

Advanced SolidWorks course curriculum development

07/11/2017

Group: F

- Naser Alhajri (Client Contact)
- Yousef Alhaddad (Project Manager)
- Mohammad Alfadhli (Secretary/ Document manger)
- Muhammad Alhajri (Web Designer)
- Abdualziz Alajmi (Budget Liaison)



Outline

- ▶ Project Description:
 - ▶ 3D Sketches on Paper
 - ▶ Homework on SolidWorks
 - ▶ Project
 - ▶ Exam
- ▶ Updates: Team Accomplished I
- ▶ Updates: Team Accomplished II
- ▶ Moving Forward
- ▶ Gantt Chart
- ▶ Budget
- ▶ Team Role
- ▶ Hardware Review 2

Project Description

- ▶ NAU has a class which is ME 180 (Engineering Graphics), which contain:
 - ▶ There is some amount of modules (3D sketches on papers).
 - ▶ Using SolidWorks as main program for the course
 - ▶ Doing parts, assembly and drawing sheet in SolidWorks.
 - ▶ Using basic features and tools, such as:
 - ▶ Extrude boss/cut
 - ▶ Revolve
 - ▶ Mirror
 - ▶ Fillet and chamfer



Project Description: 3D Sketches on Paper

- ▶ Creating ME 380 Advanced SolidWorks
- ▶ It is the upper level course for ME 180, which contain:
 - ▶ 3D sketches on paper with advance techniques.

