



FREDERICK UNIVERSITY

DEPARTMENT OF MECHANICAL ENGINEERING

Subject: Machine Elements II
Academic Year: 2020 (Spring Semester)
Lecturer: Dr. Antonios Lontos (eng.la@frederick.ac.cy)

Laboratory Assignment: Design and assembly of a gearbox

Each team has to design the machine elements shown in the following picture. Give a name to each component. Each team has to demonstrate one gear assembly using all the other parts from the all teams.



Design Teams 1 to 5

Design Team 1: Case – Gearbox

Design Team 2: Gears – Keys

Design Team 3: Caps – Screws

Design Team 4: Shafts

Design Team 5: Bearings – Spacers - Seals

Deliverables for EACH TEAM:

1. Draft drawings of each part (Hand sketches)
2. Photos of each part at different view angles
3. Construction and detail drawings of each part
4. 3D drawings each part
5. One assembly manual using the drawings from ALL THE OTHER design teams
6. Assembly manual for your gearbox

Course AMEM 317 – Machine Elements II

Date: 25/02/2020

Time: 11:50

Where: New Engineering Laboratories (Christou Kythreoti 13, Kaimakli)

Design Team 1: Case – Gear box

Team Leader *:

11320	MAJD	KALAJI		
10393	NIKOLAOS	ANTONAKIS		
13100	PETROS	ANTONIOU		
15323	ANDREAS	CHRYSOCHOS		
13068	DIMITRA	PAPANIKOLAOU		

Design Team 2: Gears – Keys

Team Leader *:

12281	ATHANASIOS	FAIDONOS		
12648	ALEXANDROS	HADJITHOMAS		
12292	CHARILAOS	KASIOULI		
12739	CHARALAMBOS	KYRIAKOU		

Design Team 3: Caps – Screws

Team Leader *:

12708	STYLIANOS	KYRIAKOU		
13887	DIMITRIS	LOUKA		
15335	SAVVAS	PROKOPIOU		
9934	SOTIRIOS	SOULTATIS		

Design Team 4: Shafts (+2)

Team Leader *:

11319	MOUAZ	KALAJI		
10106	RAFAEL	AGATHOKLEOUS		
14804	MICHALIS	EVRIPIDOU		
10537	GIORGOS	HADJITTOFI		
15697	LOUKAS	PETRAKI		
13997	PAVLOS	VLAZAKIS		

Design Team 5: Bearings – Spacers - Seals

Team Leader *:

8031	PANAGIOTIS	KAGKAS		
13173	CHRISTOFOROS	KELIRIS		
13078	ANDREAS	MICHAEL		
14719	MILTADIS	PALLIKAROS		
13273	NIKOLAOS	TSIGKAKOS		

Course: AUTO309, ASOG301 – Machine Elements II

Date: 21/02/2020

Time: 10:50

Where: New Engineering Laboratories (Christou Kythreoti 13, Kaimakli)

Design Team 1: Case – Gear box

Team Leader *:

12462	MAHER	ALAKROUSH		
13152	THEOCHARIS	APOSTOLOU		
12696	EVAGORAS	EVANGELOU		

Design Team 2: Gears – Keys

Team Leader *:

12969	ANTONIS	KONSTANTINOY		
13154	IASONAS	ODYSSEOS		

Design Team 3: Caps – Screws

Team Leader *:

13105	STAVROS	THEOFANOY		
12665	KONSTANTINOS	XYDIAS		
12646	ORESTIS	YPERMACHOU		

Design Team 4: Shafts

Team Leader *:

12647	CHRISTOS	ZORPIDES		
11388	MODESTOS	ARGYROU		
10601	CHRISTOS	KYTHREOTIS		

Design Team 5: Bearings – Spacers - Seals

Team Leader *:

12426	CHARALAMPOS	STASI		
11557	KYRIAKOS	VRACHIMIS		
12642	MILAD	RAZAVYFARID		