Master of Science (M.Sc.) in Mechanical Engineering *(Academic Master)*

2023-2024

Course Group	ECTS	Course Code	Course name	Course type	ECTS	Pre-requisite
Required	6	MATH517	Advanced Mathematics for Engineers and Scientists	required	6	
Elective	30	IE425	Computer Aided Design and Manufacturing	elective	6	
		IE502	Advanced Quality and Reliability Engineering	elective	6	
		ME411	Renewable Energy Technology	elective	6	
		ME414	Energy Conversion Technology	elective	6	
		ME415	Computational Methods	elective	6	
		ME416	Turbomachinery	elective	6	
		ME502	Measuring techniques and Instrumentation	elective	6	
		ME503	Advanced Fluid Dynamics	elective	6	
		ME504	Advanced Thermodynamics	elective	6	
		ME507	Computational Fluid Dynamics	elective	6	
		ME510	Physical Transport Phenomena	elective	6	
		ME518	Advanced Materials	elective	6	
		ME520	Welding and Joining Technologies	elective	6	
		ME580	Special Topics in Engineering	elective	6	
		ME605	Research Activity	elective	6	
Master Thesis	24	ME590	Master Thesis	required	24	
Total	60					

Graduate Studies: summary of conditions for successful completion of studies

Category	ECTS	Note:
Courses	**36**	The one-year master's program requires the completion of 6 courses, each valued with 6 ETCS. One course is mandatory (as shown in the above table) and five are elective. Minimum three of those five elective courses have to be chosen from the pool of the Program Elective Courses (as shown in the above table). The rest of the courses (Two) can be chosen from the Area Elective Courses of Mechanical, Industrial, Electrical, Computer Science, and Software engineering programs. The Area Elective courses are those courses with level 400 and higher. The Master's thesis is worth 24 ETCS. The total requirement for a one-year master's degree is 60 ETCS. The set of elective courses, to be chosen in consultation with the supervisor, shapes the professional profile.
Master Thesis	**24**	
Total	**60**	

Master of Science (M.Sc.) in Mechanical Engineering *(Professional Master)*

Course Group	ECTS	Course Code	Course name	Course type	ECTS	Pre-requisite
Required	6	MATH517	Advanced Mathematics for Engineers and Scientists	required	6	
Elective	42	IE425	Computer Aided Design and Manufacturing	elective	6	
		IE502	Advanced Quality and Reliability Engineering	elective	6	
		ME411	Renewable Energy Technology	elective	6	
		ME414	Energy Conversion Technology	elective	6	
		ME415	Computational Methods	elective	6	
		ME416	Turbomachinery	elective	6	
		ME502	Measuring techniques and Instrumentation	elective	6	
		ME503	Advanced Fluid Dynamics	elective	6	
		ME504	Advanced Thermodynamics	elective	6	
		ME507	Computational Fluid Dynamics	elective	6	
		ME510	Physical Transport Phenomena	elective	6	
		ME518	Advanced Materials	elective	6	
		ME520	Welding and Joining Technologies	elective	6	
		ME580	Special Topics in Engineering	elective	6	
		ME605	Research Activity	elective	6	
Professional project	12	ME585	Master Thesis	required	12	
Total	60					

Graduate Studies: summary of conditions for successful completion of studies

Category	ECTS	Note:
Courses	**48**	The one-year master program requires the completion of 8 courses, each valued with 6 ETCS, of which 1 course is mandatory and 7 are elective. Minimum 3 elective courses have to be chosen from the pool of the Program Elective Courses while the rest of the courses (four) can be chosen from the Area of Elective Courses. The Area Elective Courses are all courses offered at FENS faculty with levels 400 and higher. The Master's thesis is worth 12 ETCS. The total requirement for a one-year master's degree is 60 ETCS. The set of elective courses, to be chosen in consultation with the supervisor, shapes the professional profile.
Professional project	**12**	
Total	**60**	