

**Course Syllabus:**

**Electronics MA, Specialization Project, 9 credits**

**General data**

<b>Code</b>	EL052A
<b>Subject/Main field</b>	Electronics
<b>Cycle</b>	Second cycle
<b>Orientation (name)</b>	
<b>Credits</b>	9.0
<b>Progressive specialisation</b>	A1F , Second cycle, has second-cycle course/s as entry requirements
<b>Answerable institution</b>	Electronics Design
<b>Adapted</b>	2018-04-23
<b>Established</b>	2018-09-24
<b>Date of change</b>	2018-09-24
<b>Valid from</b>	2017-07-01

**Aim**

This course provides the student with a deeper knowledge in embedded sensor systems where non-functional design constraints such as energy, communication, performance, cost and integration in the surrounding environment must be considered. In addition to collecting and using information from technical literature and related work in the field, the student should be able to model, simulate and implement a design according to requirement specifications. Students will be trained to work in teams together with other students who are focusing on other fields of embedded sensor systems in related projects.

## **Course objectives**

After completion of the course the student should be able to:

- analyze complex problems where a clear optimal solution is missing,
- demonstrate the ability to formulate solutions to a given problem in a specific area of embedded sensor systems,
- based on specifications model, simulate and implement the proposed solution to the given problem.

## **Content**

The course covers

- Deeper studies of one area within the field of embedded sensor systems.
- Project in embedded sensor system oriented towards a specific area.
- Elements of independent analysis, systematic problem solving and implementation

## **Entry requirements**

Electronics MA, 15 credits.

## **Selection rules and procedures**

The selection process is in accordance with the Higher Education Ordinance and the local order of admission.

## **Teaching form**

In this project course students are divided into smaller project groups. The purpose and goal of the course, along with a specification of project assignments, are introduced in the form of lecture. Teacher will provide feedback on students' progression at regular project meetings and provide supervision to guide and support students in their work.

The effort for the whole course usually covers 240 hours. This means that in addition to scheduled hours, the student must undertake comprehensive self-study.

## Examination form

**P101:** Project with documentation , 7,5 credits

**Grading:** Seven-grade scale, A, B, C, D, E, Fx and F. Fx and F represent fail levels.

**R101:** Oral presentation and written report , 1,5 credits

**Grading:** Fail (U) or Pass (G)

7.5 hp, P101 Project with documentation

Grade A, B, C, D, E, Fx and F where A-E represent pass grade and Fx and F represent fail grade.

1.5 hp, R101 Oral presentation and written report

Grade Pass or Fail

The project is examined and graded based on the overall project outcome on the scope of depth, extent and quality of project work along with student's specification of individual contributions.

Grading criteria for the subject can be found at [www.miun.se/gradingcriteria](http://www.miun.se/gradingcriteria).

The examiner has the right to offer alternative examination arrangements to students who have been granted the right to special support by Mid Sweden University's disabilities adviser.

## Grading system

Seven-grade scale, A, B, C, D, E, Fx and F. Fx and F represent fail levels.