

**Review of the Project Group:**  
**Group Code: AP1000 53**  
**Full title: AP1000 Reactor Design**

Intended learning outcome (ILO)	Grade (0-3)	Explanation for the grading of the evidences of achieving respective ILO. Suggestions for improvements and other comments
1. <i>Collect information on</i> General design specification of the nuclear power plant with selected reactor type (Task 1, ILO1, ILO2)	2	Well written, to-the-point overview. Would be beneficial to highlight the AP1000-specific features more – what exactly makes it that cost-competitive and simple etc. The secondary loop was left undescribed, only its components were briefly mentioned under the BoP section.
2. <i>Describe</i> Operational principles of the power plant. (Task 2, ILO1, ILO2)	3	Different operations and role of auxiliary system were well described in a detailed way and the learning outcomes were reached. However, the chapters under this task seemed sloppy, there were quite a few typos and writing style inconsistencies very close together, also sentences worded in a misleading way (coolant itself is subcritical, high turbine not high pressure turbine etc).
3. <i>Explain</i> Safety features of the power plant. (Task 3, ILO1, ILO2)	2	The safety features and important parameters are explained, severe accident and core meltdown are not mentioned. Although the probability for meltdown in AP1000 is low, it is still a very important point to explain from a view of safety.
4. <i>Calculate</i> Selected core parameters (Task 4, ILO3)	3	The task was well done and interesting parts of the graphs nicely explain. Could only suggest explaining the symbols in the formulas and including units.
5. <i>Calculate</i> CHF margins in a hot channel (Task 5, ILO4a)	3	Nicely executed. Some of the plots mentioned in task were not included, but also not really missed as a reader as the shape would have been very similar to Task 4 plots. CHF could have been more explained in the introduction – why is it a limiting factor we want to avoid, what would happen otherwise etc.
6. <i>Calculate</i> Maximum cladding and fuel pellet temperature (Task 6, ILO4b)	2	The learning outcomes are mostly reached, but the reasoning behind correlation choices missing, the gap material isn't mentioned, one reasoning behind plot shape does not make sense and the headline for a plot is wrong etc. Overall impression is that it was written in a hurry and not though through very well.