Syllabus for

Academic year 2013/2014 >

PPUX05 - Master's thesis in Product and production development

Syllabus adopted 2011-02-22 by Head of Programme (or corresponding)
Owner: TKDES
30,0 Credits
Grading: UG - Fail, pass
Education cycle: Second-cycle
Major subject: Automation and Mechatronics Engineering, Mechanical Engineering, Industrial Design Engineering
Department: 44 - PRODUCT AND PRODUCTION DEVELOPMENT

Teaching language: English

Credit distribution

Course module	Sp1	Sp2	Sp3	Sp4	Summer course	No Sp	Examination dates
0108 Diploma thesis 30,0 c Grading: UG			15,0 c	15,0 c			

In programs
MPDES INDUSTRIAL DESIGN ENGINEERING, MSC PROGR, Year 2
MPPDE PRODUCT DEVELOPMENT, MSC PROGR, Year 2
MPPEN PRODUCTION ENGINEERING, MSC PROGR, Year 2
MPSYS SYSTEMS, CONTROL AND MECHATRONICS, MSC PROGR, Year 2

Examiner:

Eligibility:
For single subject courses within Chalmers programmes the same eligibility requirements apply, as to the programme(s) that the course is part of.

Course specific prerequisites
The Master Thesis may be commenced after successfully passed courses of 225 hec (Higher Education Credits) for students enrolled at an Master of Science in Engineering or Architecture programme at Chalmers. For other students at a Master Programme the Master Thesis may be commenced after successfully passed courses of 45 hec at advanced level. The subject and time schedule as well as the number of students participating in the thesis work must be approved by the Master Programme Coordinator before the work starts.

Aim
In the Master Thesis the student shall integrate, deepen and expand his or her knowledge within a restricted area of what has been previously studied at courses within the Master programme. The purpose of the Master Thesis is also for the student to gain a broad understanding and skills in engineering and scientific work methods.

Learning outcomes *(after completion of the course the student should be able to)*
The learning objectives for a thesis are based on the objectives for Master of Science/Architecture/Technology degrees formulated in Chalmers¿ local Master¿s degree procedures. (Doc. no. C2007/723). Specific learning objectives for a Master¿s thesis are for the student to show:

- Considerably more in-depth knowledge of the primary subject matter/focus of the training, including deeper insight into current research and development work.
- Deeper knowledge of methods in the primary subject matter/focus of the training.
- A capability to contribute to research and development work.
- The capability to use a holistic view to critically, independently and creatively identify, formulate and deal with complex issues.
- The capability to plan and use adequate methods to condhect qualified tasks in given frameworks and to evaluate this work.
- The capability to create, analyse and critically evaluate different technical/architectural solutions.
- The capability to critically and systematically integrate knowledge.
- The capability to clearly present and discuss the findings as well as the knowledge and arguments that form the basis for these findings in written and spoken English.
- The capability to identify the issues that must be addressed within the framework of the specific thesis in order to take into consideration all relevant dimensions of sustainable development.
- A consciousness of the ethical aspects of research and development work.

The same formulated learning objectives apply for theses encompassing 30 and 60 higher education credits (hec). However, a Master¿s thesis for a 60-hec course must be considerably more ambitious with respect to the scientific level or technical/architectural realisation. For example, the objective could be to author a scientific article as the result of the research or to further develop a technical solution for mass prodhection and market introdhection. Objectives for work in the field of architecture might include artistic development or a realisable architectural project.

Organisation

Initiation

- The thesis is to be written by a single student or two students working together.
- The student(s) contact an examiner or the MPC can suggest an examiner.
- Student(s) formulate a brief written description of the topic for the thesis. This description must be included with the registration documentation. The description should contain the background, purpose, objective and possibly the method.
- The examiner will ensure that the students meet the requirements for general and specific prerequisites for the thesis and that the proposed topic for the thesis meets the general learning objectives for theses. The examiner signs the registration documentation.
- The MPC ensures that the thesis falls within the primary area of the Master¿s programme and signs the registration documentation. The MPC sends the registration documentation to the Student Centre.
- The Student Centre completes the registration in Ladok.

Planning

- The students must write a planning report providing a detailed description of the problem/task. The planning report must contain the background, purpose, objective, scope, method and timetable for completion of the thesis. The planning report is submitted to the examiner for approval.

Guidance

- The students are entitled to guidance during the course of their work.

Interim reporting

- After twenty working weeks on a 60-hec thesis, the student(s) must report the status of their work to the examiner and the MPC. An approved interim report results in 30 hec being registered in Ladok.

Written report

- The thesis must be written in English.
- The cover, etc., of the thesis must be formulated according to the templates for "Formulating reports and theses" at Chalmers. See www.chalmers.se/sections/ar_student/framtagning-av-rapporter.
- The thesis must be parsed using anti-plagiarism software.
- Chalmers¿ policies regarding open access and confidentiality apply to the work on the thesis and to publishing the report. See Chalmers¿ working procedure C2008/271.
- The thesis must be published electronically in Chalmers Publication Library (CPL) according to the applicable rules for electronic publication of theses at Chalmers.
- When two students work jointly on a thesis, the division of the work must be clearly stated in the thesis.

Verbal presentation

- The verbal presentation begins with the students describing their work. This is followed by a defence of their findings and discussion.
- The verbal presentation must be made in English. This presentation may not take more than 60 minutes, of which approximately 1/3 of the time should be devoted to a defence of the thesis and discussion.
- At the time of the verbal presentation, the written thesis must be completed but not published. This is to make it possible to include viewpoints that arise during the verbal presentation to be incorporated into the thesis.
- The verbal presentation, including a defence of the thesis, must be done at Chalmers. Any additional presentations can be made at corporations if necessary. In exceptional cases, for example, if thesis research has been condhected abroad, the examiner may grant a dispensation from the requirement for a verbal presentation, defence of the findings in the thesis and presence at other presentations at Chalmers.
- The presentation of the thesis must be announced at the faculty in question at least two weeks prior to the date of the presentation. The presentation must be held in the period between August 15 and June 15, during normal office hours.

Examination

For a thesis to be approved, the following stages must be completed:

- An approved planning report
- An approved report
- An approved presentation and defence of the thesis
- Approved questioning of another thesis
- Attendance of the presentation and defence of two other theses

For a 60-hec thesis, an interim report must be submitted when the work has reached the halfway point. The examiner will decide on the form for the interim report. When the interim report has been approved, 30 hec will be registered in Ladok.