Microcontroller Projects of the Summer Semester 2026

Student Group

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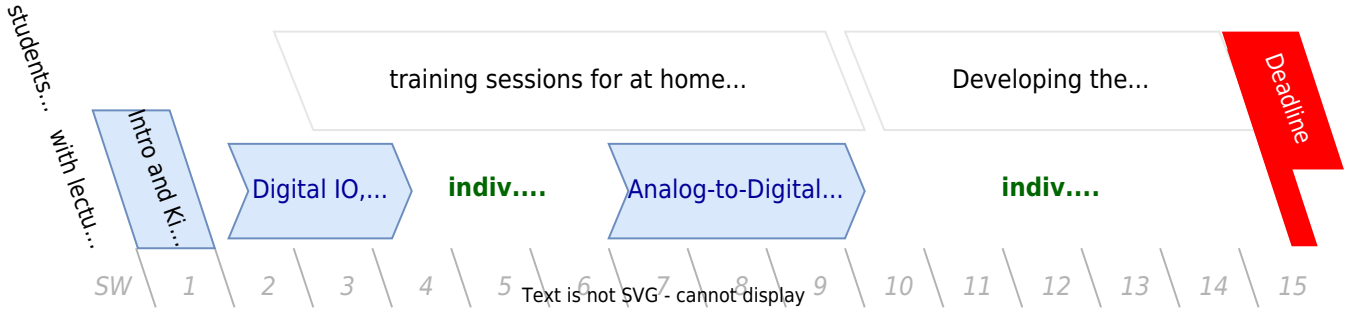
Microcontroller Projects of the Summer Semester 2026

Semester Schedule

The course is divided into several steps during the semester:



Weekly Schedule

SW	Mo (Electronics)	We (uC)	Th (uC)	Fr	Deadlines
1	09.03	11.03 Canceled	12.03 Canceled	13.03 **Intro, Kickoff and Interfaces**	
2	16.03	18.03 **Intro, Kickoff and Interfaces**	19.03 1. Hello Blinking World	20.03	
3	23.03	25.03 2. Sound and Timer	26.03 3. Logic Functions	27.03	
4	30.03	01.04 4. Up Down Counter	02.04 5. Menu	03.04	**Deadline Grouping**
5	06.04	08.04 6. Dice / 7. Randomness	09.04 Mentoring	10.04	
6	13.04 Mentoring	15.04 Mentoring	16.04 Mentoring	17.04	**Deadline Project Idea**
7	20.04 Mentoring	22.04 Mentoring	23.04 Mentoring	24.04	
8	27.04 Canceled	29.04 Canceled	30.04 Canceled	01.05	
9	04.05	06.05 8. Analog-Digital-Converter	07.05 9. UART / 10. SPI	08.05	
10	11.05	13.05 11. I2C	14.05 Canceled	15.05	
11	18.05 Mentoring	20.05 Mentoring	21.05 Mentoring	22.05	
	25.05 Canceled	27.05 Canceled	28.05 Canceled	29.05	
12	02.06	03.06 Mentoring	04.06 Mentoring	05.06	
13	09.06	10.06 Mentoring	11.06 Mentoring	12.06	
14	16.06	17.06 Mentoring	18.06 Mentoring	19.06	
15	23.06 Mentoring	24.06 **Presentations**	25.06 **Presentations**		**Deadline Code**

Legend

Mandatory events are marked in **bold**.

Submission Deadlines (European date style)

- 03.04.2026 - latest date for finalizing the group allocation. The timestamp in the ILIAS forum counts.
- 17.04.2026 - latest date for finalizing the software project idea. This should already have been clarified with me beforehand. The timestamp in the ILIAS forum counts.
- 24.06.2026 + 25.06.2026 - date for the presentation
- 03.07.2026 - latest date for submitting the software and the documentation via GitLab. The server timestamp counts.

Requirements

1. Group allocation:
    1. 2 to 3 people
    2. please ensure a good team atmosphere
2. General conditions
    1. The programming language is C or C++ (**Arduino is not possible**)
    2. The delay function must not be used for time synchronization in the millisecond range! A division into cycles (10 ms, 100 ms, etc.) must be used.
    3. An overarching overall concept must be developed, e.g. a computer game or a sensor/actuator system
    4. In general, it is easier for me to give a good grade if more functionality is implemented. As a rule of thumb, “300 self-developed lines of code” per group member applies.
    5. Regarding self-developed lines of code:
        1. The following do not count: lines that contain only comments. Header files, downloaded libraries, libraries provided by me, and code snippets. Macros, function prototypes, global variables.
        2. The following do count: non-empty lines of public and private functions that you have created yourself.
        3. Downloaded libraries or libraries provided by me should still be used where this makes sense. Header files, macros, function prototypes, and global variables should also be used.
    6. Please note the information under Tips for Programming, especially the requirements for programming!
    7. Use the available serial interfaces.
    For groups of 3 people, the use of one interface is mandatory.

Presentation and Software Submission

Details can be found under Presentation and Submission