



Course Analysis MF2077

Machine Design Advanced Course Part II HT19

2020-02-26 Kjell Andersson

Course information

Machine design involves design of a wide range of products, from complex machines, e.g. cars, to more simple products such as bicycle transmissions which we all meet in our daily life. To design, means to create new solutions to the problem we are facing in an engineering correct manner, This means that we should address the real problem and make a solution as simple as possible which also is possible to realize in an industrial environment considering e.g. aspects of economy, energy and environment. For solving the design tasks we use modern CAE programs for creating geometry and for analysis, but an important part is also to generalize and make rough estimations based on these generalizations. This course is preparing you for your upcoming work as an engineer or product developer. It also gives you knowledge and skills in planning, participating and leading product development work of integrated and modularized products. In addition you will be trained to use CAE tools for design, simulation and analysis and to communicate technical results orally and in writing.

Course responsible teacher:

Kjell Andersson

Other teachers in the course:

Stefan Björklund

Examiner:

Kjell Andersson

Learning activities:

Lectures, seminars, project work

Additional Comments

The project work is a continuation from MF2076 Machine Design Advanced Course I.

1 Students' view of the course

Summary of students' view of the course based on for example LEQ survey and/or interviews or other activities.

Response rate of LEQ course evaluation survey:

24%

Brief summary of students' responses from the LEQ survey and/or other types of course evaluation:

In the survey the students gives it high rating (around 6) in both meaningfulness (Q1-6), comprehensibility (cognitive) level (Q7-11), and for the manageable level (Q17-22).

Additional Comments

The chance to work on a real project and complete a whole design cycle was appreciated.

2 Teacher analysis of the course

The analysis should present the development of the quality of the course as well as measures that have been taken after previous course analysis. The course's strengths and weaknesses based on the course evaluation and the teacher's reflection.

Changes of the course before this course offering:

None

The course's strengths (based on the students' experiences and the teacher analysis):

The main strength is the project work where the students will experience to go through all stages from concept to manufacturing a prototype of the whole product or selected parts of it.

Areas for improvement of the course (based on student experiences and teacher analysis):

Composition of project teams (this is actually an issue for previous course MF2076), improve project meetings and dividing of workload among members in the group.

Proposed changes to the next course round:

Make a plan and strategy for how to run and follow the project groups at the weekly meetings.

Additional Comments

Both from the LEQ survey and from the individual meetings with all (=100% response rate) we find that the course is generally well appreciated and high ranked among the students.