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ARTS-ENG-PROJECT COURSE 2019 Guidelines and Framework for your Final Projects

Here are some descriptive guidelines, providing a framework for your final projects. It is not strict rules, if your project can be convincing enough, and you can prove the need and benefit from breaking the rules. If your project intends to do this, please make sure to discuss with one of the teachers during consulting and to get the "ok".

1. History.

In general, this means that we have **explored (assignment 03)** structures, which are based on the **principles (assignment 04)** of **Steward Gough platforms (SGP)**. – see **assignment 01** and below. The actuation is based on the individually **explored "mechanisms"** – **assignment 02**. In addition, the teams should think of **possible applications (assignment 05)**. Therefore, different scales, materials, etc. should be considered and explored.

	"Rules"	complementing knowledge
assignment 01	<ul style="list-style-type: none"> · stable structure depending on setup of legs · minimum 6 legged, irregular arrangement · pin-joint (spherical hinge) to a minimum of 2 platforms <p style="color: purple; font-size: small;">>>> So you know how a stable structure works by using irregular arrangement and pin-joints.</p>	assignment 01
+		assignment 03 & 04
assignment 02	<ul style="list-style-type: none"> · finding creative solutions for making these legs, changeable in length (actuator/mechanism) <p style="color: purple; font-size: small;">>>> So you have an infinite pool of found solutions for actuation. Select the most suitable.</p>	assignment 02
+		assignment 03 & 04
application / function	<ul style="list-style-type: none"> · What is the application, where freedom and / or flexibility in arrangement, stability (in each position) and motion (freedom depending on setup of legs) is needed at the same time? 	assignment 05
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Project Proposal (Product)	<ul style="list-style-type: none"> · Check your ideas, project and product against the questions below to validate your solution. 	feedback from reading/essays/mid-review

2. Validating questions for your cross-check

Check your ideas, project and product against the questions below to validate your solution.

- a. Did you follow the “rules” above regarding SGP, actuation, setup and joining?
- b. Does the application need this unique motion to work better, compared to other (uniform) solutions?
- c. How did you make use of the freedom and / or flexibility in arranging the legs or other connecting elements?
- d. Do you need more than one actuated leg / connecting elements? Why? What’s the advantage?

In addition, you could also ask for example:

- Did you use the connecting legs / elements for the stability and motion only or could you use it also to make the product more compact?
- Can you assemble it in different ways? Why?
- What do you use to actuate? Electricity? Other?
- Do you plan the path, or do you follow the path?
- Do you need 1 or more platforms?
- What is a platform? Could it be also YOU, a real landscape, a rock, a building, a backpack, a boat,?
- Do you need more than 6 legs because the scale or proportion require this? For example a big surface of a building, a jacket, something floating on water, ...
- ...

3. Other general questions and observations.

- Can you present (sell) in an efficient way? How many sentences would you need to describe your proposal?
- What is the level of innovation of the proposal?
- Could the team build a stronger project compared to the situation when the course started?
- Did the team make use of course offers and team skills?
- ...