STUDY													
S. No	Learning Content	Teaching –Learning Method	Description of T-L Process	Teach Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	Importance of project report, format for project report, report preparation and editing, proof reading	Guided learning activity	Project guides will guide respective student project groups in preparation/editing/proof-reading of project work report, the project guides will assess the final report and will provide feedback for improvements in the report	-	08	Handout, video film*	*Teacher will suggest a suitable online video to be viewed by students						
SCHEME OF ASSESSMENT													
S. No	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal								
1	Student group assignment	The department will submit the project reports of each project group to the external examiner prior to the project presentation seminar. The external examination will study these reports. He/she will assess the worth of the reports on basis of set criteria and will award marks	15	Rating Scale	External								
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
<p>1. Project reports communicate information which has been compiled as a result of project work and related issues. Good project reports are documents that are accurate, objective and complete.</p> <p>2. These should also be well-written, clearly structured and expressed in a way that holds the reader's attention and meets their expectations. The quality</p>													

and worth of the project work are also judged by the quality of the written report i.e. its clarity, organization and content.

3. The project report also helps external examiner to have a detailed study of the project work and to frame main questions for oral examination during presentation.
4. The project report should be made in hard copies. But, also soft copies can be made additionally, if necessary.
5. The project report should be made in many copies. One copy for department, one copy for library and one copy for each project group member.

#### **6. SUGGESTED FORMAT FOR PROJECT REPORT**

1. Project title
2. Students' group details
3. Need & justification
4. Expected output / outcome of the project
5. Literature survey
6. Detailed description of methodology adopted
7. Description of resources required
8. Detailed project activity plan
9. Project activity schedule chart
10. Modified / updated / rescheduled plan
11. Modified / updated / rescheduled charts
12. Major problems faced and their solutions
- 13.** Major decisions taken
14. Description of prototype/ Output/ outcome of the project
15. Conclusion
16. Recommendations
17. Evidences and references

## 7. Other suggested guidelines for project report

- a. Project reports should be typed neatly in New Times Roman letters on both sides of the paper with 1.5 line spacing on a A4 size paper (210 x 297 mm). The margins should be: Left - 1.5", Right - 1", Top and Bottom - 0.75".
- b. Before taking the final printout, the approval of the concerned guide(s) is mandatory and suggested corrections, if any, must be incorporated.
- c. Every copy of the report must contain
  - Inner title page (White)
  - Outer title page with a plastic cover
  - Certificate in the format enclosed.
- d. Main body of the report should be divided appropriately into sections and subsections. The sections and subsections may be numbered in the decimal form.
- e. Section/subsection numbers along with their headings must be left justified with section number and its heading in font size 16 and subsection and its heading in font size 14. The body or the text of the report should have font size 12. The figures and tables must be numbered chapter wise.
- f. The references should be numbered serially in the order of their occurrence in the text and their numbers should be indicated within square brackets for e.g. [3].

## 8. Suggested format for CANDIDATES' DECLARATION

I/we, ----- students of Diploma in----- Department -----  
of ----- hereby declare that I/we own full responsibility for the information, results and conclusions  
provided in this project work titled “----- “submitted to RGPV  
(Diploma Wing) for the award of Diploma in -- ----- .To the best of my/our knowledge, this project work  
has not been submitted in part or full elsewhere in any other institution/organization for the award of any

certificate/diploma/degree. I/we have completely taken care in acknowledging the contribution of others in this academic work. I/we further declare that in case of any violation of intellectual property rights and particulars declared, found at any stage, I, as the candidate will be solely responsible for the same.

<b>Date</b>	<b>Roll Number</b>	<b>Name</b>	<b>Signature</b>
	<b>1</b>		
<b>Place</b>	<b>2</b>		
	<b>3</b>		
	<b>4</b>		

**7. Suggested format for CERTIFICATE:-**

Certified that this project report entitled -----  
 -----"which is being submitted by Mr./Ms. ...., Roll. No....., a bonafide student of  
 .....in partial fulfillment for the award of Diploma in Civil Engineering during the year ..... is record of  
 students' own work carried out under my/our guidance. It is certified that all corrections/suggestions have been incorporated in the  
 Report and one copy of it being deposited in the polytechnic library. The project report has been approved as it satisfies the academic  
 requirements in respect of Project work prescribed for the said diploma. It is further understood that by this certificate the  
 undersigned do not endorse or approve any statement made, opinion expressed or conclusion drawn there in but approve the project  
 only for the purpose for which it is submitted.

Guide Name and signature

External Examiners Name and signature

Head of Department  
Dept. of -----

**8. Assessment criteria:-**

- 1. Quality of content of report (5marks)**
- 2. Quality of structure and organization of report (3marks)**
- 3. Quality of language used in report (2marks)**
- 4. Number and quality of evidences (5 marks)**

RGPV (Diploma Wing ) Bhopal		SCHEME FOR LEARNING OUTCOME			Branch Code			Course Code			CO Code	LO Code	Format No.
								6	0	4	3	3	4
COURSE NAME		Project Work											
CO Description		The student will be able to present the completed project work											
LO Description		The student will be able to prepare a reflective learning portfolio about the informal self-experiential-learning while working for the project											
SCHEME OF STUDY													
S. No	Learning Content	Teaching – Learning Method	Description of T-L Process	Teac h Hrs.	Pract. /Tut Hrs.	LRs Required	Remarks						
1	Importance of lifelong learning, experiential self-learning, reflections on self-experiences, mechanism of learning from experiences through reflective thinking, reflective learning portfolio and its use in learning from self-experiences	Guided learning activity	Project guides will encourage the students to recall their project related experiences and reflect on those experiences, he /she will provide them reflective learning portfolio format to be filled by each student individually	-	03	Handout, video film*	*Teacher will suggest a suitable online video to be viewed by students						
SCHEME OF ASSESSMENT													
S. No	Method of Assessment	Description of Assessment	Maximum Marks	Resources Required	External / Internal								
1	Individual student assignment	The internal examiner will produce the collected filled reflective learning portfolio formats to the external examiner. External examiner will assess the experiential learning of students through assessing the individual responses to the portfolio questions	10	Rating Scale	External								
ADDITIONAL INSTRUCTIONS FOR THE HOD/ FACULTY (IF ANY)													
1. Lifelong learning ability, which is a higher order learning ability is now realized as an important skill for professional students so that they can continue their knowledge gradation in future and can create new knowledge from their variety of future professional													

experiences.

