Depatment & Faculty: Department of Solid Mechanics & Design

Semester : 2
Subject & Code: SMU 2513 (Engineering Drawing) (Lukisan Kejuruteraan)

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Semester : 2
Academic Session: 2011/2012

Faculty: Faculty of Mechanical Engineering

Subject: Engineering Drawing (LUKISAN KEJURUTERAAN)

Subject code: SMU 2513

Credit: 3

Prerequisite: none

Passing gred: D+ (45%)

<u>Lecturers:</u>	e-mail	Room	<u>phone</u>
1. Dr. Mohd Nasir Hussain	mnasir@fkm.utm.my	C23-313	34633
2. Dr. Ardiyansyah Syahrom.	ardi@utm.my	C23-410.	34677

Synopsis:

This subject introduce the use of technical drawing in an effective way for communicating and integrating with engineering concepts. Such environment will provide a platform where the engineer can share and exchange the informations. These informations are interpret using standard method such as geometry, orthographic, isometric, oblique and perspective projections, sectional drawing, machines drawing and working drawing.

Objectives:

- Graphically represent technical drawing and design using accepted standard practices
- Solving technical drawing traditional method.
- Communicating graphically using traditional method.
- Applying engineering drawing principles to industrial design discipline.

Learning Outcomes:

By the end of the course, students should be able to:

- 1. Use the drafting board to produce complete drawing based on well defined technical graphics standard.
- 2. Understanding basic geometric construction techniques to create engineering drawing using drawing instruments.
- 3. Learn the standard and convention to create engineering drawing that can be read and accurately interpreted by the engineers and industrial designer.
- 4. Be able to produce engineering drawing efficiently and effectively.

Prepared by :
Name : Dr. Mohd Nasir Hussain and
Ardiyansyah Syahrom
Signature :
Date :

Certified by : (head of department)
Name: Dr. Mohd Noor Harun
Signature :
Date :

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Generic skills adressed:

1. Lifelong learning (LL1 – LL3)

2. Communication Skills (CS1-CS4)

3. Problem Solving (PS2, PS4)

Weekly Schedule:

Week 1

Introduction to Engineering Drawing

Drawing Tools
Standard practices.

Lettering and engineering drawing linetypes

Assignment: lettering

Week 2

Geometry 1

Basic drawing constructions – tangencies.

Drawing Title block and Dimensioning

Draw geometrical objects: ellipse, pentagon, heksagon

Complete geometry drawing.

Assignment: 3 questions delivered

Week 3

Orthographic

Definition

First angle projection theory and Third angle projection theory

Assignment: 3 questions delivered

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Ardiyansyah Syahrom Signature : Date :

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Signature: Date:

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Week 4

Isometric 1

Definition

Isomeric drawing concept

Basic Isometric ellipse, inclined surface(s) and dimensioning technique.

Test 1 (25 %)

Note: Answer 2 (two) questions (geometry and orthographic)

Duration: 3 hours

Assignment: 2 questions delivered

Week 5

Machine Drawing

Technique to draw bolt and nut.

Assignment : 1 question delivered (Bolt and Nut)

Week 6

Section Drawing

Sectioning concepts.

Drawing layout and labeling.

Assignment: 2 questions delivered

Week 7

Assembly drawing

Prepare Bill of Material (BOM).

Assembly drawing.

Test 2 (25 %)

Note: Answer 2 (two) question (Isometric and Sectioning Drawing)

Duration: 3 hours

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Syahrom
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Basic References:

- 1. Mohd Ramzan Mainal, Yahya Samian, Badri Abdul Ghani (1996). Lukisan Kejuruteraan Asas. Edisi Kedua. Penerbitan UTM.
- 2. Mohd Fadzil Daud, Khairul Anwar Hanafiah (2000). Panduan Asas Lukisan Kejuruteraan. Edisi Pertama. Penerbit UTM.
- 3. Frederic E. Gieseckle. (1997). Engineering Drawing. Prentice Hall. London.

Assesment:

Coursework (100%)

Weekly Assignment 50 % Test 1 25 % Test 2 25 %

Final Exam (Nil)

No final exam –

Attendance:

The student should adhere to the rules of attendances as stated in the University Academic Regulation:-

- 1. Student must attend not less than 80% of lecture hours as required for the subject.
- 2. Student will be prohibited from attending further assesment activities upon failure to comply the above requirement. Zero mark will be given to the subject.

Prepared by : Name : Dr. Mohd Nasir Hussain and

Ardiyansyah Syahrom Signature : Date :

Certified by : (head of department) Name: Dr. Mohd Noor Harun

Signature: Date: