INTERNATIONAL UNIVERSITY LIAISON INDONESIA

SYLLABUS

Date/ Revision	04 October 2016 / Rev.2
Faculty	Engineering
Approval	Dean of Engineering Faculty

SUBJECT : TECHNICAL DRAWING

1. Identification of Subject:

Name of Subject	: Technical Drawing
Code of Subject	: TDRAW-1000
SKS	: 3
Semester	: 1
Study Program	: B-AVE, B-ELE, B-MTE, B-MEE, B-INE
Lecturer	: Dipl.-Ing. Wahjoe Goeritno M.Si / Dipl. Ing. Ketut Tejawibawa, MT

2. Competency

After having the course, students are expected to:

a) Have basic knowledege of technical drawing based on ISO Standard
b) Differentiate the First angle projection and third angle projection.
c) Have undertsanding the meaning of lines, tolerance, symbols, surface roughness.
d) Be able to sketch the simple workpiece for production.
e) Be able to read and understand the technical drawing in American or European view..

3. Description of Subject:

This course is an introduction to the students about the basic and standard for drawing technique, including sizing and view and projection drawing. The drawing technique is emphasized in how to draw sketch an object graphically, and projection point from surface and arch lines, and projection drawing from different point of view. It is emphasized also to read and understand the drawing, all the meaning of symbols, tolerance, lines etc. Besides that, the students is given the requirements technical drawing the mechanical engineering objects such as block, shaft, gear. At the end, the students is capable of sketch drawing the mechanical part.

4. Learning Approach

Approach	: Combination of Expository - inquiry and colaborative
Method	: Discussion, question answer, excursion.
Student Task	: Home work, Class work
Media	: LCD projector, sample industrial drawing.

DAAD Federal Ministry of Education and Research Coordinator TECHNISCHE UNIVERSITÄT ILMENAU

PO Box 150, BSD CPA 15330
Tel. +62 21 50588000
+62 852 12318000
info@iuli.ac.id; www.iuli.ac.id
IULI – Eco Campus, The Breeze
Jl. BSD Grand Boulevard
BSD City 15345
Island of Java

5. Evaluation

a) Absence maximum : 25%
b) Participation in discussion : 5 points
c) Homework, Classwork : 10 points
d) Daily Quiz : 25 points
e) Final Examination : 60 points

Total : 100 points

6. Topics / Contents of Lecturing:

Week	Topics	Contents	Remark
1	**Intro duction to Technical Drawing Standard**	Technical Drawing ISO Standard Paper Size, Lay out, Line, Scale, Title Block, Application of lines, drawing folding.	
2	**View and Projection**	View Projection First Angle Projection Third Angle Projection	
3	**Auxialary View**	Special representation of workpiece, Simplified representation	Quiz
4	**Section**	Full section, Half section, Local section. Hatch, type of hatch	
5	**Dimensioning**	Projection lines, Dimension lines, Leader lines, Termination and Origin Indication. Chain dimension, Parallel dimension, Combined dimension, Coordinates dimension. Chord, Arc, Angle, Chamfer, Countersink.	Quiz
6	**Dimensioning**	Dimension of Cylinder part, cubical part, sheet metal part.	
7	**Tolerance**	Classification of tolerance, Linear tolerance, Angular Tolerance, Special tolerance. Tolerance indication. Bilateral and Unilateral tolerance.	Quiz
8	**MIDTERM SEMESTER BREAK**		
9	**Tolerance and Fits**	IT tolerance. Types of fits. Hole basis and Shaft basis. Calculation of fits.	
10	**Machining Symbol and Surface Roughness**	Average roughness Ra, The symbol of roughness, Symbol of direction. Machining symbol, Ra class. Indication techniques on drawing.	
11	**Geometrical Tolerance**	Form tolerance; Orientation tolerance; Location tolerance; Run-out tolerance	Quiz

DAAD Federal Ministry of Education and Research Coordinator TECHNISCHE UNIVERSITÄT ILMENAU
PO Box 150, BSD CPA 15330
Tel. +62 21 50588000
+62 852 12318000
info@iuli.ac.id; www.iuli.ac.id
IULI – Eco Campus, The Breeze
Jl. BSD Grand Boulevard
BSD City 15345
Island of Java

12	**Standards Part**	How to represent: Fastener, bolt and nut; Thread indication; Bearing; Gear; Spring; Seal; Chain,	
13	**Welding Drawing**	Welding symbols. Indication on drawing. Fillet weld, Butt weld.	
14	**Part Drawing**	Detail drawing:Cylindrical part, Cubical part, Sheet metal part.	Quiz
15	**Assembly drawing**	Material description, part number, drawing number, Bill of material.	
16	**Final Examination**		

7. Book Reference:

a) Text Book:
"Technical Drawing", **Authors**: Giesecke, Mitchell, Spencer, Hill, Dygdon, Novak, **Publisher**: Pearson, Prentice Hall, **ISBN**:0-13-178446-3

b) "Technical Drawing", **Publisher**: ISO Standard Handbook, **ISBN**: 178446 – 3

DAAD Federal Ministry of Education and Research Coordinator TECHNISCHE UNIVERSITÄT ILMENAU
PO Box 150, BSD CPA 15330 IULI – Eco Campus, The Breeze
Tel. +62 21 50588000 Jl. BSD Grand Boulevard
+62 852 12318000 BSD City 15345
info@iuli.ac.id; www.iuli.ac.id Island of Java