

University: Cairo Faculty: Engineering Department: Aerospace Engineering

Course Specifications

Programme(s) on which the course is given: **B. Sc. In Aerospace**

Major or Minor element of programmes: Major

Department offering the programme: **Aerospace**

Department offering the course: **Mechanical Design & Production**

Academic year / Level: **1st Year Aerospace (2nd Year in a five-year program)**

Date of specification approval: March 2015.

A- Basic Information

Title: Machines Drawing Code: MDP121

Credit Hours:

Lecture: 1(2 hrs) Tutorial: 3(6 hrs) Practicals:-- Total:4(8hrs)

B- Professional Information

1 – Overall Aims of Course

This course is designed to give the student the ability to understand the mechanical elements, how to draw and how to use the mechanical elements in mechanical design and assembly drawing.

2 – Intended Learning Outcomes of Course (ILOs)

a- Knowledge and Understanding:

- a1- Understand mechanical elements such as screws, nuts, springs, ...etc
- a2- Applying fits and tolerances
- a3- Draw assembly drawing
- a4-

b- Intellectual Skills

- b1- Creative thinking for how simple machine works
- b2- Analysis the relationships between mechanical parts

c- Professional and Practical Skills

- c1- The student will be able to understand and interpret mechanical drawings.
- C2- The student will be able to produce, to a minimum established standard, mechanical drawings

d- General and Transferable Skills

- d1- Assembly drawing preparation
- d2- Management of mechanical drawing project

3- Contents

Topic	No. of hours	Lecture	Tutorial/Practical
Screw threads	4	2	
Nuts, bolts, screws and washers	4	2	
Locking Devices	2	1	
Keys and Keyways	2	1	
Gears	4	2	
Limits and Fits	4	2	
Geometrical Tolerance	4	2	
Springs	2	1	
Welding and Welding Symbols	4	2	
Total	30	15	

4- Teaching and Learning Methods

- 4.1- lectures
- 4.2- classwork

5- Student Assessment Methods

- 5.1 Final written exam to assess
- 5.2 Mid-term exam to assess
- 5.3 Class Work to assess
- 5.4 Homework to assess

Assessment Schedule

Assessment 1	Final written exam	Week: end of term
Assessment 2	Mid-term exam	Week: 10
Assessment 3	Class Work	Week: distributed over all weeks
Assessment 4.....		Week:

Weighting of Assessments

Mid-Term Examination		%
Final-term Examination	60	%
Oral Examination		%
Practical Examination		%
Semester Work	40	%
<u>Other types of assessment</u>		%
Total	100	100%

Any formative only assessments

6- List of References

- 6.1- Course Notes
- 6.2- Essential Books (Text Books)
- 6.3- Recommended Books
- 6.4- Periodicals, Web Sites, ... etc

7- Facilities Required for Teaching and Learning

Data Show, Video films, Smart board connected to internet

Course Coordinator: Prof. Dr. Fawzia Basyouni & Dr . Mohamed Elshazly

Head of Department: Prof. Ayman H. Kassem

Date: March, 2015.