

List of Electives in MSNE recommended by Mentors && at least one MSNE student attending (Last update: Jan 12, 2022).

[VK] Elective Modules to MSNE (Catalogue)	[VK] [EIT355] Nanosystems
[VK] [WZ1711] Development Policy and Economics: Human Security and Human Development	[VK] [IN2361] Natural Language Processing
[VK] [IN2364] Advanced Deep Learning for Computer Vision	[VK] [EIT7776] Neuroelectronics Seminar
[VK] [IN1503] Advanced Programming	[VK] [SG860012] Neuromuscular Control and Learning
[VK] [MW2318] Applied Tensor Algebra for Engineers	[VK] [EIT0270] Neuroprosthetics
[VK] [EIT649] Approximate Dynamic Programming and Reinforcement Learning	[VK] [POL70074] Making Neuro-Technologies for Society
[VK] [POL60200] Artificial Intelligence in Theory and Practice	[VK] [PH2027] Nonlinear Dynamics and Complex Systems 1
[VK] [IN3200] Selected Topics in Computer Graphics and Vision	[VK] [PH2028] Nonlinear Dynamics and Complex Systems 2
[VK] [CLA10602] Basic Techniques in Modelling Complex Systems	[VK] [MA3305] Numerical Programming 1 (CSE)
[VK] [IN2138] Robot Motion Planning	[VK] [W001071] Patents and Licensing Agreements
[VK] [IN2272] BGCE Compact Course	[VK] [EIT8066] Practical Course Wearable Robotics: Upper Limb Exoskeletons
[VK] [IN2015] Image Synthesis	[VK] [MW0450] Practical Course Industrial Software Engineering / C++
[VK] [EIT263] Biologically-Inspired Learning for Humanoid Robots	[VK] [EIT0429] Software Engineering Lab
[VK] [EIT473] BioMEMS and Microfluidics	[VK] [W001187] Private Equity
[VK] [MW2479] Bioprinting: Fundamentals and Applications	[VK] [EIT446] Practical Course Biosignal Processing and Modeling
[VK] [EIT474] Biosensors and Bioelectronics	[VK] [EIT8046] Project Lab Human-Centered Neuroengineering: Neurorehabilitation
[VK] [EIT3141] Brain, Mind and Cognition (Seminar)	[VK] [EIT208] Practical Course Cognitive Systems
[VK] [WZ2693] Cognitive Neuroscience	[VK] [EIT0424] Python for Engineering Data Analysis - From Machine Learning to Visualization
[VK] [EIT1004] Communication Acoustics	[VK] [EIT8024] Reinforcement Learning for Robotics
[VK] [EIT646] Computational Neuroscience: A Lecture Series from Models to Applications	[VK] [EIT8001] Lab Series Neurosignals
[VK] [IN2319] Computational Physiology for Medical Image Computing	[VK] [IN2355] Robotic 3D Vision
[VK] [IN2246] Computer Vision I: Variational Methods	[VK] [IN2005] Scientific Computing I
[VK] [IN2375] Computer Vision II: Detection, Segmentation, and Tracking	[VK] [EIT7751] Seminar Biomedical Electronics
[VK] [MA3402] Computational Statistics	[VK] [EIT768] Advanced Seminar Cognitive Systems
[VK] [EIT4351] Convex Optimization	[VK] [EIT7009] Seminar Machine Learning
[VK] [WZ2938] Course block: Neuroscience of vision	[VK] [WZ2682] Sensory and Behavioral Neurogenetics
[VK] [EIT8043] Cybathlon Challenge: Mechanism Design & Control	[VK] [EIT493] Signal Processing for Audio Technology
[VK] [EIT8041] Cybathlon Challenge: Task Control & User Experiments	[VK] [W001180] Tech Challenge
[VK] [MA3081] Dynamical Systems	[VK] [ED0140] Philosophy of Technology
[VK] [IN2003] Efficient Algorithms and Data Structures	[VK] [MW2245] Think. Make. Start.
[VK] [MW2373] Introduction to nonlinear dynamics and chaos	[VK] [MA5607] Topics in Computational Biology
[VK] [EIT8023] Electrode - Electrolyte Interfaces	[VK] [ME70004] Translational Neuropsychiatry
[VK] [EIT270] Electric and Magnetic Fields in Biomedical Sciences and in Medical Applications of Nanotechnology	[VK] [CLA11123] How to Produce Your Own Videos
[VK] [EIT1037] Flexible Hybrid Electronics and Integration	[VK] [MW2437] Virtual Reality in Human Factors Engineering
[VK] [IN2379] Advanced Data Handling and Visualization Techniques	[VK] [IN2026] Visual Data Analytics
[VK] [EIT60014] Fundamentals of Computer Science for Neuroengineering	[VK] [CLA20563] What Holds Society Together?
[VK] [EIT60022] Fundamentals of Mathematics for Neuroengineering	[VK] [CLA10450] When Engineers Become Managers
[VK] [W001217] Trade Secrets	[VK] [IN8019] Scientific Visualization
[VK] [MW2395] Design and Partitioning of Dynamic Systems	[VK] [ED0150] Philosophy of Science (Advanced Topics)
[VK] [IN2062] Techniques in Artificial Intelligence	
[VK] [ME702] Basic Introduction to Advanced MRI and Analysis Techniques for Neuro-Applications	
[VK] [ME701] A Basic Introduction to Conventional MRI and Analysis Techniques for Neuro-Applications	
[VK] [IN2124] Basic Mathematical Methods for Imaging and Visualization	
[VK] [SG860013] Human Robotics	
[VK] [MEMA-STRB001] Human Biology	
[VK] [EIT210] Humanoid Robotic Systems	
[VK] [ME70003] Imaging Neuropsychiatry	
[VK] [CLA21213] Individual Change Management	
[VK] [IN2022] Computer Aided Medical Procedures II	
[VK] [EIT223] Information Retrieval in High Dimensional Data	
[VK] [W000285] Innovative Entrepreneurs - Leadership of High-Tech Companies	
[VK] [ME562] Introduction to Biological Imaging	
[VK] [IN2346] Introduction to Deep Learning	
[VK] [IN2222] Cognitive Systems	
[VK] [CLA30201] Complex Systems	
[VK] [ED0153] Complex Systems (advanced topics)	
[VK] [IN2330] Convex Optimization for Computer Vision	
[VK] [IN2377] Concepts of C++ Programming	
[VK] [IN2323] Machine Learning for Graphs and Sequential Data	
[VK] [EIT1040] Machine Learning: Methods and Tools	
[VK] [IN2064] Machine Learning	
[VK] [IN2357] Machine Learning for Computer Vision	
[VK] [IN9038] Medical Technology Entrepreneurship	
[VK] [SG860006] Methods in Neuromechanics	
[VK] [SG861006] Methods in Neuromechanics	
[VK] [EIT1059] Mixed Integer Programming and Graph Algorithms for Engineering Problems	
[VK] [MA4503] Modern Methods in Nonlinear Optimization	

Lists and links to all TUM and MSNE modules (full text) → next page!

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TUMAFMA TUM Department of Mathematics

TUMERQ3 TUM Department of Robotics

"Modules of the Organisation" (Default Tab) = List and links to all modules existing at TUM

Name	ID	Version	Org. ID
<a href="#">Generalized Model Solutions for Physical Systems, Modeled by PDE's and Their Linear Stability</a>	MA5342		TUMAFMA
<a href="#">Renewable Energy Supply in Buildings</a>	BGU62038		TUBVEFB
<a href="#">A Basic Introduction to Conventional MRI and Analysis Techniques for Neuro-Applications</a>	ME701		TUMERQ3
<a href="#">A Mathematical Introduction to Magnetohydrodynamics</a>	MA5902	v1	TUMAFMA
<a href="#">A Mathematical Introduction to Magnetohydrodynamics</a>	MA5902	v2	TUMAFMA
<a href="#">A Moral Proposal</a>	CLA20606		TUXB70L
<a href="#">A Moral Proposal</a>	CLA30606		TUXB70L
<a href="#">A Moral Proposal</a>	CLA40606		TUXB70L

Filtering for MSNE Context (= MSNE Mentors recommended at least once)

Use "Modules in SPOs" tab and edit in field "SPO-version" the keyword "neuro" and press <enter>

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SPO version: Please select...

Name or ID: neuro

Semester (description) <=:

- 28 508 Neuroengineering - Elitestudiengang (20161, Elite Master's program, current) [20161] Elite Master's in Neuroengineering (Curriculum version)
- 16 508 Neuroengineering (20161, Master's program, discontinued) [20161] Elite Master's in Neuroengineering (Curriculum version)
- 16 508 Neuroengineering (20211, Master's program, current) [20211] Elite Master's in Neuroengineering (Curriculum version)
- 28 908 Biomedical Neuroscience (20181, Elite Master's program, current) [20181] Biomedical Neuroscience (Curriculum version)

Existing modules may be in "paused" or "discontinued" status!

→ do a google search using the ID, e.g. "MA5342", or use TUM Courses Catalogue, or visit webpages of TUM institutes, most have a dedicated "teaching" – section.