Course Descriptions None 2022-2023

Course Title	Forecasting and Machine Learning
Course Code	EBC2177
ECTS Credits	6,5
Assessment	Whole/Half Grades

Period

Period	Start	End	Mon	Tue	Wed	Thu	Fri
1	5-9-2022	21-10-2022		X			X

Level	no level
Coordinator	Ron Triepels For more information:r.triepels@maastrichtuniversity.nl
Language of instruction	English
Goals	* Students gain insight into basic concepts and techniques of machine learning, wide variety of learning algorithms and learn how to evaluate models generated from data. * Students can apply machine learning algorithms for solving practical real-world problems. * Students can report, interpret and reason on results from machine learning algorithms. * Students are able to discuss and select machine learning applications. * Students are able to critically assess machine learning applications. * Students can discuss the advantages of machine learning algorithms in different real-world cases. * Students can report and communicate application results from machine learning in real-world cases and communicate findings of academic papers on real-cases. * Students are able to acquire knowledge in a supervised self-directed manner, through self-study and hands-on R applications to business cases. * Students collaborate in active learning through tutorial meetings and group work in real-world business cases.
Description	PLEASE NOTE THAT THE INFORMATION ABOUT THE TEACHING AND ASSESSMENT METHOD(S) USED IN THIS COURSE IS WITH RESERVATION. A RE-EMERGENCE OF THE CORONAVIRUS AND NEW COUNTERMEASURES BY THE DUTCH GOVERNMENT MIGHT FORCE COORDINATORS 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. In this course, students learn commonly used, yet non-regression based, business-forecasting techniques. In particular, the following methods are addressed: supervised and unsupervised learning, classification, non-linear methods, decision trees, discriminant analysis, Bayes, neural networks, and association rules. These methods are illustrated in business applications such as recommender systems, market segmentation and targeted commercials. The course provides tools complementary to the classic statistic machineries learned in the courses ‘Statistics' and ‘Knowledge discovery and data visualisation'. Effectiveness of the tools in practice is discussed from three viewpoints: applicability to business (e.g., interpretation of outcomes), quality of the solutions and computability. Formative assessment: Feedback by tutors and peers Summative assessment: Written exam, presentation, participation Instructional approach: Lectures, tutorials, tutorial assignments
Literature	
Prerequisites	
Keywords	
Teaching methods	
Assessment methods	Written Exam
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

Bachelor Business Analytics	Year 2 Compulsory Course(s)
Bachelor Econometrics and Operations Research	Year 3 Elective Course(s)