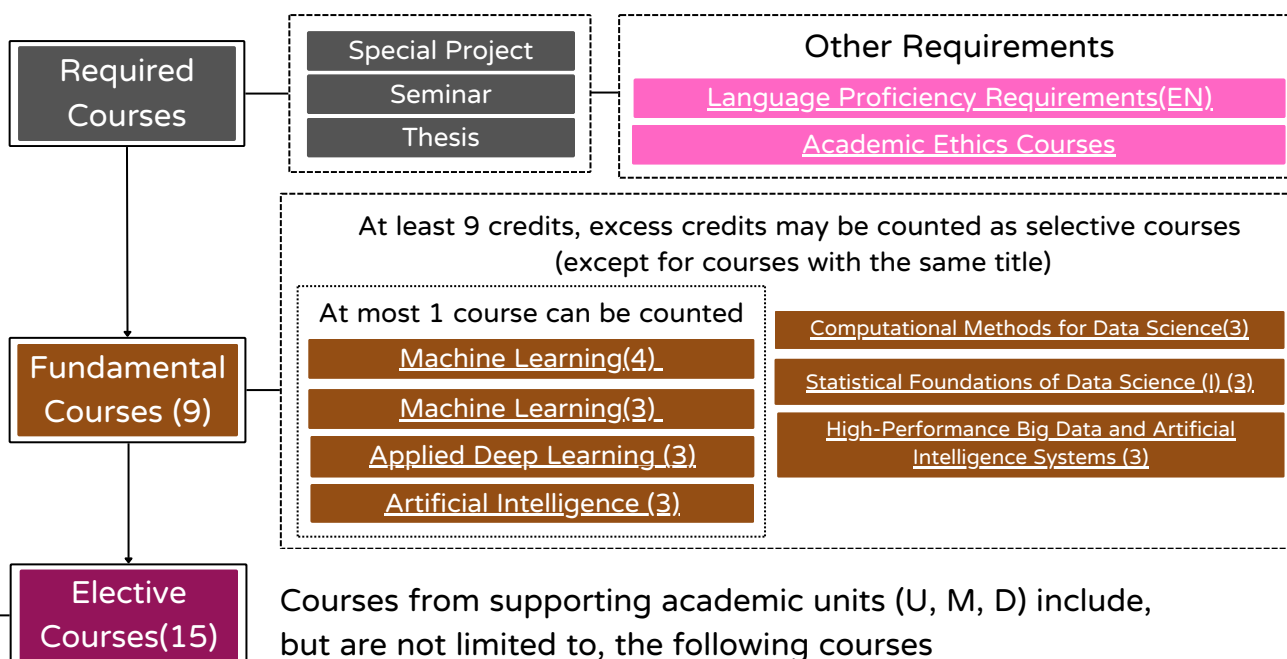


Data Science Master Degree Program Course Flowchart



Examples of tool / method courses

Mathematics and Statistics	
Numerical Linear Algebra	Probability Theory (I), (II)
Regression Analysis	Multivariate Statistical Analysis
Statistical Computing	Bayesian Statistical Methods
Convex Optimization	Online Convex Optimization
Optimization Algorithms	Advanced Algorithms
Advanced Methods in Optimization Algorithms	
Mathematics in Deep Learning	Statistical Learning
Computational Methods for Data Science	
Data Analysis and Manifold Learning	
Data Analysis and Manifold Learning	
Mathematics in Signal Processing and Machine Learning	
Advanced Statistical Inference(I), (II)	

Computer Science		
Big Data Systems	Robotics	Data Science
Artificial Intelligence	Advanced Artificial Intelligence	
Trustworthy Artificial Intelligence		
Natural Language Processing	Topics in Machine Learning	
Digital, AI and Emerging Computing Architecture		
Introduction to Generative Artificial Intelligence		
Information Retrieval and Extraction		

Examples of application courses

Bioinformatics	Biomedical Statistics	Artificial Intelligence and Intelligent Medicine	Computational Social Science
The practical implementation of artificial intelligence in medical images		AI for Medical Image Analysis	
Medical Imaging Systems	Medical Image Processing	Application of Big Data System	Advanced Deep Learning
Security and Privacy of Machine Learning		Nonlinear Optimization: Theory and Applications	Applied Deep Learning
Cryptography and Network Security	Deep Learning for Medical Imaging	Computer Vision Practice with Deep Learning	
Deep Learning for Computer Vision	Computer Communication Networks	Distributed Machine-Learning System	
3D Computer Vision with Deep Learning Applications		Deep Learning for Music Analysis and Generation	
Deep Learning for Human Language Processing		NLP and Information Retrieval with Applications in Social Networks	
Frontiers of Artificial Intelligence of Things		Introduction to Social Networks	
Introduction to Artificial Intelligence of Things and its Applications			

Recommended courses for undergraduate students

Probability	Calculus	Statistics	Numerical Analysis	Linear Algebra	Algorithms	Database	Data Structure
Discrete Mathematics			Computer Programming		Introduction to Computer Science		
Introduction to Computational Mathematics				Introduction to Computer Networks			