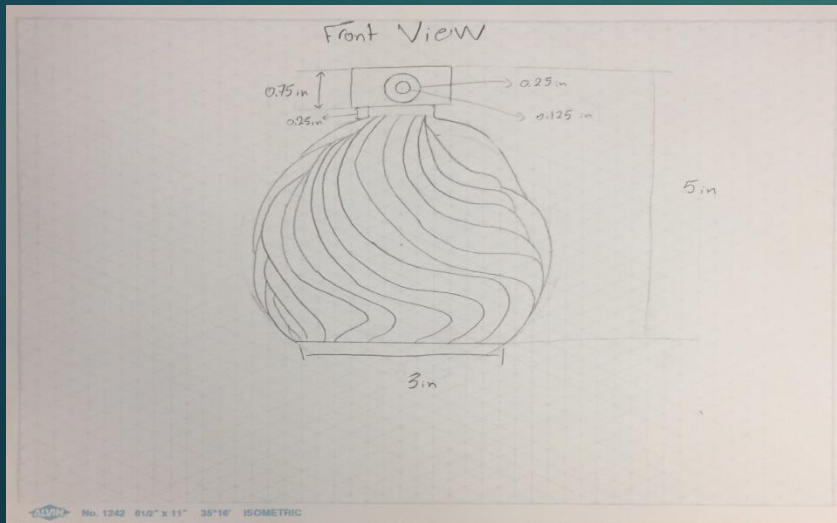


Figure 1: Front view of perfume

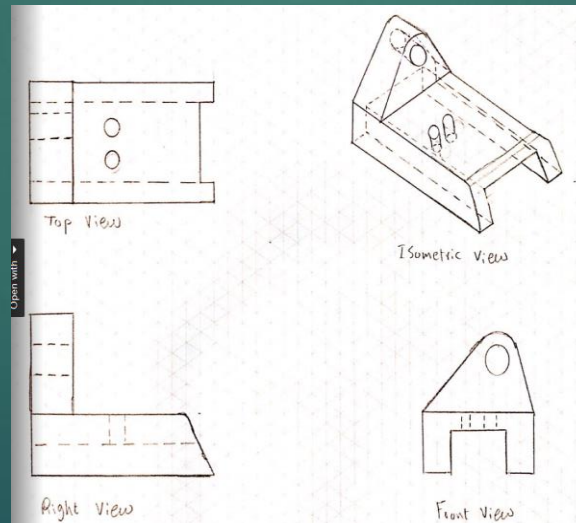


Figure 2: Four views of geometric shape

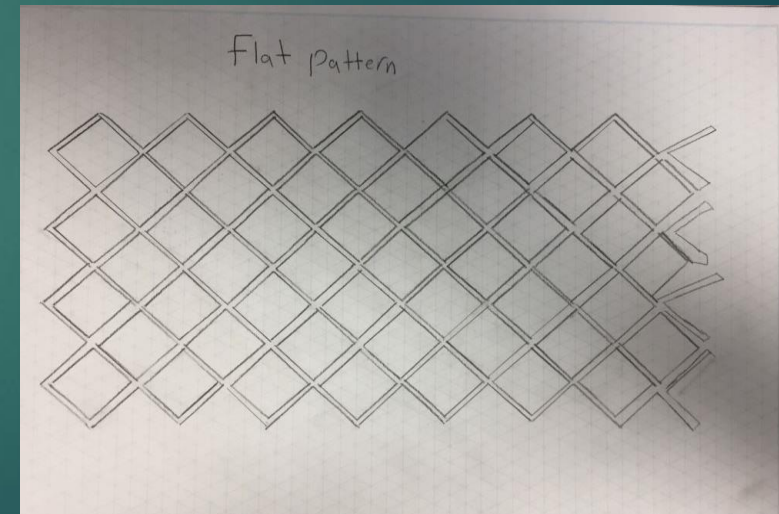


Figure 3: Flat pattern view of Sheet metal conversions

Project Description: Homework on SolidWorks

- ▶ Homework with more tricky and professional techniques.



Figure 4: Motion study



Figure 5: Sheet metal parts

Project Description: Project

- ▶ Projects with theme chosen by the instructor and students.

