Number of Module	Name of Module	Lecturer
VW-ATL-52b	Data-Driven Multivariate Statistics	Prof. Ostap Okhrin ostap.okhrin@tu-dresden.de
Qualification Aim	Students have a solid understanding of data analysis, with a particular focus on unstructured datasets and handling missing data. They possess comprehensive media literacy skills in the use of statistical software.	
Content	Module Contents: 1. Graphical interpretation of numerical data, 2. Decision trees, 3. Cluster analysis, 4. Maximum margin classifiers and support vector machines (SVM), 5. Missing data, and 6. Neural networks.	
Teaching and Learning Methods	2 SWS lecture, and independent study. In accordance with Section 6, Paragraph 7 of the Academic Regulations, enrollment in the module is limited to 30 participants, who will be selected on a first-come, first-served basis.	
Requirements for Participation	The competencies to be acquired in the module Theoretical Multivariate Statistics are required.	
Usability	This module is one of 27 elective modules in the master's degree program Air Transport and Logistics, which must be chosen according to § 32 paragraph 3 of the examination regulations.	
Requirements for the Award of Credits	Credit points are earned when the module examination is passed. For more than 20 registered students, the module examination consists of a written exam lasting 120 minutes. For up to 20 registered students, it consists of a non-public oral examination lasting 30 minutes as an individual examination; if applicable, this will be announced to the registered students in text form at the end of the registration period. The examination language of the written examination or the oral examination is English.	
Credit Points and Grades	5 credit points can be acquired through the module. The module grade corresponds to the grade of the examination performance.	
Frequency of Module	The module is offered each academic year in the summer semester.	
Workload	The total workload is 150 hours.	
Duration of the Module	The module lasts one semester.	
Literature	Hastie, T., Tibshirani, R., Friedman, J. (2009), The Elements of Statistical Learning: Data Mining, Inference, and Prediction (2nd Edition), Springer Verlag.	