CURRICULUM 2024-2025 Master Mechanical Engineering v03-06-2024

	Q1	Section	Slot (ECs)
Core*	4UM00 - Microfabrication methods	MS	B (5)
	4CM00 - Control Engineering	CST	C (5)
	4MM10 - Advanced Computational Continuum Mechanics	MoM/PP	D (5)
	4BM00 - Advanced Engineering Mathematics	PF/ET	E (5)
Specialization	4DM00 - Structural Dynamics and Vibro-Acoustics	DC	A (5)
	4MM00 -Composite and Light-weight Materials	MoM	A (5)
	4CM10 - System Theory for Control	CST	B (5)
	4RM00 - Introduction to Computational Fluid Dynamics	PF	B1 (5)
	4LM60 - Structural performance of polymers and pol. Comp	PP	C (5)
	4CM100 - Optics for Mechanical Engineers	CST	D (5)

*Core courses can also be chosen in the specialization space.

	Q2	Section	Slot
Core*	4BM60 - Interfacial Transport Phenomena in Engineering Flows	PF/PP	D2 (5)
	4DM10 - Multibody and Non-linear Dynamics	DC	A (5)
	4BM20 - Experimentation for Mechanical Engineering	ET/PP/PF/MS	E (5)
	4EM70 – Sustainable Energy Sources	ET/PF	A (5)
Specialization	4EM10 - Gasdynamics	ET	B (5)
	4LM30 - Multiscale Modelling for Polymer Mechanics	PP	C (5)
	4EM40 - Heat and Flow in Microsystems[1]	ET	C (5)
	4SE20ONL- Microscale modeling of heat storage materials[2]	ET	X (5)
	4BM30 - Modelling Combustion	PF	D (5)
	4MM20 - Computational and Experimental Micro-mechanics	MoM	D (5)
	4CM70 - Integrated Systems Design	CST	E (5)
	4CM60 - Advanced Motion Control	CST	B (5)
	4SC000 -Optimal control and reinforcement learning	CST	D (5)
	4TM00-- Robot Motion Planning and Control	RBT	C (5)
	4CM110- Design of Optical Instrumentation	CST	B (5)

1 When selecting the course 4EM40 the course 4SE20ONL cannot be selected. 2 On campus exam in timeslot C

	Q3	Section	Slot
Core*	4DM20 - Engineering Optimization	CST	B (5)
	4EM30 - Scientific Computing for Mechanical Engineering	ET/MoM/RBT	A (5)
	4CM00 - Control Engineering	CST	E (5)
	4MM50 – Fracture Mechanics – theory and application	MoM	C (5)
Specialization	4DM30 - Non-linear Control	DC	A (5)
	4UM10 - Lab on a Chip Microdevices	MS	A (5)
	4LM20 - Soft Materials Processing	PP	C (5)
	4SC080 - Supervisory Control of cyber-physical systems	CST	D (5)
	4EM50 - Thermal Energy Storage [3]	ET	A2 (2.5)
	4SE30ONL-Thermal energy storage and demand [4]	ET	X (5)
	4BM10 - Hydraulic Turbomachines	PF	E (5)
	4CM40 - Physical and data-driven modelling	CST	D (5)
	4BM50 - Energy Geoscience	PF	D (2.5)
	4CM90 – OptoMechatronics	CST	A (5)
	4CM120- Data-based optimization of control systems	CST	E (5)
	4EM90 - Modelling high-tech systems with thermo-mechanical effects	ET	E (5)

3 When selecting the course 4EM50 the course 4SE30ONL cannot be selected. 4 On campus exam in timeslot A

	Q4	Section	Slot
Core*	4CM50 - Applications of Design Principles	CST	D (5)
	4UM00 - Microfabrication methods	MS	B (5)
Specialization	4AT020 - Clean engines and future fuels	PF	C (5)
	4DM40 - Modelling and Control of Manufacturing Systems	DC	A (5)
	4BM40 - Optical Diagnostics for Combustion and Fluid Flow	PF	A (5)
	4DM70 - Analysis and design of networked dynamical systems	DC/RBT	B (5)
	4CM20 - Hybrid Systems and Control	CST	C (5)
	4LM50 - Rheology	PP/MS	E (5)
	4MM60 - Advanced and Additive Manufacturing	MoM/PP	A (5)
	4EM80 - Monte Carlo Simulations for Energy Application	ET	E (5)
	4DM80 – Fault-tolerant control	DC	D (2.5)
	4EM60 - Advanced Discretization Techniques	ET	B (5)
	4SC020 - Mobile robot control	RBT	D2 (5)
	4SC100: Haptics and soft robotics	RBT	A (5)