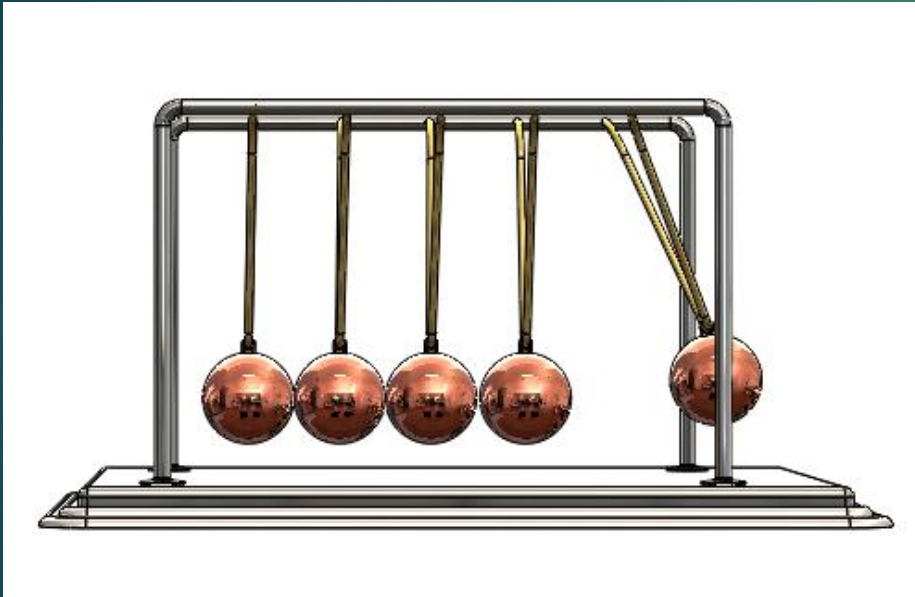


Figure 6: newton cradle

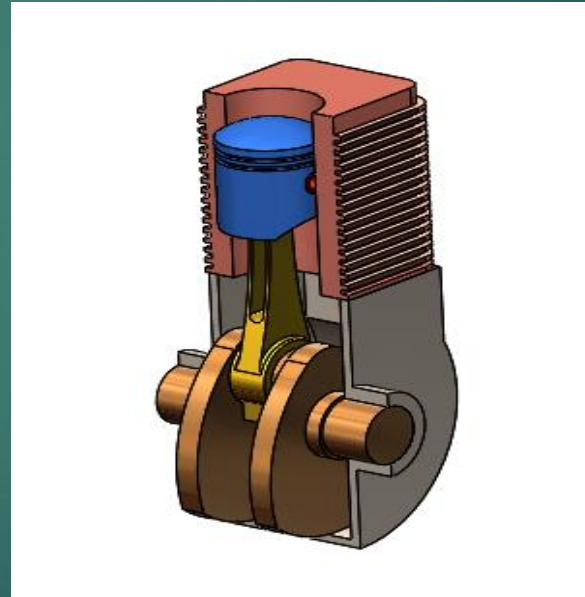


Figure 7: Piston

Project Description: Exam

- ▶ Exams will be based on the new techniques from homework, projects and lectures.

ME 380 (Advanced SolidWorks)
Exam 2

Fall 2017

First: _____ Last: _____ /100

Include your first and last name in the parts file properties.

- 1) Create a mouse computer design in SolidWorks as Shown in figure 1. /10
- 2) Create this design with only one part in SolidWorks. /10
- 3) Follow the dimensions that were given in the figures (2-8). /10
 - a. All dimensions are in mm/g/s/ISO.
- 4) The tools that required to create this design: /75
 - a. Boundary Surface.
 - b. Split Line.
 - c. Surface Offset.
 - d. Delete Face.
 - e. Surface Trim.
 - f. Surface Plane.
 - g. Surface knit.
 - h. Mirror.
 - i. Thicken.
- 5) Color the design as shown in the figure 1. /5
- 6) Save the SolidWorks file with your first and last name and your class section.



Figure 8: Exam 2

Updates: Team Accomplished I

- ▶ **Our team completed half portion of the project and some updates which are:**
 - ▶ **Eleven homework.**
 - ▶ **Two projects.**
 - ▶ **Two exams.**
 - ▶ **Update our website such as:**
 - ▶ **Team minutes.**
 - ▶ **Removing shadows from SolidWorks pictures.**
 - ▶ **Uploading midpoint report.**
 - ▶ **Hardware review 1.**

Updates: Team Accomplished II

- ▶ **There were not any changes in our Project.**
- ▶ **The left work for our project are:**
 - ▶ **Twelve lectures including tutorial videos.**
 - ▶ **One exam.**
- ▶ **The new analytical analysis for our project:**
 - ▶ **Videos.**
 - ▶ **Tutorials.**

Moving Forward

- ▶ The team divide the work that left equally between the team member such as:
 - ▶ Three team members will be assign two lecture each and the other two members will do the rest of the lectures.
- ▶ Our team will choose random students to test the project.
 - ▶ Three students will choose one or two homework to check the testing proof of our project.
- ▶ Gantt chart

