Georg-August-Universität Göttingen **Module M.WIWI-WIN.0019: Business Analytics**	6 C 3 WLH

Learning outcome, core skills: After a successful completion of the course students have acquired the following skills: • understand the basic principles of decision support systems, business intelligence, and advanced analytics, • know and apply a skillset suited for addressing unstructured decision situations that require advanced data processing and analysis, • understand and evaluate methods and tools required in descriptive data analytics, • understand, apply and evaluate approaches for advanced data analytics, especially data and text mining techniques.	**Workload:** Attendance time: 42 h Self-study time: 138 h

Courses: **1. Business Analytics** (Lecture)	2 WLH

Contents:

1. Managerial decision making and computerized support

• Types of decision and control
• The decision making process
• (The need for…) decision making support
• Introduction to computer-assisted decision support

2. Business intelligence

• Introduction to business Intelligence
• Business performance management
• Data warehousing
• Data discovery

3. Advanced analytics with structured data

• Introduction to analytics and data mining
• Unsupervised learning data mining
• Supervised learning data mining

4. Advanced analytics with unstructured data

• Web and text mining
• Sentiment analysis and opinion mining
• Topic modeling

2. Business Analytics (Tutorial)	1 WLH

Contents:

• Case studies that provide insights into the context of managerial decision-making as well as illustrate the major benefits and challenges of IT-based decision support,
• tutorial sessions in which students deepen and broaden their theoretical and methodological knowledge from the lectures,

• computer tutorial sessions with RapidMiner and Tableau in which students will apply their knowledge.	

Examination: Written examination (90 minutes)	6 C

Examination requirements: • Demonstrate profound knowledge of the theoretical and methodological foundations of decision support systems, business intelligence, and advanced analytics, • document an understanding of the concepts behind managerial decision-making and Simon's phases of the decision-making process, • demonstrate an understanding of relevant system components, methods and approaches providing managerial decision support, • show a profound understanding of methods and techniques to analyze structured and unstructured data sources, • demonstrate an understanding to efficiently complete data and text mining projects.	

Admission requirements: none	**Recommended previous knowledge:** none
Language: English	**Person responsible for module:** Prof. Dr. Jan Muntermann
Course frequency: each winter semester	**Duration:** 1 semester[s]
Number of repeat examinations permitted: twice	**Recommended semester:** 1 - 3
Maximum number of students: not limited	