

Das Masterstudium umfasst Theorie- und Kontextmodule an zentralen Standorten sowie Vertiefungsmodule (Vertiefungsprojekte und ergänzende Veranstaltungen) an den MRUs.

In der nachstehenden Tabelle sind die Theorie- und Kontextmodule aufgelistet, welche für das jeweilige Fachgebiet empfohlen werden¹: (Stand April 2008)

Technisch-wissenschaftliche Vertiefung

Modulbezeichnung	BEP²	EE⁶	InT⁶	ICT⁶	PPCBT⁶
Advanced Control		X	X		
Advanced Electronic Design			X		
Advanced Data Management Systems				X	
Algorithms	X		X	X	
Antriebs- und Servosysteme		X	X		
Applied micro & nano technologies			X		X
Applied Photonics			X		
Baudynamik					X
Business and ICT Strategies	X			X	
Business Dynamics	X			X	
Business Strategy	X			X	X
Communication Networks and Services				X	
Data Management	X	X		X	
Design of Embedded Hardware and Firmware			X		
Digital Image Processing			X	X	
Electrical Energy Systems		X	X		
Embedded Real-time Software			X	X	
Enterprise Computing				X	
Global Manufacturing, Logistics and Sourcing	X	X			X
ICT Management	X			X	
Information Visualisation & User Interfaces			X	X	
Instandhaltung					X
Integrated Automation			X		X
Intelligent Systems				X	
IT-Security			X	X	
Manufacturing Technologies	X		X		
Materials and Surfaces			X		X
Materials for precision manufacturing			X		
Mechatronics			X		
Mobile Devices			X	X	

¹ Die Modulbeschreibungen können unter <http://www.msengineering.ch> heruntergeladen werden

² BEP: Business Engineering and Production; EE: Energy and Environment; InT: Industrial Technologies; ICT: Information and Communication Technologies; PPCBT: Public Planning, Construction and Building Technology

Mobile Systems and Applications			X	X	
Multiphysics Modeling and Simulation		X	X		X
Nachhaltigkeit im Bauwesen / Sustainable Engineering		X			X
Numerical Simulation and Validation of Technical Systems		X	X		
Numerische Methoden der Geotechnik		X			X
Power Electronic Systems		X	X		
Product Innovation, Product Engineering and PLM	X	X	X		
SIG/GIS and Geospatial Imaging				X	X
Signal Processing and Transmission		X	X	X	
Software Design			X		
Software Engineering & Architectures				X	
Statistical Digital Signal Processing and Modeling	X		X	X	
Structural Mechanics and Dynamics		X	X		X
Theoretical Computer Science			X	X	
Verkehr und Raumplanung					X
Wasserbau		X			X
Wireless Communications			X	X	
Zweiphasenströmung mit Wärme- und Stofftransport		X	X		X

Erweiterte theoretische Grundlagen

Modulbezeichnung	BEP ³	EE ⁶	InT ⁶	ICT ⁶	PPCBT ⁶
Angewandte Statistik und Datenanalyse	X	X	X	X	X
Algorithms and Complexity				X	
Computer Algebra and Numerical Mathematics in Eng.	X	X	X	X	X
Factory Planning			X		
Festkörperphysik und Anwendungen			X		X
From Fourier to Wavelets			X	X	
Gestion, production et utilisation d'énergie	X	X	X	X	
Gewöhnliche Differentialgleichungen und dyn. Systeme		X	X	X	X
Kryptografie und Codierungstheorie	X		X	X	
Modeling, Simulation and Optimization				X	
Numerical Control			X		
Optimization	X		X	X	X
Partielle Differentialgleichungen der Ingenieurwissenschaften		X	X	X	X
Stochastic Modelling	X		X	X	X
Vibration			X		
Materialeigenschaften von Kristallen / Tensoren für Ing.			X	X	X
Wellenphänomene in modernen Technologien			X	X	

Kontextmodule

Modulbezeichnung	BEP ⁴	EE ⁶	InT ⁶	ICT ⁶	PPCBT ⁶
Business and Management				X	
Cross-cultural competence and global market	X		X	X	X
Entrepreneurship und Unternehmensführung	X	X	X	X	X
Ethics and Corporate Responsibility	X		X	X	X
Innovations- und Changemanagement	X		X	X	X
Kommunikation in Unternehmen	X		X	X	X
Management komplexer Probleme	X	X	X	X	X
Privacy and Law	X	X	X	X	X
Process design, Production planning and monitoring			X		
Quality and Risk Management (QRM)	X		X	X	X
Strategy, Innovation and Project Management			X		

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