



Academic Introduction

How Do You Organize Your ORBA Study Program?

Christian Hermann, Natalie Nowak

Otto-von-Guericke-Universität Magdeburg

*Note: This presentation is **NOT** a legally binding document!*

8 October 2026

► Your Hosts Today:

- Dipl.-Wirtsch.-Ing. Christian Hermann
- M.Sc. Natalie Nowak

► Chair of Financial Management and Innovation Finance

- Research assistants
- G22-B103a
- www.ifm.ovgu.de

- ▶ **ORBA Program Director:**
Prof. Dr. Elmar Lukas
- ▶ Chair of Financial Management and Innovation Finance
 - ▶ Room: G22-B102a
 - ▶ www.ifm.ovgu.de
- ▶ Consultations by appointment only:
 - ▶ Appointments must be arranged by email.
 - ▶ Email: LS_ifm@ovgu.de



Prof. Dr. Lukas

- ▶ **Degree:** Master of Science
- ▶ **Standard period of study:** 4 semesters
- ▶ **Medium of instruction:** primarily English
 - ▶ Some courses are offered exclusively in German
- ▶ **Type:** research-based, with a strong theoretical focus
- ▶ **Credits:** 120 ECTS (including master's thesis)
- ▶ **Enrollment:** Winter semester only

The ORBA Program: Objectives

- ▶ Quantitative Modeling and Algorithms
- ▶ Data Analysis and Big Data Methods
- ▶ Analytical Tools and Skills

The ORBA study program is based on cooperation among the faculties of Economics and Management (WW), Computer Science (INF), and Mathematics (MATH).



FACULTY OF
ECONOMICS AND MANAGEMENT



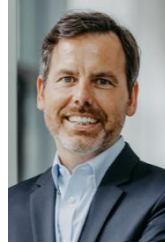
FACULTY OF
COMPUTER SCIENCE



FACULTY OF
MATHEMATICS

Key ORBA-Related Chairs at WW

Financial Management
and Innovation Finance
(Prof. Lukas)



Prof. Lukas

Data-driven Decision
Support (AIBDS)
(Jun.-Prof. Heinrich)



Jun.-Prof. Heinrich

Operations Management
(Prof. Neufeld)



Prof. Neufeld

Lectureship Production
and Logistics
(Prof. Kleber)



Prof. Kleber

Management Science
(Prof. Ulmer)



Prof. Ulmer

ORBA Program: Recommended Structure

1. Semester	2. Semester	3. Semester	4. Semester
Business Analytics Compulsory Elective 5 ECTS	Business Analytics Compulsory Elective 5 ECTS	Specialization Compulsory Elective 5 ECTS	Master Thesis + Research Seminar 30 ECTS
Business Analytics Compulsory Elective 5 ECTS	Operations Research Compulsory Elective 5 ECTS	Specialization or Supplements Compulsory Elective 5 ECTS	
Operations Research Compulsory Elective 5 ECTS	Operations Research Compulsory Elective 5 ECTS	Specialization or Supplements Compulsory Elective or CoMeT 5 ECTS	
Specialization Compulsory Elective 5 ECTS	Specialization Compulsory Elective 5 ECTS	Specialization Scientific Project 15 ECTS	
Specialization Compulsory Elective 5 ECTS	Specialization Master's Seminar 10 ECTS		
General Key Qualifications Scientific Work 5 ECTS			

► Scientific Work for ORBA (23720)

- The course is designed to provide students with:
 - the fundamentals of academic research methods, including research, citation, and academic writing;
 - basic concepts and methods in analysis, linear algebra, and statistics; and
 - foundational knowledge of programming languages.
- 5 ECTS, to be taken in the first semester (offered only in the winter semester).

ORBA Program: Fundamentals

1. Semester	2. Semester	3. Semester	4. Semester
Business Analytics Compulsory Elective 5 ECTS	Business Analytics Compulsory Elective 5 ECTS		
Business Analytics Compulsory Elective 5 ECTS	Operations Research Compulsory Elective 5 ECTS		
Operations Research Compulsory Elective 5 ECTS	Operations Research Compulsory Elective 5 ECTS		

- ▶ You must take **compulsory elective** modules in the two **fundamental areas**:
 - ▶ **Operations Research and**
 - ▶ **Business Analytics**
- ▶ In each fundamental area, you must obtain **at least 15 ECTS**.
- ▶ The modules offered are generally **lectures** worth 5 (or 9-10) ECTS.
- ▶ The selection of required elective modules can change each semester.
- ▶ In principle, **failed exams** for compulsory elective modules can be retaken an unlimited number of times.
However:
 - ▶ Exams are usually offered only once a year.
 - ▶ Some exams may no longer be offered at all.

