Module 5211 Data Analytics and Information Management

1	Module Number	Study Programme	Semester	Offered in	Duration	Module Type	Workload (h)	ECTS Points
	5211	IM (MBA)	1	☒ WS ☐ SS	1 semesters	Compulsory	180	6

2	Courses	Teaching and Learning Forms	Contact Time (SWS)	Contact Time (h)	Self-Study Time (h)	Language
	a) Quantitative Methods	Lecture, exercises	2	30	30	English
	b) Data Science	Lecture, cases, exercises	2	30	30	English
	c) Information Management	Lecture, cases, exercises	2	30	30	English

3 **Learning Outcomes and Competences**

Once the module has been successfully completed, the students

Knowledge and Understanding

- understand the methods which support decision making in various departments of a company (Quantitative Methods)
- understand some methods in order to analyze actual phenomena with data (Data Science)
- have an understanding of information technology and systems on management level (Information Management)

Use, Application and Generation of Knowledge

Use and Transfer

- choose an appropriate forecasting model and make predictions based the model
- choose and apply methods for data driven decision making
- understand the basics of information security

Scientific Innovation

- create new regression models
- use methods and tools to gain new insights in the various departments of a company based on data
- use methods and tools to gain insight into new concepts of information management

Communication and Cooperation

- interpret the results of regression analysis
- translate business problems into analytical solutions
- enabling evaluation and decision capabilities in information technology issues

Scientific Self-Conception/ Professionalism

- will recognize situations in which the methods can be applied
- independently develop adequate approaches for implementing and/or updating technologies in business and production

Methods

- lecture, exercises using IT equipment and other sources, presentations, discussion

4 **Contents**

The module covers the following three courses:

- Quantitative Methods: Methods which support decision making in various departments of a company
- Data Science: methods in order to analyze actual phenomena with data
- Information Management: Implementation, evaluation, design, operation, security, and maintenance of information systems in business and production environments

5 **Participation Requirements**

recommended: Participants should be able to work with MS-Excel.

6 **Examination Forms and Prerequisites for Awarding ECTS Points**

- Written exam graded, Mid-terms (written, graded) will be obligatory
- Information Management: Certificate of attendance non-graded (Class attendance of more than 80 %)

7 **Further Use of Module**

This module lays the groundwork for the modules “Entrepreneurial Management” and “Enterprise Management” in the 2nd semester.

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8	**Module Manager** Prof. Dr. Karin Melzer
9	**Literature** Please see the specific course descriptions
10	**Last Updated** 26.10.2019