## **SCHEME OF COURSE WORK**

#### CourseDetails:

| CourseTitle | :Design Thinking and Innovation    |      |            |
|-------------|------------------------------------|------|------------|
| CourseCode  | :22ME11D1                          | LTPC | :0 0 3 1.5 |
| Program:    | :B.Tech.                           |      |            |
| Branch:     | : computer Science and Engineering |      |            |
| Semester    | :IV                                |      |            |

### **Course Outcomes (COs):**

On successful completion of the course, the student should be able to

| CO | Course Outcomes   |  |  |  |  |  |
|----|---|--|--|--|--|--|
| 1  | Outline a problem, apply methods of Empathy on user groups                |  |  |  |  |  |
| 2  | Describe and define the problem specific to the user group                |  |  |  |  |  |
| 3  | Apply Ideation tools to generate Ideas to solve the problem               |  |  |  |  |  |
| 4  | Develop prototype   |  |  |  |  |  |
| 5  | Test the ideas and demonstrate Story telling ability to present the Ideas |  |  |  |  |  |

### Course Outcome Versus Program Outcomes Versus Program Specific Outcomes:

| COs  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 | PSO3 |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| CO-1 | 3   |     |     |     |     | 2   |     | 2   | 3   | 3    | 2    | 3    |      |      |      |
| CO-2 | 2   |     |     |     |     |     |     | 2   | 3   | 3    | 2    | 3    |      |      |      |
| CO-3 | 3   |     | 2   |     |     |     | 3   | 3   | 3   | 3    | 2    | 3    |      |      |      |
| CO-4 | 3   |     | 2   | 3   | 2   |     | 3   | 3   | 3   | 2    | 2    | 3    |      |      |      |
| CO-5 | 3   |     |     | 3   | 2   |     |     |     |     | 3    | 2    | 3    |      |      |      |

3-Strongly correlated,2-Moderately correlated,1-Weakly correlated,Blank-No correlation

| Assessment Methods: | Assignments/Article/Prototype/Internal Exam(Presentation)/End Exam |  |  |  |  |  |
|---------------------|--|--|--|--|--|--|
| Assessment Methous. | (Presentation/demo)  |  |  |  |  |  |

# **Teaching-Learning and Evaluation**

| Week | Contents   | Course<br>Outcome                 | Sample<br>Questions                        | Teaching<br>Learning<br>Strategy                  | Assessment Method &Schedule   |  |
|------|--|-----------------------------------|--|---|-------------------------------|--|
| 1    | Identify an Opportunity and Scope of the Project   | Opportunity and Scope of the CO-1 |  | Lecture,PPT,<br>Group Discussion                  | Activity, Display<br>(Week 1) |  |
| 2    | Explore the possibilities and Prepare design brief | CO-1                              | Present the design brief                   | Lecture,PPT,<br>Group Discussion                  | Presentation<br>(Week 2)      |  |
| 3    | Apply the methods of Empathize and Define Phase    | CO-2                              | Develop<br>Empathy map                     | Lecture, PPT,<br>Group<br>Discussion,Roll<br>play | Presentation (Week 3)         |  |
| 4    | Finalize the problem statement                     | CO-2                              | Present your final how might we statement  | Lecture,PPT,<br>Group Discussion                  | Presentation (Week 4)         |  |
| 5    | Apply the methods of Ideate Phase CO-3             |                                   | Tools used for Ideate phase                | Lecture,PPT,<br>Group<br>Discussion               | Presentation (Week 5)         |  |
| 6    | Generate lots of Ideas                             | CO-3                              | Brainstorming result                       | Lecture,PPT,<br>Group Discussion                  | Presentation<br>(Week 6)      |  |
| 7    |  |                                   | InternalExam-1                             |   |                               |  |
| 8    | Apply the<br>Methods of<br>Prototype Phase         | CO-4                              | Evaluate the ideas And select the best one | Lecture,PPT,<br>Group<br>Discussion               | Presentation<br>(Week 8)      |  |
| 9    | Create prototypes of selected ideas                | CO-4                              | Apply your learning to develop a prototype | Lecture,PPT,<br>Group<br>Discussion               | Presentation<br>(Week 9)      |  |
| 10   | Test the   | CO-4                              | Present the                                | Lecture,PPT,                                      | Presentation                  |  |
|      | prototype and collect feedback                     |                                   | Feedback on test<br>phase                  | Group<br>Discussion                               | (Week10)                      |  |
| 11   | Iterate and improve the ideas                      | CO-5                              | What is the importance of Early failure?   | Lecture,PPT,<br>Group<br>Discussion               | Presentation<br>(Week 11)     |  |

| 12 | Present your solution through Story telling method | CO-5 | Present the most effective solution | Lecture,PPT,<br>StoryTelling | Presentation<br>(Week 12) |  |  |  |
|----|--|------|-------------------------------------|------------------------------|---------------------------|--|--|--|
| 13 | Fine tuning and submission of project report       | CO-5 | Project Report                      | PPT                          | Presentation<br>(Week 13) |  |  |  |
| 14 | InternalExam-2(PresentationandDemoofprototype)     |      |                                     |                              |                           |  |  |  |
| 15 | ExternalExam(PresentationandDemoofprototype)       |      |                                     |                              |                           |  |  |  |