# Course: Embedded Systems

credits: 5

| | |
|---|---|
| **Course code** | ELVH20AEMB |
| **Name** | Embedded Systems |
| **Study year** | 2022-2023 |
| **ECTS credits** | 5 |
| **Language** | English |
| **Coordinator** | P.J. Kamphuis |

| | |
|---|---|
| **Modes of delivery** | Assignment<br>Individual supervision<br>Lecture<br>Practical / Training |
| **Assessments** | Embedded Systems - Assignment |

**Learning outcomes**

The student understands the basics of a microcontroller in an Embedded setting:

- Design principals of an Embedded systems in Flow Charts
- GPIO read and write
- Serial communication
- Analog communication
- Project to apply and integrate these techniques
- Show the output data on a platform

**Content**

This course will take the ESP32 microcontroller as an example
For serial communication I2C or SPI will be discussed
Analog communication DAC (write) and ADC (read)
Project Solar Power meter with temperature compensation
Show the real-time output data on a output page

**Included in programme(s)**

Exchange Technology to Innovate (autumn)
Electrical Engineering Major Sensor Technology
Minor Technology to Innovate

**School(s)**

Institute of Engineering

share your talent. move the world.

Although every effort has been taken to ensure the accuracy of the information in the ECTS Course Catalogue, we cannot guarantee that the content and the information contained in it is always up-to-date, complete or true. Accordingly, no rights can be derived from the contents of the catalogue.