Gantt Chart: Zoom out

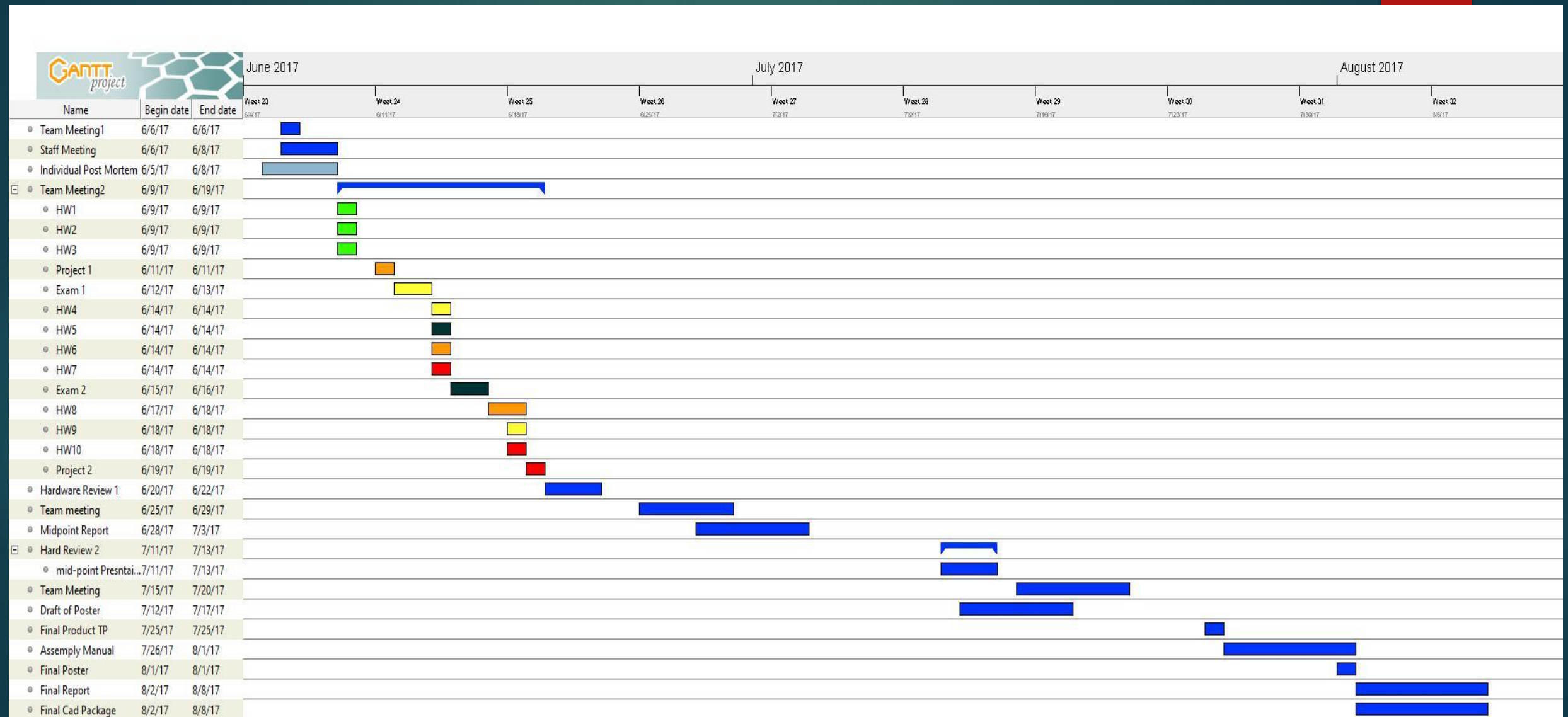


Figure 9: Gantt chart zoom out

Gantt Chart: Zoom in

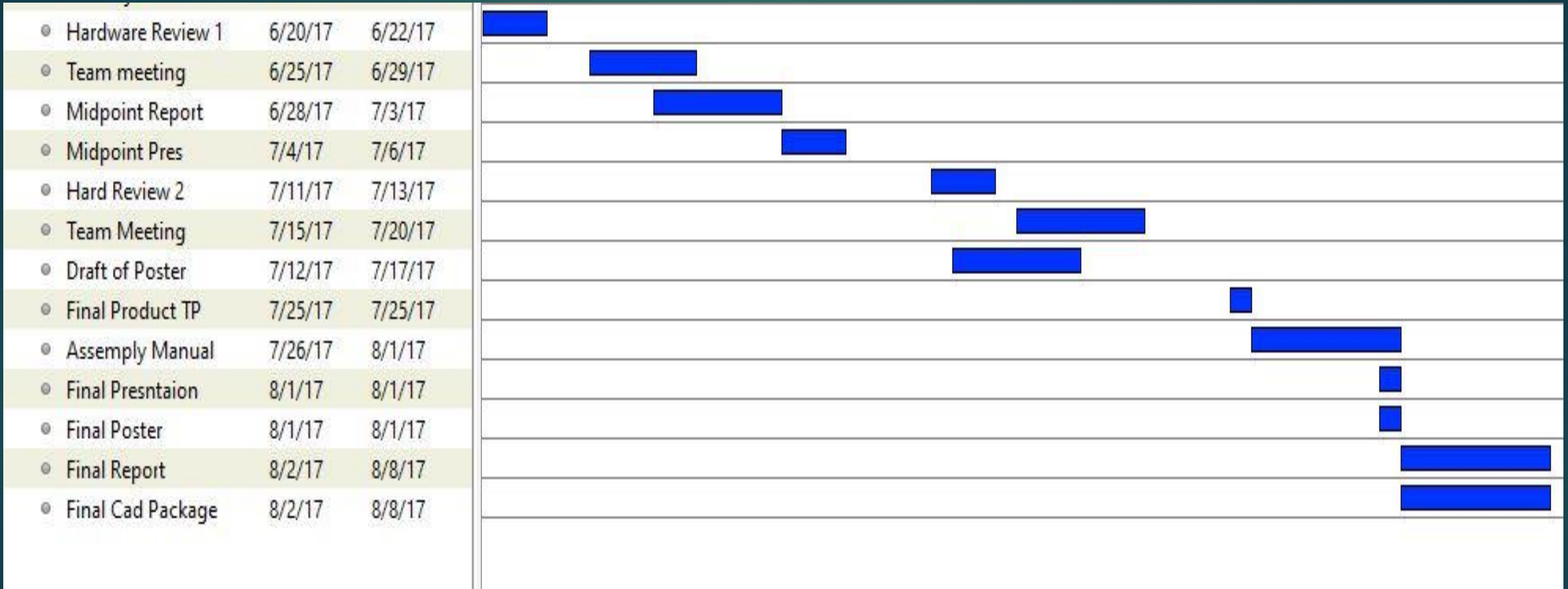


Figure 10: Gantt chart zoom in

Team Role

Table 1: Team rule

Team Member	Homework (11)	Exam (3)	Project (2)	Lecture (12)
Yousef Alhaddad	2	-	1	3
Mohammad Alfadhli	2	-	1	2
Mohammad Alhajri	2	1	-	2
Naser Alhajri	2	1	-	3
Abdulaziz Alajmi	3	1	-	2

Budget

▶ Cost:

- ▶ Our project will depend on the stuff that we need for the new course and we can propose it to the client.
- ▶ For example:
 - ▶ Basic Engineering Drafting Kit/ cost (\$48.92).
 - ▶ 3D printer/ cost(depends on weight).
 - ▶ Lego for themes/cost (\$9.99).
