

Annex to the Study and Examination Regulations for the Master's Programme International Automotive Engineering at Technische Hochschule Ingolstadt of 27.06.2011 in the version of the amendment statutes of 24.11.2014

Overview of the modules, specialisations and credits

1	2	3	4	5	6	7	8	
Lfd. No.	Modules	SWS	Type of course	Exams		Performance certificates relevant to the final grade (weighting for the formation of the final subject grade) 1.0, unless otherwise stated)	Weighting for the overall examination grade (in %)	Performance Points (ECTS-points)
				Type and duration in minutes				
1.	Mathematical Modelling and Simulation	4	SU /Ü	schrP 90-120			6	5
2.	CAX-Techniques in Automotive Engineering	4	SU /Ü/Pr			PrA ³⁾	6	5
3.	Power Train	4	SU /Ü	schrP 90-120			6	5
4.	Vehicle Dynamics	4	SU /Ü	schrP 90-120			6	5
5.	Automotive Electronics	4	SU /Ü	schrP 90-120			6	5
6.	Group Project ⁴⁾	2	S			PB ⁵⁾	9	5
7.	Core Area	16	(see there)	(see there)			total 24	20
9.	Elective Subjects	8	S			2 LN1 ¹⁾	per LN 6	10
10.	Master's thesis	1		MA6 ¹⁾			25	30
11.	Seminar for Master's thesis	1	S	S		Coll2 ²⁾		
	Total	48					100	90

7 Core Area (= focal points)

7.1 Core Area (= focus) "Vehicle Electronics"

1	2	3	4	5	6	7	8
Lfd. No.	Modules	SWS	Type of course	Examinations: Type and duration in minutes	Final examinations that are relevant for the final grade of the degree programme Performance records	Weighting for the overall examination grade (in %)	Performance points (ECTS-points)
7.1.1	Automotive Control Engineering	4	SU/Ü	schrP, 90-120		6	5
7.1.2	Power Supply and Energy Distribution	4	SU/Ü	schrP, 90-120		6	5
7.1.3	Automotive Communication Systems	4	SU/Ü	schrP, 90-120		6	5
7.1.4	Development Methodologies for Automotive Systems	4	SU/Ü	mdIP, 15-30		6	5
	Totals	16				24	20

7.2 Core Area (= focus) "Vehicle Safety"

1	2	3	4	5	6	7	8
Lfd. No.	Modules	SWS	Type of course	Examinations: Type and duration in minutes	Final examinations that are relevant for the final grade of the degree programme Performance records	Weighting for the overall examination grade (in %)	Performance points (ECTS-points)
7.2.1	Vehicle Crash Mechanics and Biomechanics	4	SU/Ü	schrP, 90-120		6	5
7.2.2	Integrated Safety and Assistance Systems	4	SU/Ü	schrP, 90-120		6	5
7.2.3	Sensor Technology and Signal Processing	4	SU/Ü	schrP, 90-120		6	5
7.2.4	Testing and Simulation Methods for Vehicle Safety Systems	4	SU/Ü	mdIP, 15-30		6	5
	Totals	16				24	20

Abbreviations

schrP	written examination	SU	seminar-based teaching
mdIP	oral examination	Ü	Exercise
PB	Project report	Pr	Internship
PrA	practical work		
LN	Performance record		
S	Seminar	MA	Master thesis
Coll	Colloquium		

Notes

- 1) In the study block "Elective Subjects" (subject-specific elective modules), 2 subject-specific elective modules of 4 SWS each must be completed. In the subject-specific elective modules, theoretical knowledge or methodological knowledge of the engineering development of automotive systems is taught, which cannot be taken into account in the compulsory curriculum. They thus give students the opportunity to design their individual subject profile according to their inclinations and abilities. For each FW module, a performance record must be provided. Each performance record must be evaluated with at least "sufficient". The final performance record is either a written examination (90-120 min), an oral examination (15-45 min), a practical paper (to be completed during the respective semester) or a presentation (10-30 min). The details are determined by the Faculty Council in the study plan. The practical work is a study project to be completed either by a student or by a group of students during the lecture period of a semester with a workload of 125 hours per student. It is a written elaboration of a topic with practical relevance of approx. 10-15 pages with a 15-30 minute presentation in the course. The details are determined by the Faculty Council in the curriculum.
- 2) Oral presentation of the results of the Master's thesis (30-60 min.). Assessment by the predicate "with success" or "without success". For passing the Master's examination, the assessment with the predicate "with success" is required.
- 3) The practical work is a concrete task, which may consist of several subtasks. The tasks are to be worked on either in a group or individually. In the case of group work, each student has to contribute individually. The workload for the individual contribution corresponds to 125 time hours. Grades are awarded for an individual written elaboration of the assignment of 10-20 pages and an oral questioning of 10-15 minutes. Further details are determined by the Faculty Council in the curriculum.
- 4) The group project work is carried out in teams based on division of labour, which are put together by the students themselves. The content of the project is usually a complex task from the area of the development of components of vehicle electronics or vehicle safety. By applying scientific methodology using technical-scientific standards, interdisciplinary contexts in particular are to be developed and methodological skills (including structuring, project and time management) are to be acquired. The group project report is broken down with sections that can be assigned to the individual students.
- 5) The project report is a written elaboration of a topic with practical relevance of approx. 20-30 pages with a 15-30 minute presentation in the course. The details are determined by the Faculty Council in the curriculum. The Master's thesis is a written final thesis. The processing time (=period between registration of the Master's thesis and submission) is 6 months. The length is 50-80 pages using the standard font sizes (10pt - 12pt). The workload corresponds to the credit points set for the course.