COURSE SPECIFICATIONS

University: Benha University  Faculty: Benha Faculty of Engineering

Course specifications

Course Description

Programs take this course through their curricula
- Degree of Engineering and Technology in Mechanical Engineering (Production and Power)
- Degree of Engineering and Technology in Civil Engineering
- Degree of Engineering and Technology in Electrical Engineering (Control and Communications)

Departments offering these programs are:
- Mechanical Engineering
- Civil Engineering
- Electrical Engineering

Academic year / Level
- First preparatory year

Date of specification approval
- 2008 G.
A- Basic Information
Title: Engineering Drawing  
Code: M 150  
Credit Hours: 3  
Lecture: -  
Tutorial: 4  
Practical: -  
Total: 4

B- Professional Information
1 - Overall aims of course
• Read and understand objects from standard Orthographic drawings
• Be able to draw standard drawing to describe objects in orthographic or pictorial drawings

2- Intended learning outcomes of course (ILOs)
• Deduce three standard orthographic views of an object
• Draw hidden details by taking suitable sectioning views
• Draw a pictorial drawing using orthographic projection
• Draw auxiliary views as needed to clarify object details
• Draw resulting lines from intersection of planes with solids and develop the remaining solid
• Draw resulting lines from intersection of tow solid objects and develop the side boundary of each

a. Knowledge and understanding:
   a.1 Kinds of lines
   a.2 Standard views, their positions relative to each other and relationships
   a.3 Drawing entities
   a.4 Read and dimension drawings

b. Intellectual skills
   b.1 Visualize objects from orthographic projections
   b.2 Visualize hidden details of an object
   b.3 Deduce intersection of geometric entities
   b.4 Deduce boundary of a solid

c- Professional and practical skills
c.1 Making scaled sketches to objects

2.2 Draw exact layout of objects sheet metal working

d- **General and transferable skills**

d.1 Dealing with geometry description (reading and drawing)

d.2 Hand sketching with tools

d.3 Free hand sketching

3- **Contents**

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4- **Teaching and learning methods**

4.1 Direct instruction

4.2 Supervised tutoring

4.3 Solid models

4.4 Home assignments

5- **Student assessment methods**

5.1 Class work grading to assess knowledge and intellectual skills

5.2 Quizzes to assess understanding and professional skills

5.3 Homework grading to assess understanding and professional skills

5.4 MidTerm to assess intellectual and transferable skills

5.5 Final Exam to assess intellectual and transferable skills
Assessment schedule

Assessment  CW every week
Assessment 2 Quizzes twice or thee time each term
Assessment 3 HW every work
Assessment 4 Mid Term end of the first term
Assessment 5 Final Exam end of the year

Weighting of assessments

Mid-term examination 20 %
Final-term examination 40 %
Other types of assessment 40 %
Total 100 %
Any formative only assessments

6- List of references

   6.1- Course notes
     ▪ Engineering Drawing,

   6.2- Essential books (text books)
     ▪ Lecture Notes

   6.3- Recommended books
     ▪ Same books

   6.4- Periodicals, Web sites, ... etc

7- Facilities required for teaching and learning

Possible E-Learning

Course coordinator: Prof. Dr. Ahmed El-Assal
Head of Department:
Date: 30 / 6 / 2009