

| <b>Department of Mechanical Engineering</b>  |   |                                |                     |
|--|---|--------------------------------|---------------------|
| <b>Graduation Project I (67551)</b>  |   |                                |                     |
| <b>Total Credits</b>   | <b>2</b>  |                                |                     |
| <b>major compulsory</b>  |   |                                |                     |
| <b>Prerequisites</b>   | <b>-</b>  |                                |                     |
| <b>Course Contents</b>   |   |                                |                     |
| The course provides : 1) an introduction to research methodology 2) ways of making literature review 3) the manner of writing technical reports 4) Initial data collection and design. |   |                                |                     |
| <b>Intended Learning Outcomes (ILO's)</b>  |   | <b>Student Outcomes (SO's)</b> | <b>Contribution</b> |
| 1  | an ability to apply knowledge of mathematics, science, and engineering  | A                              | 8 %                 |
| 2  | an ability to design and conduct experiments, as well as to analyze and interpret data  | B                              | 6 %                 |
| 3  | an ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability | C                              | 15 %                |
| 4  | an ability to function on multidisciplinary teams   | D                              | 10 %                |
| 5  | an ability to identify, formulate, and solve chemical engineering problems  | E                              | 3 %                 |
| 6  | an understanding of professional and ethical responsibility   | F                              | 13 %                |
| 7  | an ability to communicate effectively   | G                              | 12 %                |
| 8  | the broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context  | H                              | 21 %                |
| 9  | a recognition of the need for, and an ability to engage in life-long learning   | I                              | 6 %                 |
| 10   | a knowledge of contemporary issues.   | J                              | 3 %                 |
| 11   | an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.  | K                              | 3 %                 |
| <b>Textbook and/ or References</b>   |   |                                |                     |
| 0  |   |                                |                     |
| <b>Assessment Criteria</b>   |   | <b>Percent (%)</b>             |                     |
| Reports  |   | 50 %                           |                     |
| Presentation   |   | 30 %                           |                     |
| Progress   |   | 20 %                           |                     |
| <b>Course Plan</b>   |   |                                |                     |
| <b>Week</b>  |   | <b>Topic</b>                   |                     |