



**Course Description:**

The final year project gives the student the opportunity to apply knowledge acquired in the early years. It aims to develop and measure the capabilities of a student to analyze and solve complex problems. Projects are assigned on a team basis and are normally proposed by lecturers of the department. However, a student may propose a topic or an area of his/her research interest. Projects should be problem-oriented relevant to the program of study. Students are encouraged to have some original contribution. Each Team will be assigned a supervisor who is in charge of the entire project. In this part of the project, the student is expected to develop the skills in gathering information, analyzing and specifying problem requirements. A literature survey and initial plan are written up by the middle of the semester, and a requirement specification document is submitted by the end of the semester. A final oral representation before faculty members is given for assessment and to suggest modifications. It covers the design and implementation phases of the project. The design document is to be submitted and reviewed by the supervisor by the middle of the semester. A final design and implementation report is submitted, and an oral presentation including a public demo is evaluated by a committee of faculty members.

**Aim of the course:**

The course objective is to encourage students to apply their accumulated learning, knowledge and experience to produce a high-quality solution (a Product) that is applicable in a real life situation.

**Intended Learning Outcomes: (ILOs)**

- A. To develop and measure the capabilities of a student to analyze and solve complex problems.
- B. The student is expected to develop the skills in gathering information, analyzing and specifying problem requirements.
- C. The student should be able to design and implementation report

**Course structures:**

| Week | Credit Hours | ILOs   | Topics   | Teaching Procedure   | Assessment methods   |
|------|--------------|--------|--|--|--|
| 1    | 3            | A1     | Graduation Project (GP) initiation<br>How to choose the project and colleagues<br>Setting tasks, milestones and implementation plan                      | Presentation methods and techniques, Sources of information and Instructional Aids | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class Participation<br>b) Midterm<br>d) Activity file |
| 3,4  | 4            | A1, A3 | Project Proposal (Vision Document/ Feature list)<br><i>At this stage, the Project Proposal will be sent to GP committee for evaluation and feedback.</i> | Presentation methods and techniques, Sources of                                    | Diagnostic tests to identify the students level and areas of weakness  |



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|-------|---|-----------|--|--|---|
|       |   |           | <i>In case of rejecting a project idea, the course instructor will work closely with the student to improve his proposal</i> | information and Instructional Aids   | Formal (stage) evaluation<br>a) Class Participation<br>b) Midterm exam<br>d) Activity file  |
| 4,5   | 4 | A1,A2, A3 | <ul style="list-style-type: none"> <li>Requirements elicitation</li> </ul>   | Presentation methods and techniques, Sources of information and Instructional Aids | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class Participation<br>b) Midterm exam<br>d) Activity file |
| 5,6   | 3 | B1, C1    | Requirements Analysis  | Presentation methods and techniques, Sources of information and Instructional Aids | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class Participation<br>b) Midterm exam<br>d) Activity file |
| 7,8,9 | 3 | B2, B3    | Data Flow Diagram(DFD )/ level 1 and level 2, System Architecture  | Presentation methods and techniques, Sources of information and Instructional Aids | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class Participation<br>b) Midterm exam<br>d) Activity file |
| 10,11 | 3 | B2, B3    | DFD/ level 1 and level 2, System Architecture  | Presentation methods and techniques, Sources of information and Instructional Aids | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class Participation<br>b) Midterm exam<br>d) Activity file |
| 12,13 | 3 | B2, B3    | Entity-Relationship (ER)Diagram, Data Dictionary   | Presentation methods and techniques, Sources of information and Instructional Aids | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class Participation<br>b) Midterm exam<br>d) Activity file |



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|-------|---|--------|--|--|---|
| 14,15 | 5 | C2, C3 | Use case Diagram, Use Case Description   | Presentation methods and techniques, Sources of information and Instructional Aids | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class Participation<br>b) Final exam<br>d) Activity file |
| 15    | 1 | D1, D2 | Hierarchical Overview, Network Diagram   | Presentation methods and techniques, Sources of information and Instructional Aids | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class Participation<br>b) Final exam<br>d) Activity file |
|       |   |        | Dummy User Interface   |  | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class Participation<br>b) Final exam<br>d) Activity file |
|       |   |        | Testing Methodology & test cases   |  | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class Participation<br>b) Final exam<br>d) Activity file |
|       |   |        | Project Management Plan  |  | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class Participation<br>b) Final exam<br>d) Activity file |
|       |   |        | Writing the Project Specification Document (Introduction, Background, Analysis, Design) chapters of the final report |  | Diagnostic tests to identify the students level and areas of weakness<br>Formal (stage) evaluation<br>a) Class  |



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|  |  |  |   |  | Participation<br>b) Final exam<br>d) Activity file |
|  |  |  | Completing the Project Specification Document |  |  |
|  |  |  | <b>FINAL EXAMINATION WEEK</b>                 |  |  |

**References:**

1- *Systems Analysis and Design, 9th Edition*, Gary B. Shelly, Thomas J. Cashman and Harry J. Rosenblatt, ISBN-10: 0538481617 | ISBN-13: 978-0538481618, Course Technology, 2011

Developing Software with UML: Object- Oriented Analysis and Design in Practice, Bernd Oestereich, Addison Wesley, 2002

**Assessment Methods:**

| Methods  | Grade | Date   |
|--|-------|--|
| Attend meetings  | 20%   | Week 1   |
| Team formation   | 8%    | Week 2   |
| Choose Admin   | 10%   | Week 3   |
| work plan  | 10%   | Week 4   |
| Report Writing includes: <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Analysis</li> <li>• Design</li> <li>• Selection of appropriate software</li> </ul> | 10%   | Week 5,6<br>Week 7,8<br>Week 9,10<br>Week 11,12,13 |
| Admin evaluation   | 12%   | Week 14,15   |
| presentation   | 30%   | Week 16  |

