


Sub.	Course Description – توصيف مقرر دراسي	الموضوع	 <b>كليات المعرفة</b> ALMAAREFA COLLEGES
Date		التاريخ	

Course Code & No	IE496		رقم المقرر ورمزه
Course Name	Graduation design project-1		اسم المقرر
Credit Hours	2 (1+1+2)		عدد الساعات المعتمدة
Pre-requisite	Pass Successfully 130 Cr.H.		المتطلب السابق

<b>General Description</b>	توصيف عام
<p>Senior student selects a project applying learned tools and knowledge to understand the process and elements of a large, interdisciplinary engineering project design through experience. The course is carried out by: Choosing the topic; Establishing the project; reviewing background; Preparing for/or preliminary conducting of the experiments; Collecting the field data and developing the mathematical model if applicable; Writing the first two chapters along with any preliminary findings.</p>	

<b>Course Objectives</b>	أهداف المقرر
<p>Prepares the senior students to carry a production design project for process, product, component, and/or system on the basis of the learned knowledge reflecting the department program objectives.</p> <p><b>By the end of the course, each student should be able to:</b></p> <ol style="list-style-type: none"> <li>1. Identify project problem and statement based on realistic needs and relative constraints</li> <li>2. Review related data, knowledge and experiences from credible sources.</li> <li>3. Formulate problem covering methodology of integrating knowledge drawn from previous courses and information, addressing the realistic constraints, and generating possible alternative design options and solution.</li> <li>4. Develop design objectives and evaluation; it should cover design viability, evaluation criteria, and problem reformulation based on available data. [Ability to carry computational and/or experimentations of the design project and to interpret and make decision on design issues</li> <li>5. Plan Project effectively using project planning techniques to ensure proper project timing and budgeting.</li> <li>6. Communicate orally and in writing the project design details in technical report.</li> <li>7. Work effectively as member of team.</li> </ol>	

Sub.	Course Description – توصيف مقرر دراسي	الموضوع	 <b>كليات المعرفة</b> ALMAAREFA COLLEGES
Date		التاريخ	

Course Outlines	مفردات المقرر
<ul style="list-style-type: none"> <li>• Elements of capstone design project</li> <li>• Project planning</li> <li>• Problem review</li> <li>• Design Methodology, Synthesis, Creativity and Conceptualization</li> <li>• Design problem formulation / experimental design /</li> <li>• Preparing technical report</li> <li>• Presentation skills</li> </ul>	

References	المراجع
<p><b>Required Textbooks</b>  This depends on the type of design project  (assistive material is updated to the course Web Site)</p> <p><b>Essential References Materials</b>  This depends on the type of design project  (assistive material is updated to the course Web Site)</p>	