



universität  
wien

Faculty of Business,  
Economics and Statistics

# Business Analytics

Master



# Master Business Analytics

## Interests

### 10 Topics of the Programme

- Data Science
- Optimisation
- Data Analysis
- Mathematical Modelling
- Big Data Analysis
- Advanced Operations Research
- Supply Chain Management
- Foundations of Decision-Making
- Modelling and Handling of Large Databases
- Graph Algorithms and Network Flows

## Study Goals

The Master's programme Business Analytics is an innovative study programme in the area of big data. The programme aims to familiarise you with current methods and instruments in data science for business analytics and decision support. You will specialise in a field of business administration to carry out data analyses, and develop and implement prototypical decision support systems. Graduates will be able to solve complex business problems with the use of advanced methods in business analytics.

## Content and Structure

The programme has 120 ECTS and can be accomplished in 4 semesters with the degree Master of Science (MSc). The degree programme starts with the alternative compulsory module Foundations of Business Analytics that aims at providing students with a basis for further studies in business analytics. Furthermore, it serves to ensure that all students have the same/basic level of knowledge. The Advanced Analytics group of compulsory modules aims at familiarising students with the methodological foundations of statistics, operations research and the perspective of business administration on data science. The Doing Data Science, Ethical and Legal Issues group of compulsory modules combines the compulsory modules that students of the Master's programmes in

Data Science, Digital Humanities and Business Analytics have to complete and/or that are offered in a similar form in all three Master's programmes. Furthermore, students have to complete the Data Science Electives compulsory module, the Business Administration alternative group of compulsory modules and the Business Analytics Elective compulsory module. In addition, students have to complete a Master's Thesis Seminar, write a Master's Thesis and complete a Master's Examination.

## Admission

To be admitted to the Master's programme in Business Analytics, students must have completed a suitable Bachelor's programme at a recognised Austrian or foreign post-secondary educational institution. Also required is a sufficient command of English corresponding to at least level B2 of the Common European Framework of Reference for Languages.

All further special requirements can be found at: [slw.univie.ac.at](http://slw.univie.ac.at)

### New Master's Programme

Business Analytics is a new Master's programme at the interface of Business Administration, Statistics and Informatics that starts in winter term 2020.



## Structure (4 semesters)

### **Foundations of Business Analytics** (alternative compulsory module) **14 ECTS**

Foundations of Business Analytics for Business Administration Students *or*

Foundations of Business Analytics for Computer Scientists

### **Advanced Analytics** **14 ECTS**

Advanced Business Analytics 6 ECTS

Advanced Operations Research 8 ECTS

### **Doing Data Science, Ethical and Legal Issues** **28 ECTS**

Doing Data Science, Ethical and Legal Issues 12 ECTS

Data Analysis Project and Seminar 16 ECTS

### **Data Science Electives** **12 ECTS**

### **Business Administration** (alternative compulsory module) **20 ECTS**

Subject to availability, students may choose between the following Minors:

Banking & Finance

Electronic Business

Marketing & International Marketing

Organization and Personnel

Smart Production

Supply Chain Management

### **Analytics Elective** **4 ECTS**

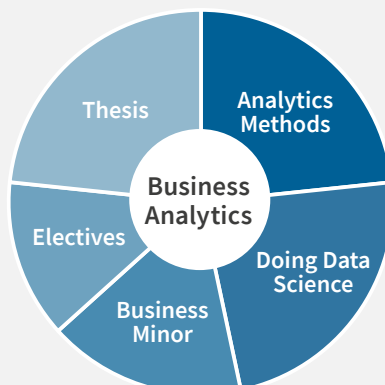
### **Master's Thesis Module** **28 ECTS**

Master's Thesis Seminar 2 ECTS

Master's Thesis 24 ECTS

Master's Examination 2 ECTS

## Overview



## Work prospects

Graduates of the Master's programme in Business Analytics at the University of Vienna are qualified to carry out academic research independently or to work as highly qualified professionals in a field relating to business administration. In the latter, they are able to independently perform different tasks, solve problems and make recommendations for action using methods of predictive and prescriptive analytics.

Graduates are able to apply a wide range of methods, qualifying them to analyse and solve issues in an analytical way in related disciplines as well.

### Fields of activity

- Consulting
- Digital Controlling
- Data Science
- Asset Management
- Audit
- Banking
- ... and many more



To spearhead our various Business Analytics initiatives we are looking for a

### Junior Manager Business Analytics (f/m/d)

Become a member of our highly dynamic Business Analytics team in a truly global environment.

