

### LIFE SCIENCES FOR ENGINEERS LAB

|  |   |                                 |       |                      |     |
|--|---|---------------------------------|-------|----------------------|-----|
| <b>Course Code</b>   | 19BS1351  | <b>Year</b>                     | II    | <b>Semester</b>      | I   |
| <b>Course Category</b>   | Basic Sciences  | <b>Branch</b>                   | CE    | <b>Course Type</b>   | Lab |
| <b>Credits</b>   | 1   | <b>L-T-P</b>                    | 0-0-2 | <b>Prerequisites</b> | Nil |
| <b>Continuous Internal Evaluation:</b>                                 | 25  | <b>Semester End Evaluation:</b> | 50    | <b>Total Marks:</b>  | 75  |
| <b>Course Outcomes</b>   |   |                                 |       |                      |     |
| After successful completion of the course, the student will be able to |   |                                 |       |                      |     |
| <b>CO1</b>   | Understand basic facts and concepts in life sciences.   |                                 |       |                      |     |
| <b>CO2</b>   | Evaluate and explain different processes in industrial applications                               |                                 |       |                      |     |
| <b>CO3</b>   | Summarize the applications of various spheres in life sciences in relevance to future studies     |                                 |       |                      |     |
| <b>CO4</b>   | Develop the ability to apply the principles of Mendalian laws and acquire problem solving skills. |                                 |       |                      |     |

| <b>Contribution of Course Outcomes towards achievement of Program Outcomes &amp; Strength of correlations (3:High, 2: Medium, 1:Low)</b> |     |     |     |     |     |     |     |     |     |      |      |      |      |      |
|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|
|  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | PSO1 | PSO2 |
| <b>CO1</b>   | 3   |     |     |     |     |     | 2   |     |     |      |      |      |      |      |
| <b>CO2</b>   | 3   |     |     |     |     |     | 2   |     |     |      |      |      |      |      |
| <b>CO3</b>   | 3   |     |     |     |     |     | 2   |     |     |      |      |      |      |      |
| <b>CO4</b>   | 3   |     |     |     |     |     | 2   |     |     |      |      |      |      |      |

| <b>Syllabus</b> |   |           |
|-----------------|---|-----------|
| Expt.No         | Contents  | Mapped CO |
| I               | Microscopy  | CO1, CO3  |
| II              | Dissect & mount different parts of plants using Microscope                          | CO1, CO3  |
| III             | Estimation of Proteins by using Biuret method                                       | CO1, CO2  |
| IV              | Estimation of enzyme activity.  | CO1, CO2  |
| V               | Estimation of chlorophyll content in some selected plants.                          | CO1, CO3  |
| VI              | Nitrogen Cycle: Estimation of Nitrates /Nitrites in soil by using Spectrophotometer | CO2,CO3   |
| VII             | Mendal's laws   | CO1, CO4  |
| VIII            | Solve Problems based on Mapping .   | CO2, CO4  |