Annex 6 to the Addendum for Double Master's Degrees between Chalmers tekniska högskola and Universität Stuttgart

Double Master's Degree Scheme

The attached MACROPLAN depicts the 2-year MSc double degree structure in **Systems, Control and Mechatronics at Chalmers** and in **Technische Kybernetik at U Stuttgart**. It shows the compulsory and elective courses in each semester as well as the prerequisites for students wishing to spend their 2nd year at the partner institution.

Semester 1		Semester 2		Semester 3		Semester 4	
Chalmers students at Chalmers	**Stuttgart students in Stuttgart**	**Chalmers students at Chalmers**	**Stuttgart students in Stuttgart**	**Chalmers students in Stuttgart**	**Stuttgart students at Chalmers**	**Chalmers students in Stuttgart**	**Stuttgart students at Chalmers**
Quarter 1 Modelling and Simulation (C) (7,5 ECTS) --- Discrete Event Systems (C) (7,5 ECTS) --- **Quarter 2** Linear Control System Design (C) (7,5 ECTS) --- Elective course 1 from course packages (7,5 ECTS) (list)	Concepts of Systems and Control Theory (C) (6,0 ECTS) --- Project in the Field of Engineering Cybernetics (C) (1,5 Credits) --- Course from group "Modelling" (SC) (6,0 Credits) --- Course from group "Area of Specialisation 1 OR 2" (SC) (6,0 Credits) --- Course from group "Area of Specialisation 1 OR 2" (SC) (6,0 Credits) --- Course from group "Area of Specialisation 1 OR 2" (SC) (6,0 Credits)	**Quarter 3** Elective course 2 from course packages (7,5 ECTS) (list) --- Elective course 3 from course packages (7,5 ECTS) (list) --- **Quarter 4** Embedded Control Systems (C) (7,5 ECTS) --- Elective course 4 from course packages (7,5 ECTS) (list)	Advanced Control 1 (Nonlinear Control) (SC) (6,0 ECTS) --- Project in Engineering Cybernetics (C) (1,5 ECTS) --- Dynamics of Distributed Parameter Systems (C) (6,0 ECTS) --- Systems Analysis (DES) (6,0 Credits) OR Course from group "Area of Specialisation 1 OR 2" (SC) (6,0 Credits) --- Elective in Engineering Cybernetics (SC) (3,0 ECTS) --- Internship (12 ECTS)	Course from group "Advanced Control" (6,0 ECTS) --- Module 2 from Area of Specialisation (SC) (6,0 ECTS) e.g. Convex optimization (R) --- Module 3 from Area of Specialisation (SC) (6,0 ECTS) Elective in Engineering Cybernetics (E) (3,0 ECTS) --- Internship (12 ECTS) (preferably completed from June to October in Sweden or Germany)	**Quarter 5** Sensor fusion and non-linear filtering (7,5 ECTS) --- Discrete Event Systems (7,5 ECTS) OR Course from group "Area of Specialisation 1 OR 2" (SC) (7,5 Credits) --- Design Project in Systems, Control and Mechatronics (C) (1,5 ECTS) --- **Quarter 6** Design Project in Systems, Control and Mechatronics (C) (6,0 ECTS) --- Course from group "Area of Specialisation 1 OR 2" (7,5 ECTS) (list)	Master Thesis (30 ECTS)	Master Thesis (30 ECTS)
Σ ECTS = 30	**Σ ECTS = 31.5**	**Σ ECTS = 30**	**Σ ECTS = 34.5**	**Σ ECTS = 33**	**Σ ECTS = 30**	**Σ ECTS = 30**	**Σ ECTS = 30**

Elective Course or Spezialisierungsfach has to be chosen so that "Embedded Control Systems" is accounted for by Chalmers unless EZDV had been taken previously in the Bachelor's Programme at US

Internship is accounted for as "Design Project in SCM". It is a compulsory course for Chalmers students and a recommended course for US students

US students must choose during Semester 1 to Semester 3 one course on "**Discrete Event Systems**", three courses from "**Area of Specialisation 1**", and two from the "**Area of Specialisation 2**". **US students** must choose either "Autonome Systeme und Regelungstechnik", "Systemdynamik" or "Mathematische Methoden der Kybernetik" as one of their "Area of Specialisation".

Chalmers students must choose four "**Elective courses**" from course packages, at least three out of the four courses have to be semi-compulsory (SC).

Course code: C = compulsory; E = elective: SC = semi compulsory; R = recommended

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