

COSI Industrial Project

Course level: Master

Course code: 3621611

ECTS Credits: 5.00

Course instructor/s: Markku Hauta-Kasari with assistant

Education period (Dates): 3rd semester

Language of instruction: English

Expected prior-knowledge: COSI courses taught on Semester 1 and 2

Aim:

Student will join the color related industrial project work which will be done in groups. Students will learn group working, in which the group members are possibly in different universities. Topic of the project work is defined every year separately and topic is from industrial collaborator. Work is evaluated at the end of the 3rd semester by the evaluation board. After the industrial project, students have basic skills on project work, experience on industrial oriented topic, and they have applied the course contents from semester 1 and 2 to real industrial problem.

Teaching methods:

Project work in groups with supervision.

Course outline:

The topic for the industrial project is decided in consortium. Topic is given to students at the latest at the beginning of 3rd semester. At the end of semester 3, the evaluation of the project works is done. Check points of the project will be organized by the course instructor.

Lab experiments:

Project work may include laboratory measurements.

Examination:

Project report and final presentations at the end of semester 3.

Learning Outcomes¹:

- *Knowledge and Comprehension* of the fundamentals, principles, applications, limits, relationships, of all concepts and topics covered by this course;
- *Application, Analysis, Synthesis and Evaluation* skills of the main concepts and topics covered by this course;
- Ability to apply/implement concepts and principles introduced in the lectures and laboratory exercises on practical tasks and on industrial study cases;
- Ability to self-learn, to understand some problems and to suggest/find solutions to solve these problems.

Assessment methods and tasks:

At the end of 3rd semester, each group will submit the written project report. It must consist of chapters: Introduction, Methods, Experiments, Results, Discussion, and References. In addition, the software must be returned in digital form, to be tested by the evaluation board. After the final report submission, the groups will present their project work and results as oral presentation. This will be organized by video conferencing. The grading of the project contest is the weighted grading as follows: grading of the report 30 %, solution of the project task 40 %, final presentation 30 %.

¹ The meaning of *keywords* written in italic used to define Learning Outcomes are detailed in Annex.

Assessment criterion:

Written exam and Practical works

Excellent - outstanding performance	A
Very Good - above the average standard but with some errors	B
Good - generally sound work with a number of notable errors	C
Satisfactory - fair but with significant shortcomings	D
Sufficient - performance meets the minimum criteria	E
Fail - some more work required before the credit can be awarded	FX
Fail - considerable further work is required	F

Detail of criteria used to assess acquired skills :

- *Activities and questionnaires giving evidence of knowing (5%)*
- *Activities and questionnaires giving evidence of comprehension/understanding (5%)*
- *Activities and questionnaires giving evidence of analysis (5%)*
- *Activities and questionnaires giving evidence of synthesis (5%)*
- *Activities and questionnaires giving evidence of evaluation (5%)*

Excellent	A
Very Good - above the average standard	B
Good - generally sound well	C
Satisfactory - but with significant shortcomings	D
Sufficient - performance meets the minimum criteria	E
Fail - some more work required	FX
Fail - considerable further work is required	F

The evaluation of informal learning outcomes will be based on questionnaires and laboratory notebook (self evaluation, learning diary).

Literature and study materials:

- Students are expected to do literature survey and find help by contacting researchers in the field.

Contact details:

Professor Markku Hauta-Kasari
 University of Eastern Finland
 E-mail: Markku.Hauta-Kasari@uef.fi
 Office hours: 8:00- 16:00 (from Monday to Friday)