

Students must decide for one specific area within the Interdisciplinary Electives and attend at least two courses worth 8-12 credits within this area.

Once creatures of our collective imagination found in Isaac Asimov's novels with the famous three fundamental laws of robotics, every year that passes makes them closer to being a reality. Some of them are "AI on wheels", aka autonomous cars that may one day significantly reduce driving errors as well as traffic jams. At ETH, researchers also develop robots that walk, run, fly, swim and jump, since Darwinian evolution somehow never came up with any animal species with wheels. In this compilation, Data Science Master students are given the opportunity to learn more about how robots are built, how they sense their environment and how they move around, so that graduates can later contribute to the advancement of the field.

Number	Title	Credits	Semester	Language
151-0325-00	Planning and Decision Making for Autonomous Robots	4	autumn	EN
151-0563-01	Dynamic Programming and Optimal Control	4	autumn	EN
151-0632-00	Vision Algorithms for Mobile Robotics (University of Zurich)	6	autumn	EN
151-0851-00	Robot Dynamics	4	autumn	EN
227-0103-00	Control Systems	6	autumn	EN
151-0566-00	Recursive Estimation	4	spring	EN
151-0660-00	Model Predictive Control	4	Spring	EN