#### Your responsibilities

- Identification and evaluation of Business Analytics use cases
- Development and implementation of analytical models to support forward-looking steering and risk controlling
- Monitoring, quality assurance and improvement of productive analytical models
- Data visualization and dashboard design
- Complete data management
- Preparation of management decisions regarding strategic analytics topics

#### Your qualification

- Graduate degree in Business Administration/Informatics/Mathematics, Computer Science or comparable studies
- In-depth knowledge of analytical models (e.g. classification, time series, machine learning) and their application in R and/or Python
- Good knowledge of Business Intelligence and data visualization tools, e.g. SAP Analysis for Office/Analytics Cloud, Microsoft Power BI and/or R Shiny
- Ability to structure and simplify complex tasks
- Excellent communication and leadership skills
- Fluent in English and German, both written and spoken

EXAMPLE  
Job Advertisement

## Opinions

*The new Master's programme Business Analytics is an innovative course of study at the interface of Business Administration, Statistics and Informatics. Students not only learn about current data science methods, but they are also required to implement them in a self-selected field of application in order to solve complex business-related problems. It is crucial to highlight the connection between theoretical demanding methods and relevant business-related problems. This combination prepares students for a career in economics and management as well as in academia.*

Jan Fabian Ehmke, Professor for Business Analytics

*For me the Master's programme Business Analytics is a highly attractive choice. It does not only provide me with expertise in my chosen specialisation of business administration and the analysis thereof, but also gives me the basic legal training which is nowadays needed when working with data.*

Manuel Müller, Student Statistics

*The Master's programme in Business Analytics is an incredible combination of theoretical knowledge and practical skills. It gives you the qualifications needed to become a top-notch business analyst, well suited for any company, but also the strong theoretical foundation required to continue to a PhD.*

Stefan Velez, Student Statistics

## University of Vienna

The University of Vienna was founded in 1365 and is one of the oldest and largest universities in Europe.

In the field of research, the University of Vienna is subdivided into 20 faculties and centres. With 178 degree programmes, the University of Vienna provides an opportunity for its currently approximately 90,000 students from 139 countries, to acquire knowledge and methodological core competencies in the course of their studies.

As one of the largest employers in Vienna, the University of Vienna employs 9,800 people. About 6,800 scientists conduct research and teach in the disciplines of economics, theology, law, social sciences, humanities, cultural studies and natural sciences.

## The Faculty

The Faculty of Business, Economics and Statistics is part of the University of Vienna and one of the leading research institutions in its field.

The Faculty currently has around 5,420 students (3,200 in Bachelor's programmes, 2,100 in Master's programmes and 120 in doctoral or PhD programmes). Approximately 50 professors and 250 other teaching and research staff are assigned to the eight institutes of Accounting, Innovation and Strategy, Business Decisions and Analytics, Finance, Law of Economics, Marketing and International Business, Statistics and Operations Research, Economics and Economic Sociology. There is also the Vienna Centre for Experimental Economic Research (VCEE) and a Department of Business Languages.

# Information and contact

## StudiesServiceCentre – Faculty of Business, Economics and Statistics

The StudiesServiceCentre (SSC) is the central information point for students of the Faculty of Business, Economics and Statistics. The team of the SSC takes time to advise students competently and reliably in questions concerning the organisation of their studies as well as matters related to rules and regulations for studying.

## Teaching Affairs and Student Services – University of Vienna

The service unit Teaching Affairs and Student Services supports potential students with general questions about degree programmes, admission and tuition fee. It also helps students, lecturers and staff of the University of Vienna in the organisation, administration and implementation of studies and teaching.

## University of Vienna – Faculty of Business, Economics and Statistics

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1090 Vienna

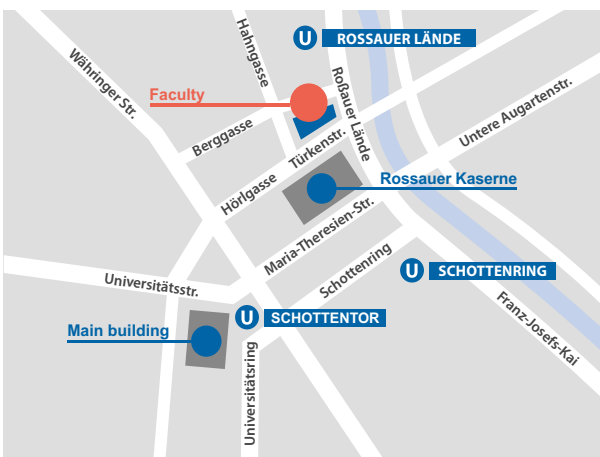
[ssc.wiwi@univie.ac.at](mailto:ssc.wiwi@univie.ac.at)  
[wiwi.univie.ac.at](http://wiwi.univie.ac.at)

## University of Vienna

Universitätsring 1  
1010 Vienna

[slw.univie.ac.at](http://slw.univie.ac.at)

# Location



## Public Transport

### Metro

U2, U4 (Schottenring)  
U4 (Rossauer Lände)

### Tram

D (Schlickgasse)  
31 (Schottenring)  
71, 1 (Börse)



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