university of groningen / university college groningen

Major Sciences: Smart Technologies (75 ECTS, exc. R&M)

Discipline specific Research & Methodology (15 ECTS total)

Level 100 (total 5 ECTS): Calculus 1
Level 200 (total 10 ECTS), choose two:
Calculus 2
Computational Methods for Science

Major courses (60 ECTS)

Level 100 (20 ECTS)
Three Compulsory
Principles of Modern Technology
Linear Algebra
Programming in Python

One elective course, choose from:
Media and Technology (HU)
Ethics (SS)
Systems View of Life (SC)

Level 200 (max 30 ECTS)
Two Compulsory
Machine Learning (prerequisite: Programming Python)
Smart Technologies Lab: Physical Principles

One elective to choose from
Applied Mechanics (prerequisite: Calculus 1)
Artificial Intelligence (prerequisite: Programming Python)
Smart Technologies Lab: From Art to Robotics (prerequisite: Programming Python)
Advanced Programming
Fields, Waves and Signals
Big Data
Principles of Entrepreneurship

OR level 300 electives

Level 300 (min 10 ECTS)
Two electives to choose from:
Robotics
Device Physics
Health Technology
Existential Risk (HU)
Science Communication

AND
Level 300 Capstone: Smart Technologies (5 ECTS)
Level 300 Individual Bachelor thesis: Smart Technologies (10 ECTS)