► Business Analytics (WW, FIN)

- AI-based Decision Support I (Prof. Heinrich)
- Datenbanken (Database Concepts) (Prof. Saake)
- Introduction to Computer Science for Engineers (Dr. Braune)
- Machine Learning (Prof. Nürnberger)



FACULTY OF
ECONOMICS AND MANAGEMENT



FACULTY OF
COMPUTER SCIENCE

► Operations Research (WW, MATH)

- Computational Transportation (Prof. Ulmer)
- Investition und Finanzierung III: Engineering Economics (Prof. Lukas)
- Modelling and Solving Optimization Problems (Dr. Friedrich)
- Optimization Methods for Machine Learning (Prof. Sager)



FACULTY OF
ECONOMICS AND MANAGEMENT



FACULTY OF
MATHEMATICS

ORBA Program: Specialization

1. Semester	2. Semester	3. Semester	4. Semester
Business Analytics Compulsory Elective 5 ECTS	Business Analytics Compulsory Elective 5 ECTS	Specialization Compulsory Elective 5 ECTS	
Business Analytics Compulsory Elective 5 ECTS	Operations Research Compulsory Elective 5 ECTS	Specialization or Supplements Compulsory Elective 5 ECTS	
Operations Research Compulsory Elective 5 ECTS	Operations Research Compulsory Elective 5 ECTS	Specialization or Supplements Compulsory Elective or CoMeT 5 ECTS	
Specialization Compulsory Elective 5 ECTS	Specialization Compulsory Elective 5 ECTS	Specialization Scientific Project 15 ECTS	
Specialization Compulsory Elective 5 ECTS	Specialization Master's Seminar 10 ECTS		
General Key Qualifications Scientific Work 5 ECTS			

- ▶ At least **45 ECTS** must be earned in the compulsory elective area “**Specialization**”, including:
 - ▶ at least one seminar (10 ECTS)
 - ▶ exactly one scientific project (15 ECTS)
 - ▶ lectures assigned to the “Specialization” category of the ORBA program

- ▶ It is **recommended** that you write your master’s thesis in your area of specialization.

► Modules (selection):

- Advanced Game Theory (Hoffmann)
- Business Decision Making (Raith)
- Downside Risk (Reichling)
- Econometrics (Noth)
- Foundation for Finance (Li)
- International Taxation (Eichfelder)
- Marketing Methods & Analysis (Lichters)
- Pricing in Global and Local Competition (Sadrieh)
- Production Planning and Scheduling (Neufeld)
- Stochastic Processes (Wendler)
- Sustainable Supply Chain Management (Kleber)



*Dr.
Hoffmann*



*Prof.
Raith*



*Prof.
Reichling*



*Prof.
Noth*



*Prof.
Li*



*Prof.
Sadrieh*



*Prof.
Eichfelder*



*Prof.
Lichters*



*Prof.
Neufeld*



*Dr.
Wendler*



*Prof.
Kleber*

- ▶ **Seminars and scientific projects** are offered every semester.
 - ▶ At least one seminar and exactly one scientific project must be completed successfully!
- ▶ Note: You must **register well in advance!**
 - ▶ A faculty-wide, multi-stage registration process typically begins at the end of the **previous semester**.
 - ▶ Check [here](#) for the latest information.
- ▶ If you **fail a seminar or project**, you can only retake it twice.
- ▶ For information about requirements and content, consult the respective chairs' websites, for example:
 - ▶ [Chair of Financial Management and Innovation Finance](#) (Prof. Lukas)
 - ▶ [Chair of Operations Management](#) (Prof. Neufeld)
 - ▶ [Chair of Management Science](#) (Prof. Ulmer)
 - ▶ [Chair AIBDS](#) (Jun.-Prof. Heinrich)
 - ▶ [Lectureship Production and Logistics](#) (Prof. Kleber)

