

Report – DD2414 – Spring 2022

DD2414 Engineering project in Robotics, Perception and Learning 15.0 credits

Course analysis carried out by (name, e-mail):

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Description of the course evaluation process

There was no formal course evaluation.

Description of meetings with students

There was one student taking the course this spring, a 1st year student from the Systems, Control and Robotics program.

Course design

The course gives students with a special interest in robotics, perception and learning the opportunity to read an especially designed a project course in an area of their specific interest. Both course content and assessment are designed individually for each project. In principle the course can be initiated both bottom-up (i.e. by students) and top-down (i.e. by teachers). To take the course a teacher must be willing, capable and have time to supervise the project and take on the role as supervisor and teacher in the course and ensure that the student engage in learning activities that make them meet the objectives of the course and the specific project. When appropriate the teacher can delegate much of the day-to-day activities in the project to, for example, a PhD student or postdoc, but must remain the one responsible.

Before a new project starts, a specification must be approved by the course coordinator. The specification should contain intended learning outcomes that can be accessed for each student and a description of how the examination should be carried out for both those specific to this project and the general ones that have to be met for all projects.

The general objective of the course is to let students practice the skills required to participate professionally in project work in activities in robotics, perception and learning. The general learning outcomes are that a student that has passed the course shall be able to

- choose a course of approach and define, follow and follow up a plan for carrying out the task in a given resource budget and
- present orally and in writing, a description and defense of a technical solution to a problem in robotics, perception and learning.

The project work is divided into two parts with a half time evaluation between to allow individual follow up take place.

The students' workload

See feedback from the student below.

The students' results

The result of the course was implemented code and a report.

The following feedback was provided by the student after the course

1. I truly enjoyed how the course was organized. Working together with PhD students gave me a whole new perspective on how research is carried out in the academia. I also appreciated being completely involved in the SMaRC organization and being invited to all the different events.
2. Some days I had to work more than expected but otherwise the workload was extremely well balanced.
3. I learned more than I was expecting to. I worked on one of the cutting-edge underwater SLAM approaches, I improved my real time coding skills, I learned how all the different parts of an AUV work and what their limitations are, I saw how doctoral dissertations are carried out, and so much more.

Overall I'd say that I'm extremely satisfied with how the project went.

Overall impression

Summarize the teachers' overall impressions of the course offering in relation to students' results and their evaluation of the course, as well as in relation to the changes implemented since last course offering.

No changes implemented so far. Things seem to work quite well.

Analysis

Is it possible to identify stronger and weaker areas in the learning environment based on the information you have gathered during the evaluation and analysis process? What can the reason for these be?

The weak area of the learning environment is the same as its strength, namely the flexibility and close relation to the research environment. If one can establish a close link between the students and the research environment much is gained.

The course design put a too big distance between the course coordinator/examiner and the students taking it. The suggestion is that the student will be asked to always include a document in the final deliverable that provides feedback that can be used in the course development.

Prioritized course development

To improve the feedback loop between the students taking the course and the course development process the student in the future course rounds will be asked to deliver a document that provides such input.