

## Course Descriptions Master 2020-2021

Course Title Machine Learning for Smart Services  
 Course Code EBC4255  
 ECTS Credits 5,0  
 Assessment Whole/Half Grades

Period	Start	End	Mon	Tue	Wed	Thu	Fri
2	26-10-2020	11-12-2020		X			X

Level Advanced  
 Coordinator Leto Peel For more information: [l.peel@maastrichtuniversity.nl](mailto:l.peel@maastrichtuniversity.nl)  
 Language of instruction English

Goals After completing this course you:  
 \* Know the relationship between machine learning, artificial intelligence and smart services.  
 \* Will be able to design and implement intelligent systems.  
 \* Will be able to reflect on and evaluate intelligent systems.

Description PLEASE NOTE THAT THE INFORMATION ABOUT THE TEACHING AND ASSESSMENT METHOD(S) USED IN THIS COURSE IS WITH RESERVATION. THE INFORMATION PROVIDED HERE IS BASED ON THE COURSE SETUP PRIOR TO THE CORONAVIRUS CRISIS. AS A CONSEQUENCE OF THE CRISIS, COURSE COORDINATORS MAY BE FORCED TO CHANGE THE TEACHING AND ASSESSMENT METHODS USED. THE MOST UP-TO-DATE INFORMATION ABOUT THE TEACHING/ASSESSMENT METHOD(S) WILL BE AVAILABLE IN THE COURSE SYLLABUS.<br /><br />Smart services or (more generally) intelligent systems rely on data to automate processes or assist human decisions. There are numerous domains in which they are applied such as predictive maintenance and recommender systems. They all have a set of components in common: input, output and a controller, but they vary on different aspects: such as the level of automation, ranging from suggesting actions to a user to automated, autonomous actions.  
 After following Machine Learning for Smart Services you will understand the concept of intelligent systems, such as what constitutes them and when they are useful to implement. Building on the knowledge you gained in the course Business Analytics you will learn how to implement and evaluate them.

Literature \* Hulten, Geoff (2018). Building Intelligent Systems: A Guide to Machine Learning Engineering. New York, NY: Apress [ISBN 978-1-4842-3431-0]  
 \* Additional Papers

Prerequisites \* Experience with programming in R  
 \* Basic understanding of predictive modeling and model evaluation

Keywords

Teaching methods PBL / Lecture / Assignment / Papers / Research

Assessment methods Final Paper / Written Exam / Presentation

Evaluation in previous academic year For the complete evaluation of this course please click <http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM>

This course belongs to the following programme / specialisation Master Business Intelligence and Smart Services Compulsory Course(s)