

Overview of AI-related PhD courses in Norway relevant for NORA's research school -UiT							
Course	ECTS	Department/Institute	Link	Short Description	Last taught	Course leader	Email
FYS-8012 Pattern Recognition	10	Institute for physics and technology	https://uit.no/utdanning/emner/emne?p_document_id=670710&ar=2020&semester=H	The course covers data analysis techniques such as Bayes classifiers, estimation of probability density functions and related non-parametric classification approaches. Further, linear classifiers using least squares are addressed, in addition to simple processing units (neurons) and their extension to artificial neural networks.	2019		
FYS-8033 Deep Learning	10	Institute for physics and technology	https://uit.no/utdanning/emner/emne?p_document_id=696938&ar=2021&semester=V	Deep Learning, a subfield of machine learning, has in recent years achieved state-of-the-art performance for tasks such as image classification, object detection and natural language processing. This course will study recent deep learning methodology such as e.g. convolutional neural networks, autoencoders and recurrent neural networks, will discuss recent advances in the field, and will provide the students with the required background to implement, train and debug these models.	2019		
FYS-8032 Health Data Analysis	?	Institute for physics and technology	TBA	TBA	2020		
FYS-8024 Biomedical Instrumentation and Imaging	10	Institute for physics and technology	https://en.uit.no/education/courses/course?p_document_id=165549	The course will examine various imaging techniques including X-Ray, ultrasound, nuclear, MRI, microwave, and optical techniques. Emphasis will be put on the underlying physics and the technical mechanisms for image generation. It will be shown how images are formed and how various types of information are extracted.	2020	Svein Ketil Jacobsen	
INF-8207 Advanced mHealth Systems and Applications	10	Department of Computer Science	https://en.uit.no/education/courses/course?p_document_id=582680	This course covers advanced principles of mHealth (mobile health) systems and applications. The course addresses classic principles for design and implementation of mHealth systems and applications and discusses emerging mHealth trends from the international research front.			
INF-8710 Multimedia Information Retrieval	10	Department of Computer Science	https://en.uit.no/education/courses/course?p_document_id=187882	The course covers content-based operations such as indexing, retrieval, filtering, summarization, and information extraction and is applied to text, image, spoken audio and digital video. Particular importance will be allocated to the problem of testing and evaluation of information retrieval systems.		Dag Johansen	dag.johansen@uit.no
STA-8001 Computer-intensive Statistics	10	Institute for mathematics and statistics	https://uit.no/utdanning/emner/emne/640453/sta-8001	The course includes stochastic simulation, bootstrapping, Bayes theory, Laplace methods, the EM algorithm and Bayesian methods like Markov chain Monte Carlo (MCMC) and integrated nested Laplace approximations (INLA).	2020	Georg Elvebakk	georg.elvebakk@uit.no
Note:							
In FYS special curriculums can be arranged for individual students and PhD candidates. Previously the following special curriculums has been arranged.							
Graph Neural Networks							
Deep Domain Adaptation							
Natural Language Processing with Deep Learning							
Bayesian Deep Learning							
Gaussian Processes							
Bayesian Modelling							
Reinforcement Learning							
Random Forests							
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