

IL2206 EMBEDDED SYSTEMS

# Reflection Assignment 1

## Step 1: Reflection Assignment

(Expected workload: 4 hours)

*The reflection assignment shall train the students for the 'open' questions, but also improve the writing skills of the students. The participation in the reflection exercises is **mandatory**. Answer the questions **individually** and **with your own words** in electronic form (about 3 pages, 10pt, single-line-spaced). Be also very careful about the quality of your writing.*

**NOTE:** There is not a single correct answer, in fact for many of these question there exist even multiple different opinions in industry and the research community. It is important that you start to think about the problems in order get a better understanding of the problems related to area of embedded software development.

**Deadline:** See the Canvas page for the deadline for submission of answers.

## Step 2: Feedback Assignment

(Expected workload: 1 hour)

*Each student shall give constructive anonymous feedback on the reflection assignment of another student. The Canvas system will automatically do the assignments. Please provide relevant feedback of about one A4 page, where you concentrate on a few interesting aspects and discuss them in a constructive way. Please avoid too negative statements, but instead give suggestions for improvements.*

**Deadline:** See the Canvas page for the deadline for submission of feedback.

## Step 3: Reflecting on the Feedback

*Carefully read through the feedback on your assignment and try to use the feedback for a better understanding of the problems, but also to improve future reflection assignments and other writing task.*

**Deadline:** This task should be completed before your seminar session.

# **1 Reflection Assignments for Seminar 1**

- 1.1 Give three new examples (not mentioned previously in the lectures or lecture notes) for typical safety-critical embedded systems from different application domains.**
- 1.2 What do you consider the main problems and challenges in the design process of safety-critical embedded systems?**
- 1.3 What do you consider the most relevant properties for an embedded computing platform designed for safety-critical systems. Motivate! What does this mean for the characteristics of the individual components (processor, memory system, interconnection network, peripherals) that build the platform for a safety-critical embedded systems?**
- 1.4 Safety-critical systems execute a lot of software. How can a time-predictable behaviour of the software be supported by the hardware?**