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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 | | | | | | | |
| **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 | | | | | | | |
| **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. | | | | | | | |
| **Reference Materials:** | | | | | | | |
| * Varies with the particular project. | | | | | | | |
| **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 | | | | | | | |