 - ▶ SolidWorks 2017 Advanced Techniques on PDF (\$62.20).



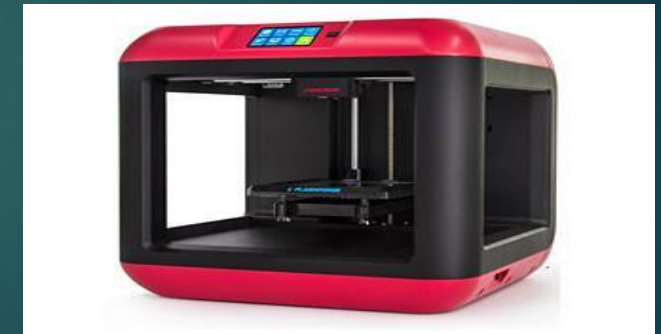
[1]



[4]



[2]



[3]

Abdualaziz Alajmi

Hardware Review 2

- ▶ Our team completed the rest of the work which are:
 - ▶ Twelve Lectures.
 - ▶ One Exam.
- ▶ Examples:
 - ▶ Homework
 - ▶ Exam
 - ▶ Project
 - ▶ Lecture

References

- ▶ [1] <https://shop.lego.com/en-US/Super-Soarer-31042>
- ▶ [2] <http://www.draftingsteals.com/20467.html?gclid=ClyRxOWTm9ICFYqBfgodvh4LMQ>
- ▶ [3] <http://uk.pcmag.com/printer-reviews/36506/guide/the-best-3d-printers-of-2017>
- ▶ [4] <https://www.amazon.com/SOLIDWORKS-2017-Advanced-Techniques-Paul/dp/1630570591>

ASK ME
ANYTHING

إسألني أي شيء ... !