2. Ability to informally self-learn from self professional experiences is core of lifelong learning ability.
3. Students' project work offers them an opportunity to undergo a variety of professional like experiences. They can learn how to learn from these experiences.
4. We humans do not automatically learn from our experiences. But, when we think and reflect on our experiences, when we question the unexpected results, abnormal happenings, unusual findings, mistakes, errors, delays, disagreements, differences, conflicts etc., we seek reason for them and in this way we learn from them. This process is called reflective learning.
5. In experiential learning, mistakes committed, errors done, wrong decisions, crisis handled and problems faced are considered as learning opportunities rather than the indicators of bad performance. Students should be encouraged to face them, accept them, discuss them, and solve/ correct them.
6. To help students to reflect on their individual project experiences, a tool (questionnaire) called **Reflective Learning Portfolio** is used
7. When student attempts to fill this questionnaire, he/she encounters with few questions which provoke him/her to reflectively think on the project experiences. In this way student learns to reflect on self experiences and creates self-knowledge from self-experiences.
8. Following is the suggested format of Reflective Learning Portfolio ( open ended questions with descriptive answers) :-

#### **FORMAT OF PORTFOLIO**

1. Student details (Name, Roll Number, Project group no. etc.)
2. Project title
3. Was our plan worked as it was or it has been changed?  
क्या हमारी कार्य योजना सही थी या फिर हमें इसमें आवश्यकतानुसार संशोधन भी करना पड़े?
4. Why the plan needed changes?

यदि हाँ, तो कार्य योजना में संशोधन क्यों करना पड़े? क्या क्या कारण थे?

5. What precautions we should take in future while planning the similar project activities?

यदि हम भविष्य में इसी तरह के प्रोजेक्ट पर फिर से कार्य करते हैं तो योजना बनाते समय, पहले से ही क्या क्या अतिरिक्त सावधानीयाँ लेंगे?

6. Did I face group related problems? If yes, what major problems I faced?

क्या प्रोजेक्ट पर कार्य करते समय हमें समूह संबंधी समस्याओं का सामना करना पडा? यदि हाँ, तो प्रमुख समस्याएँ कौन कौन सी थीं?

7. How I solved them?

हमने उन्हें कैसे-कैसे हल किया?

8. What precautions I should take to avoid such group related problems in similar future project work?

यदि भविष्य में हमें इसी तरह के प्रोजेक्ट पर फिर से कार्य करना पड़े तो इन समूह संबंधी समस्याओं को टालने के लिए हम पहले से ही क्या क्या सावधानीयाँ बरतेंगे?

9. Did we face problems related to resources? If yes, what were those problems?

क्या हमें संसाधनों से सम्बन्धित समस्याएँ भी आयीं? यदि हाँ, तो वो कौन कौन सी थीं?

10. How we solved these problems?

हम इन समस्याओं को कैसे कैसे हल कर पाए?

11. What precautions we will take to avoid such problems in future, if we work in similar project works?

यदि हमें भविष्य में फिर से इसी तरह के प्रोजेक्ट पर कार्य करना पड़ता है तो हम इन समस्याओं से बचने के लिए पहले से



ही क्या क्या सावधानीयाँ बरतेंगे?

12. What was the worst incident in our project work? How we coped from it? What precautions we will take to avoid such incidences in future, in similar project works

हमारे प्रोजेक्ट कार्य में सबसे खराब घटना क्या रही? हमने इसका सामना कैसे किया? भविष्य में दोबारा इसी तरह का प्रोजेक्ट करते समय इस तरह की घटना न घटे इसके लिए हम पहले से ही क्या-क्या उपाय करेंगे.

13. Did we face problems like delays, crisis of resources, and expenditure more than what was thought of earlier? What were those problems? How we solved them?

क्या हमने विलम्ब, संसाधनों का संकट, अनुमान से अधिक खर्च आदि समस्याओं का सामना भी किया? वे समस्याएँ क्या क्या थी? उनसे हम कैसे कैसे निबटे?

14. What precautions we will take to avoid such problems in future, if we work in similar project works

भविष्य में इसी तरह के प्रोजेक्ट कार्य को करते समय ऐसी समस्याओं से बचने के लिए हम पहले से ही क्या क्या उपाय करेंगे?

15. What advices, tips and suggestion related to project work we would like to give to our junior students?

अब यह प्रोजेक्ट कार्य करने के उपरांत हम अपने जूनियर छात्रों को प्रोजेक्ट कार्य करने के लिए क्या क्या सुझाव एवं सलाह देना चाहेंगे ताकि उनका प्रोजेक्ट कार्य बगैर विघ्न-बाधा-समस्या के सरलता से पूर्ण हो सके? वर्णन करें.

**9. Assessment criteria:-**

- a. Extent and appropriateness problems/ crisis/ delays / mis-happenings etc. described in detail (3marks)
- b. Extent and appropriateness coping strategies/ solutions/ handling ways described in detail (3 marks)

**c. Extent and appropriateness of precautions/ suggestions/ advices/ tips described in detail (4 marks)**