Department offering the program: Electronics and Electrical Communications
Department offering the course: Electronics and Electrical Communications Engineering

Course Specification

1- Course basic information :		
Course Code: FR 016 Faculty requirement	**Course Title: Engineering Drawing and Descriptive Geometry (1)**	**Academic year: 2015/2016 Level (1) – Semester : 1st**
Field: Basic Eng. Science	**Teaching hours:** **Lecture** 2	**Tutorial** 2

2- Course Objectives	1. To teach students different types of engineering lines. 2. To introduce students to Engineering Operations. 3. To equip student with isometric and view, 4. To acquire students the skills to deduct the third view. 5. To introduce students engineering sections. 6. To provide students with different methods of projection. 7. To acquire students the skills to deduce normal projections for eng. bodies.	
3- Intended Learning Outcomes: ARS		**Course ILOs**
A- Knowledge and Understanding	A.9) Discuss topics related to humanitarian interests.	A9.1 Discuss different types of engineering lines. A9.2 Discuss topics related to isometric and view. A9.3 Discuss Construction of the third view for machine elements. A9.4 Discuss topics related to Sectional views, cutting plane and types of sections. A9.5 Discuss topics related to drawing of Metallic junction lines A9.6 Discuss topics related to different methods of projection. A9.7 Discuss topics related to normal projection.
B- Intl. Skills	None	None

C- Professional Skills	C.3 Create and/or re-design a process, component or system, and carry out specialized engineering designs. C.12 Prepare and present technical reports.	C3.1 Create isometric view. C3.2 Create deduction of the third view. C3.3 Create sectional views for eng. machines. C3.4 Create different projections for eng. problems. C3.5 Create normal projections for eng. problems. C12.1 Prepare and present technical drawing reports for isometric view. C12.2 Prepare and present technical drawing reports for deduction of the third view. C12.3 Prepare and present technical drawing reports for sectional views for eng. machines. C12.4 Prepare and present technical drawing reports for normal projections for eng. problems.
D- General Skills	D.3 Communicate effectively. D.6 Effectively manage tasks, time, and resources.	D3.1 Communicate effectively in tutorial class room, and in lecture time. D6.1 Effectively manage tasks, time, and resources at drawing room, when doing drawing homework, and at exam time.

4- Course Contents	Different types of engineering lines- Operations- Isometric and view – Construction of a third view for machine elements. Sectional views, cutting plane, types of sections –Draw of Metallic junction lines- Introduction to projection- different methods of projection- normal projection.
5- Teaching and Learning Methods	- Lectures - Tutorials - Drawing assignments
6- Teaching and Learning Methods for disable students	• Official low cost special classes for developing student skills, arranged by the faculty administration. • Office hours for those students. • Lessen to their questions carefully and answer it on time.
7- Student Assessment	
a- Assessment Methods	- Weekly sheet exercises at Drawing hall - Quizzes - Drawing homework. - Midterm, and final exams
b- Assessment Schedule	- Drawing assignment: Weekly - Quiz-1: Week no 4 - Mid-Term exam: Week no 8 - Quiz-2: Week no 12 - Final – term examination: Week no 16
c- Weighting of Assessment	- Mid-term, and Quizzes: 30 % - Final – term examination: 70 % Total 100 %

8- List of text books and references:	
a- Course notes	There are lectures notes prepared in the form of a book authorized by the department
b- Text books	[1] Ken Morling, Geometric and Engineering Drawing, 3rd edition, Routledge, ISBN-10: 0415536197, July 2012.
c- Recommended books	[1] Mahendrakumar Budhichand Shah, Bachubhai Chhibubhai Rana, Engineering Drawing, Pearson Education India, 2009. [2] Basant Agrawal, Engineering Drawing, Tata McGraw-Hill Education, 2008.
d- Periodicals, Web sites .. etc	Web Sites related to **Drawing Engineering and Projection.**

Course contents - ILOs Matrix

Content Topics	Week	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Different types of engineering lines	1-2	A9.1	-		D.3.1, D.6.1
Operations -Isometric and view	3-4	A9.2	-	C3.1, C12.1	D.3.1, D.6.1
Construction of a third view for machine elements	5-7	A9.3		C3.2, C12.2	D.3.1, D.6.1
Sectional views, cutting plane, types of sections	9-10	A9.4		C3.3, C12.3	D.3.1, D.6.1
Draw of Metallic junction lines	11	A3.1, A9.5			D.3.1, D.6.1
Introduction to projection- different methods of projection	12-13	A9.6		C3.4	D.3.1, D.6.1
Normal projection Additional projection-	14-15	A9.7		C3.5, C12.4	D.3.1, D.6.1

Teaching and Learning Methods - ILOs Matrix

Teaching and Learning Methods	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Lectures	A.3,A.9	-	C.3	D.3
Tutorials.	A.3,A.9	-	C.3,C.12	D.3,D.6
Exercises	A.3,A.9	-	C.3,C.12	D.3,D.6
Reports and assignments	A.3,A.9	-	C.3,C.12	D.3,D.6

Assessment Methods - ILOs Matrix

Assessment Methods	A- Knowledge & Understanding	B- Intellectual skills	C- Professional and practical skills	D- General and transferable skills
Weekly sheet exercises	A.3,A.9	-	C.3,C.12	D.3,D.6
Reports	A.3,A.9	-	C.3,C.12	D.3,D.6
Quizzes	A.3,A.9	-	C.3,C.12	D.3,D.6
Midterm, and Final Written exams	A.3,A.9	-	C.3,C.12	D.3,D.6

Authorized from department board at 15/05/2016
Authorized from college board at 05/06/2016

Course coordinator:
Prof. Dr. Saber Zaineldeen

Head of Department
Prof. Fathi El-Sayed Abd El-Samie