FACULTY OF COMPUTER APPLICATIONS
Bachelor of Computer Applications

- **Sem.**: 5
- **Subject Code**: 05BC3506
- **Subject**: Minor Project – 4 (Python)
- **Course Objectives**:
    1. Acquainted with the process of applying knowledge and providing solutions to the problems in various application domains.
    2. Learn Project Management Skills during the project.
    3. Design and develop the solution for identified problems.
    4. Acquainted with the process of writing a technical document.
    5. Conceptualize knowledge with emphasis on teamwork, effective communication, critical thinking and problem solving skills.
- **Prerequisites** :Basic knowledge of Software Engineering and any programming language

Course Outcomes:

1. Identify problems based on environmental, societal & research needs.
2. Apply software project management skills during project work.
3. Design and develop solutions for the identified problems.
4. Demonstrate the ability to produce a technical document.
5. Build small groups to work on projects effectively in a team.

Guidelines for Mini Project:

1. Students shall form a group of 2 to 3 students.
2. Students must develop the project only in any of the technology such as Java, Python, C# or R Programming. Usage of the other technologies are not permitted.

3. Students should do survey and identify needs, which shall be converted into problems in consultation with the faculty Supervisor/Guide/HOD/Internal Committee of faculties.
4. Students shall submit an implementation plan in the form of Gantt/PERT/CPM chart, which will cover weekly activity of mini project.
5. A log book to be prepared by each group, wherein the group can record weekly work progress. Guide/Supervisor can verify and record notes/comments.
6. Faculty may give inputs during mini project activity; however, focus shall be on self learning.
7. Students in a group shall understand the problem effectively, propose multiple solutions and select the best possible solution in consultation with Guide/ Supervisor.
8. Students shall convert the best solution into a working model using various components of their domain areas and demonstrate.
9. The solution to be validated with proper justification and project report to be compiled in standard format prescribed by Marwadi University.

Assessment of Mini Project:

I) Term work (25 Marks):

1. The progress of the mini project to be evaluated on a continuous basis.
2. In continuous assessment focus shall also be on each individual student, assessment based on individual's contribution in group activity, their understanding and response to questions.
3. Distribution of Term work marks shall be as below:
    a. Marks awarded by guide/supervisor based on log book : 10
    b. Self contribution and use of skill set in project : 10
    c. Quality of Project report : 05

II) Viva (25 Marks):

1. Report should be prepared as per the guidelines issued by the Marwadi University.

2. Mini Project shall be evaluated through a presentation and demonstration of working model by the student project group to a panel of examiner at Institute level.
3. Mini Project shall be assessed based on following points:
    a. Problem identification.
    b. Clarity of Problem definition based on need.
    c. Innovativeness in solutions.
    d. Feasibility of proposed problem solutions and selection of best solution.
    e. Cost effectiveness.
    f. Societal impact.
    g. Full functioning of working model as per stated requirements.
    h. Effective use of skill sets.
    i. Contribution of an individual as a member or leader.
    j. Clarity in written and oral communication.
    k. Project report as per the format prescribed by the University.
4. Identify problems based on environmental, societal & research needs.
5. Apply software project management skills during project work.
6. Design and develop solutions for the identified problems.
7. Demonstrate the ability to produce a technical document.
8. Build small groups to work on projects effectively in a team.

Course Outcomes – Program Outcomes Mapping Table:

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3
CO1	L			H	M		H	M	H	L	L
CO2	M	M	H	H	H	M	H	H	L	H	M
CO3	H	H	H	L	L	M	M	M	L	H	H
CO4		M		H			M		M	M	M
CO5				H	H		M		L	M	M

Reference Books:

1. “Java 2: The Complete Reference”, Herbert Schildt, 12th Edition

2. “Core Python Programming”, R Nageswara Rao, Dreamtech Press, Second Edition
3. “C#: The Complete Reference”, Shildt, TMH
4. “R for Everyon””, Jared P Lander, Pearson Education 2017

Web References:

1. https://www.w3schools.com/java/
2. https://www.tutorialspoint.com/python/index.html
3. https://www.tutorialspoint.com/csharp/index.htm
4. https://www.geeksforgeeks.org/r-programming-language-introduction/