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| **Course Title** | Graduation Project | **Coordinator** |  |
| **Course Code** | 519-CE-3 | **Credit Hrs.** | 3 | **Contact Hrs.** | 3 |
| **Prerequisites** | Department approval (Student should have no more than 38 credits of coursework). Consent of supervisor | **Level/Year** | 9-10/5 |
| **Couse Objective:** Students must be prepared for engineering practice through the curriculum culminating in a major design experience based on the knowledge and skills required in earlier course work and incorporating engineering standards and realistic constraints that take into account considerations such as: economic; environmental; safety; manufacturability; ethical; and social aspects. The objectives of this course where student can: * Select and plan an engineering project involving analysis and design tasks
* Perform a literature survey
* Formulate, as a team, civil engineering design
* Perform the relevant calculations, analysis, and implement his design.
* Understand economic, environmental issues related to technology.
* Evaluate the impact of engineering on societal issues.
* Communicate technical information in writing.
* Communicate in oral and critically evaluate technical information
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| **Teaching Method:**Independent study/research, group discussion, meetings are scheduled with the supervisor for the particular project. Each students’ group will meet together weekly, keeping detailed minutes of the meetings. |
| **Course Learning Outcome:*** Ability to perform a literature survey
* Ability to formulate design an engineering project, by setting objectives that are appropriate for the project purpose and scope and that take into account the following aspects: economic; environmental; manufacturability; ethical; safety; social; and political.
* Ability to plan an engineering project involving multiple tasks and contributors.
* Ability to identify, formulate and solve an engineering problem.
* Ability to work effectively on a team to complete the project.
* Ability to implement, evaluate, and document a project design.
* Ability to communicate technical information in writing.
* Ability to communicate technical information in oral presentations.
* Recognize the need for a lifelong learning.
* Ability to use modern tools in engineering solving problems
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| **Topic Covered** | 1. Literature survey 2. Engineering design 3. Proposals 4. Project planning, budgeting, and management 5. Professionalism, ethics 6. Technical reports 7. Oral presentations |
| **Text Book (s):** |
| * Varies with the particular project.
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| **Reference Materials:** |
| * Varies with the particular project.
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| **Mode of Evaluation:** |
| Student progress and project product:(Assessed by the supervisor(s)):  | **25** |
| Log book (Assessed by the supervisor (s)) | **5** |
| Professional Conduct includes (Assessed by the supervisor(s)):* Cooperation with the project group
* Alignment with the code of ethics
* Attendance in discussion sessions with supervisor
 | **20** |
| Project Report  | **20** |
| Presentation and defense (assessed by at least two panel members and the supervisor(s) ) | **30** |
| Total | **100** |
| **Course Ground Rules** |
| The following department rules will be applied: * The deadline for submitting a hard copy of the project report is one week before the presentation.
* If student does not submit the report on time, a 25% of the report grade will be deducted for every day delay.
* If no report is submitted 24 hours before the presentation, a grade F will be given to the whole project.
* Other additional rules by the supervisor
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