

Sub.	Course Description – توصيف مقرر دراسي	الموضوع	 كليات المعرفة ALMAAREFA COLLEGES
Date		التاريخ	

Course Code & No	ENGR-201		رقم المقرر ورمزه
Course Name	Engineering Drawing		اسم المقرر
Credit Hours	2 (1+1+2)		عدد الساعات المعتمدة
Pre-requisite			المتطلب السابق

General Description	توصيف عام
Engineering drawing types; Drawing equipment; Layout of drawings; Constructional geometry and basics of lettering; Sketching; Tangencies; Isometric drawing; Orthographic, oblique and pictorial projections; Sectional and auxiliary views; Dimensioning; Engineering applications; Fasteners; Electric circuit diagrams; hydraulic diagrams.	

Course Objectives	أهداف المقرر
The course aims to provide the knowledge and skills for basic engineering drawing. It covers types of drawings, drawing equipment and their use, lettering and lines, engineering curves, geometric constructions, projection, sectioning, dimensioning.	
By the end of the course, each student should be able to	
<ul style="list-style-type: none"> • Present the concept design in a better way using standard drawings. • Handle the drawing equipment. • Read and understand technical drawings. 	

Course Outlines	مفردات المقرر
<ul style="list-style-type: none"> • Introduction to Engineering Drawings: Types, artistic drawing and technical drawing • Drawing Equipment and their use: Important drawing equipment • Lettering and lines: Letter style, Techniques of Lettering, Spacing of letters, guide lines, conventional lines • Engineering Curves and Geometric Constructions: Types of engineering curves, geometric nomenclature, techniques of geometric construction. • Projection: Isometric drawing, Orthographic or multi-view projection, precedence of lines, pictorial projections. 	

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- Sectioning: Sectional views, multi-sectional views, how sections are shown.
- Dimensioning: Definitions, Steps in dimensioning, Where to put dimensions.
- Limits and Fits for Holes and Shaft, and Screws: Limit system, Fit, Conventional method of illustrating terms, Screw, threads, nuts and bolts.
- Assembly Drawing: General assembly, Sectioned assembly .
- Electric Circuit and Hydraulic Diagrams: Electrical cables layout, valves and other hydraulic drawings.

References	المراجع
<p>Required Textbooks</p> <ul style="list-style-type: none"> • Basic Engineering Drawing; Rhodes, R.S., Cook, L.B., Pitman Publishing, latest edition, ISBN-10: 273 31887 X • Engineering Drawing; Basant Aggarwal, Tata McGraw-Hill, latest edition, ISBN-13: 978-0070668638. <p>Essential References Materials</p> <ul style="list-style-type: none"> • Engineering Drawing and Design; David A. Madsen, Delmar Cengage Learning, latest edition, ISBN 978-1111309572 • Progressive Engineering Drawing for TEC Students; C.H. Simmons and D.E. Maguire, latest edition, Hodder and Stoughton. 	