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Project ICAROS **Report Code**	DE-17-02-13
Title	Gantt diagramms as a helpful tool for planning and engeneering a drone
Start/End Date	november 2016 / december 2016
Coordinator name and email	Juan Bergdahl
Name of teachers	Jörn Trautmann / Carsten Leimbach
Number and age of students	17 students 17-20 years old
Description of activities	The students were requested to set up the plan for the drone construction process as shown in the tasks below
Learning outcomes	The students set up one Gantt diagram for the planning of the drone construction. They were asked to research for the important knowledge in an internet video, following the flipped classroom model.In the second phase they built the drone and considered, if their own planning is functioning. In a third step they reflected and revised their planning. The students learned to understand the Gantt diagram as an instrument for engineering. The students were high motivated because they learned to use the methods in a context of a real world problem as prescribed in thematic learning.

Photos or other relevant material

See the tasks below and the results below:

Lesson One: Gant Charts and Project planning (Flipped Classroom)

First task - watch the video:

https://www.youtube.com/watch?v=cGkHjby1xKM

Make sure, that you know the following words in your native language:

chart
schedule
duration
dependencies
interdependencies
depicture
bar chart
activity
network diagram

Questions:

1. What are the different presentation styles in project management planning?
2. What are the plusses and minuses of Gantt-charts?

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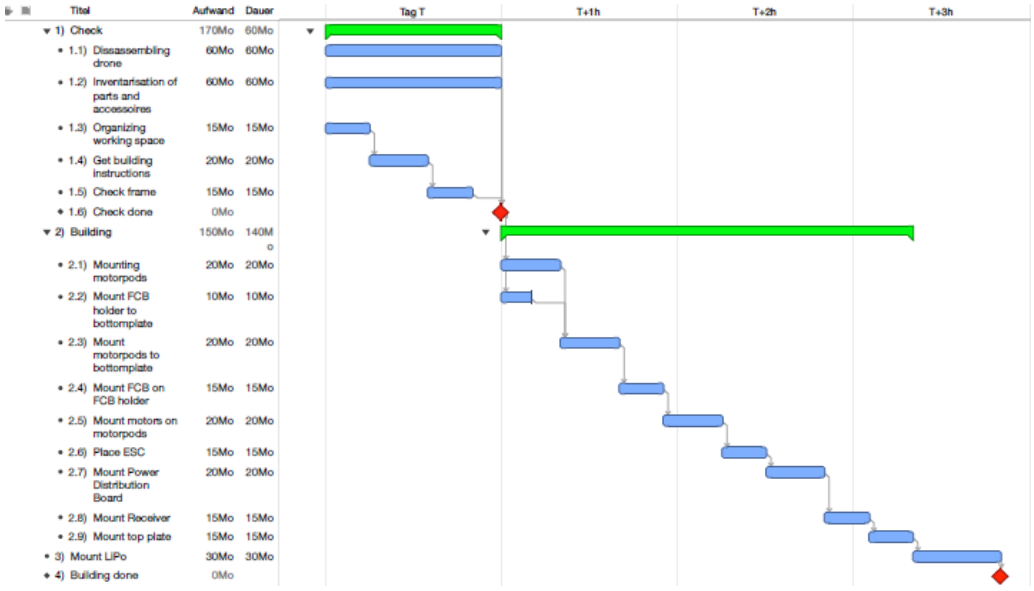
Lesson Two: Planning the building process

Do the planning for the building process by doing the following steps. Use the presentation "building a quadcopter" to solve the problem:

1. Describe a checklist of the necessary parts, the necessary tools and the necessary accessories, i.e. set up an inventory of material!
2. Describe working steps for the building process of your quadcopter!
3. Estimate the time resources that are needed to build the quadcopter for each working step!
4. Determine the predecessors and successors for each step!
5. Build a Gantt-Chart for the entire construction process, that you are committed to follow for your future building process!
6. Take your real time resources into consideration i.e. consider holidays, weekly lessons and weekend meetings!
7. Present your results to Mr. Leimbach!

Results



Drone construction process