SYLLABUS

STUDY YEAR 2021/2022

Master Programme in Cybernetics

Enrollment semester Autumn 2021

DATE
2019-06-12

REFERENCE NO.
LTU-2002-2019

DECISION MAKER
Dean of the Faculty of Engineering

Luleå University of Technology 971 87 Luleå, Sweden
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LULEÅ TEKNISKA UNIVERSITET

Programme content and structure

The program consists of 120 credits in total out of which 112.5 are compulsory courses in Automatic Control and Machine learning. In the beginning of the program the students are introduced to cybernetics and a set of standard methods and engineering tools from electronics and computer programming.

After that, the students follow a study schedule containing mandatory courses in the areas of automatic control, robotics, including biorobotics, and machine learning, including AI. Two electable courses give the students the opportunity to choose between industrial automation and deeper studies into machine learning.

In the beginning of the second year, the students consolidate their learnings in a project course, where they work in groups in collaboration with industry or academia. Within the project course, the students will also receive knowledge in a number of subjects relevant for their future career, such as project management, gender equality, etc. Finally, the second half of the second year is devoted to master thesis work.

Credits

120 credits

Entry requirements

Bachelor or engineering degree of at least 180 credits in engineering physics and electrical engineering, physics, electronics, electrical engineering, mechanics, space technology, robotics, vehicle technology or related areas. Courses at the higher education level in control and physics, and at least 22.5 credits in mathematics are required. The mathematical knowledge shall include linear algebra, integral calculus and ordinary differential equations. In addition, good knowledge of English is required, corresponding to English B / English 6.

Selection

The selection procedure is based on academic qualifications, quality and quantity aspects

Selection group

Academic: 100%

Compulsory courses

Study schedule