



Savitribai Phule Pune University

M.Sc. Computer Science / Data Science / Computer Application / Information Technology

Research Project Work Manual

Code: CS/DS/CA/IT-631- RP

Credit =4

Prepared by : Dr. Manisha Bharambe

Course Objectives:-

1. To understand the research and research project.
2. To know the research areas in computer domain.
3. To understand the ethical issues associated with research.
4. To encourage students to publish the paper in conference.

Course Outcomes:- After completion of this course the student will be able to

CO1: Carry out a substantial research-based project

CO2: Analyse data and synthesize research findings

CO3: Report research findings in written and verbal forms

CO4: Demonstrate an understanding of the ethical issues associated with practitioner research

CO5: Publish research work in reputable journals, present at conferences or in recognized project competitions.

CO6: file the patent and copyright of their research if research work is substantial.

Certificate

This is certified that the student _____ ,
Roll No. _____ has successfully completed the Research Project work of Sem I / II of
M.Sc. Part II in the academic year 202 -20 .

Internal Evaluation:

Description	Marks(out of)	Marks Obtained
Research topic / Problem /Survey	10	
Literature review and/or Data collection	10	
Presentation and Documentation	10	
Total Marks	30	

Sign of Research Project Guide /Expert:

Guidelines for Research Work :

Research Project will consist of 2 parts

- I. The Research Proposal
- II. The actual dissertation or Research Project Report

I. RESEARCH PROPOSAL :

Students are required to submit their research ideas in the form of a research proposal to their supervisors / advisors / guides and get approval from the guide before the actual research work starts.

Format of Research Proposal (RP)

- a) Project Title
- b) Introduction and Origin of the research problem
- c) Interdisciplinary/ Social relevance
- d) Introduction of Research and Development in the Subject
- e) National / International status
- f) Significance of the study - Objective, methodology
- g) Approximate time by which each stage will be completed
- h) Expected results and the outcome(s) of the research project.
- i) Bibliography

Following can be used as a guide to evaluate a RP:

- Does the proposal address a well-formulated problem?
- Have research gaps been identified.
- Is it a research problem, or is it just a routine application of known techniques?
- Do the proposers have a good idea on which to base their work? The proposal must explain the idea in sufficient detail to convince the reader that the idea has some substance, and should explain why there is reason to believe that it is indeed a good idea.
- Does the proposal explain clearly what work will be done? Does it explain what results are expected and how they will be evaluated? How would it be possible to judge whether the work was successful?
- Is there evidence that the proposers know about the work that others have done on the problem? This evidence may take the form of Literature Review or a short review as well as representative references.

II. Research Project Report

The Students should submit a proper research dissertation at the end of their research work for the required credits.

Format of Research Project

- I. Title of Research
- II. Certificate
- III. Index
- IV. List of Figures
- V. List of Tables
- VI. Publications if student have done
- VII. Introduction - Objectives of the Research
- VIII. Literature Review of previous research in the area and justification / Importance /Value of further research.
- IX. Data collection
- X. Actual Work Done with Experimental Setup, if any
- XI. Results
- XII. Future scope of research and limitation
- XIII. Bibliography in format –Author name, title, publication details, year

Guidelines for Research Project Work

- a) Each student or group of students must submit a detailed project proposal outlining the research problem, objectives, methodology, and expected outcomes.
- b) A mentor will be assigned by college to each group of students to provide guidance and support throughout the research process as well as to do internal assessment.
- c) Students are required to conduct a thorough literature review to understand the current state of research in their chosen area.
- d) Students should execute the research plan outlined in their proposal, adhering to ethical guidelines and academic standards.
- e) Proper documentations of the research process, including experimental setup, data collection methods, and analysis techniques, should be maintained.
- f) Upon completion of the research work, students must prepare a project report and encouraged to publish their research work in reputed journals, present at conferences or in recognized project competitions to disseminate their findings.
- g) Evaluation will be as per the University guidelines, based on the quality of the research work, adherence to the research plan, presentation skills, and contribution

Process/Rules:

1. Students should work in a team of minimum 2 and maximum 3 students.
2. Students can choose a project topic without any restriction on technology or domain.
3. Students are expected to carry out the following tasks during project work –
 - a. Problem Identification
 - b. Literature Review/ Study
 - c. Feasibility Study
 - d. Design (includes DB design, system flow or design diagrams)

e. Modelling (if applicable)

4. Track sheet will be maintained by project guide for each group separately. Record of the student progress will also be maintained by keeping track sheet.

5. Project guide will conduct presentation for the work done (mentioned in point no. 3)

6. Project groups will work on actual development and/or implementation of proposed idea/topic.

8. At the end of the project, the group should prepare a report which should conform to international academic standards. The report should follow the style in academic journals and books, with clear elements such as: abstract, background, aim, design and implementation, testing, conclusion and full references, Tables and figures should be numbered and referenced to in the report.

9. Minimum 2 demos will be conducted for the project work.

10. The final research project presentation with demonstration (EE) will be evaluated.

Evaluation :

Internal marks=30

External Evaluation =70

Internal Evaluation:

Description	Marks(out of)
Research topic / Problem /Survey	10
Literature review and Data collection	10
Presentation and Documentation	10
Total Marks	30

External Evaluation:

Description	Marks
Literature Review	10
Presentation	20
Documentation	15
Relevance of research topic and conclusion	15
Viva	10

M.Sc. (CS) / (CA) / (DS) Sem-III (2024-25)
Research Project Report

Roll No and Name of Student	
Title of the Project:	
Company Name: (if any)	

Sr.No.	Date	Task Done	Remark and Signature

Research Project Completion Remark:

Name and Signature of Guide: