

Georg-August-Universität Göttingen		6 C 4 WLH
Module M.Inf.1257: Deep Learning		
Learning outcome, core skills: Students <ul style="list-style-type: none"> • learn concepts and techniques of deep learning and understand their advantages and disadvantages compared to alternative approaches • learn to solve practical data science problems using deep learning • implement deep learning techniques like multi-layer perceptrons, convolutional neural networks, recurrent neural networks, deep reinforcement learning • learn techniques for optimization and regularization of deep neural networks 		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Deep Learning (Lecture) Goodfellow, Bengio, Courville: Deep Learning. https://www.deeplearningbook.org Bishop: Pattern Recognition and Machine Learning. https://bit.ly/2KDkueT		2 WLH
Examination: Written examination (90 minutes) Examination prerequisites: M.Inf.1257.Ex: At least 50% of homework exercises solved. Examination requirements: Knowledge of basic deep learning techniques, their advantages and disadvantages and approaches to optimization and regularization. Ability to implement these techniques.		6 C
Course: Deep Learning - Exercise (Exercise)		2 WLH
Admission requirements: none	Recommended previous knowledge: Knowledge of basic linear algebra and probability; knowledge of basics of machine learning	
Language: English	Person responsible for module: Prof. Dr. Alexander Ecker	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 100		