

Data Science for Business

Module code	Workload	Credits/CP	Semester	Frequency of module	Duration
	90 h	3		Winter Semester	Semester
1	Module	Teaching Language	Contact hours	Self-study	Class size
	Data Science for Business	English	22,5 h	67,5 h	
2	Learning outcomes	<p>After passing this module successfully, students are able to ...</p> <p>Knowledge (1)</p> <ul style="list-style-type: none"> • know concepts of data science • know data science methods and tools <p>Comprehension (2)</p> <ul style="list-style-type: none"> • comprehend the applicability of data science methods to business problems • demonstrate the strength and weaknesses of data science methods <p>Application (3)</p> <ul style="list-style-type: none"> • Use science tools of analysis • Know the process of data science in business <p>Analysis (4)</p> <ul style="list-style-type: none"> • identify alternative solution options for data science approaches • analyse and examine data with appropriate tools <p>Synthesis (5)</p> <ul style="list-style-type: none"> • generate and develop solution to address business problems with data science analytics <p>Evaluation (6)</p> <ul style="list-style-type: none"> • validate results and models generated with analysis data science tools 			
3	Individual component content	<p>Concepts of Data Science</p> <p>Importance of Data Science in Business</p> <p>Data Analysis Methods</p> <ul style="list-style-type: none"> - Data pre-processing/cleaning - Data visualization - Machine learning and statistics 			
4	Teaching methods	Lectures, exercises and practices, presentations			
5	Prerequisites	<ul style="list-style-type: none"> • Basic programming knowledge 			

6	Methods of assessment Presentation, written term paper
7	Applicability of module
8	Person responsible for module/ lecturer Prof. Dr. Holger Ziekow, Prof. Dr. Monika Frey-Luxemburger
9	Literature <ul style="list-style-type: none">• Foster Provost, Tom Fawcett: Data Science for Business- What You Need to Know about Data Mining and Data-Analytic Thinking, O'Reilly Media, August 2013• Cathy O'Neill: "Doing Data Science", published by O'Reilly Media, Inc.• Sandya Mannarswamy. Data Science , published by Apress