

## Course Descriptions Bachelor 2023-2024

Course Title	Machine Learning																
Course Code	EBC2177																
ECTS Credits	6,5																
Assessment	Whole/Half Grades																
Period	<table><tr><th>Period</th><th>Start</th><th>End</th><th>Mon</th><th>Tue</th><th>Wed</th><th>Thu</th><th>Fri</th></tr><tr><td>2</td><td>30-10-2023</td><td>15-12-2023</td><td></td><td>X</td><td></td><td>X</td><td></td></tr></table>	Period	Start	End	Mon	Tue	Wed	Thu	Fri	2	30-10-2023	15-12-2023		X		X	
Period	Start	End	Mon	Tue	Wed	Thu	Fri										
2	30-10-2023	15-12-2023		X		X											
Level	no level																
Coordinator	Ron Triepels For more information:r.triepels@maastrichtuniversity.nl																
Language of instruction	English																
Goals	<ul style="list-style-type: none"><li>* 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.</li><li>* Students can apply machine learning algorithms for solving practical real-world problems.</li><li>* Students can report, interpret and reason on results from machine learning algorithms.</li><li>* Students are able to discuss and select machine learning applications.</li><li>* Students are able to critically assess machine learning applications.</li><li>* Students can discuss the advantages of machine learning algorithms in different real-world cases.</li><li>* Students can report and communicate application results from machine learning in real-world cases and communicate findings of academic papers on real-cases.</li><li>* Students are able to acquire knowledge in a supervised self-directed manner, through self-study and hands-on R applications to business cases.</li><li>* Students collaborate in active learning through tutorial meetings and group work in real-world business cases.</li></ul>																
Description	<p>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.</p> <p>Formative assessment: Feedback by tutors and peers Summative assessment: Written exam, presentation, participation Instructional approach: Lectures, tutorials, tutorial assignments</p>																
Literature																	
Prerequisites																	
Keywords																	
Teaching methods																	
Assessment methods	Written Exam																
Evaluation in previous academic year	For the complete evaluation of this course please click <a href="http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM">http://iwio-sbe.maastrichtuniversity.nl/rapporten.asp?referrer=codeUM</a>																
This course belongs to the following programme / specialisation	<table><tr><td>Bachelor Business Analytics</td><td>Year 2 Compulsory Course(s)</td></tr><tr><td>Bachelor Econometrics and Operations Research</td><td>Year 3 Elective Course(s)</td></tr></table>	Bachelor Business Analytics	Year 2 Compulsory Course(s)	Bachelor Econometrics and Operations Research	Year 3 Elective Course(s)												
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