- ▶ Up to 10 ECTS can be earned through Supplement Modules.
 - ▶ Of these, up to 5 ECTS may be earned through CoMeT.
 - ▶ Alternatively, these 10 ECTS credits can be earned through courses in the compulsory electives area “Specialization”.
- ▶ Current course offerings for Supplement Modules:
 - ▶ Lecture series: Diversity, Equity & Inclusion in Science and Society (German only)
 - ▶ Corporate Governance, Compliance und Konzernrecht (20309) (German only)

- ▶ CoMeT – Competencies and Methods Training (23939) allows students to earn up to 5 ECTS within the Supplementary Modules area through activities focused on personal development and student engagement.
- ▶ Eligible activities include, for example, **German language courses**, OVGU cultural events, and participation in student initiatives.
- ▶ For details on eligible activities, requirements, and the recognition procedure, please refer to the corresponding e-learning course.

ORBA Program: Master Thesis

1. Semester	2. Semester	3. Semester	4. Semester
Business Analytics Compulsory Elective 5 ECTS	Business Analytics Compulsory Elective 5 ECTS	Specialization Compulsory Elective 5 ECTS	Master Thesis + Research Seminar 30 ECTS
Business Analytics Compulsory Elective 5 ECTS	Operations Research Compulsory Elective 5 ECTS	Specialization or Supplements Compulsory Elective 5 ECTS	
Operations Research Compulsory Elective 5 ECTS	Operations Research Compulsory Elective 5 ECTS	Specialization or Supplements Compulsory Elective or CoMeT 5 ECTS	
Specialization Compulsory Elective 5 ECTS	Specialization Compulsory Elective 5 ECTS	Specialization Scientific Project 15 ECTS	
Specialization Compulsory Elective 5 ECTS	Specialization Master's Seminar 10 ECTS		
General Key Qualifications Scientific Work 5 ECTS			

- ▶ **Applications** must be submitted to the preferred chair:
 - ▶ Application to the Chair of Financial Management and Innovation Finance via the application form (see the website). Application deadlines: 15 September (WT) and 15 March (ST).
 - ▶ The application deadlines for the Chair of Management Science, the Chair of Operations Management, the Chair of AIBDS, and the Chair of Production and Logistics are generally 1 September for WT and 1 March for ST (see the respective websites).
- ▶ Admission **requirements** (no exceptions!):
 - ▶ A total of at least 75 ECTS, including:
 - ▶ min. 15 ECTS in each of the two fundamental areas, 5 ECTS in the area “Scientific Work”, and 10 ECTS in at least one seminar.
- ▶ **Thesis duration:** 22 weeks, including 4 weeks of reading time.
- ▶ **Max. one retake** in the following semester if failed.



ORBA Program: Recommended Structure

1. Semester	2. Semester	3. Semester	4. Semester
Business Analytics Compulsory Elective 5 ECTS	Business Analytics Compulsory Elective 5 ECTS	Specialization Compulsory Elective 5 ECTS	Master Thesis + Research Seminar 30 ECTS
Business Analytics Compulsory Elective 5 ECTS	Operations Research Compulsory Elective 5 ECTS	Specialization or Supplements Compulsory Elective 5 ECTS	
Operations Research Compulsory Elective 5 ECTS	Operations Research Compulsory Elective 5 ECTS	Specialization or Supplements Compulsory Elective or CoMeT 5 ECTS	
Specialization Compulsory Elective 5 ECTS	Specialization Compulsory Elective 5 ECTS	Specialization Scientific Project 15 ECTS	
Specialization Compulsory Elective 5 ECTS	Specialization Master’s Seminar 10 ECTS		
General Key Qualifications Scientific Work 5 ECTS			

Required for graduation:	Key Qualifications Scientific Work	+	Fundamentals: Business Analytics	+	Fundamentals: Operations Research	+	Specialization:	Specialization Modules	+	Master Thesis	
	=		≥		≥			Master's Seminar min. 10 ECTS		=	≥ 120 ECTS
	5 ECTS		15 ECTS		15 ECTS			Scientific Project 15 ECTS		30 ECTS	
								Supplements max. 10 ECTS			
								≥ 55 ECTS total			

Course List for Master's Programs

- ▶ Each semester, before the start of the respective exam registration period (key term: **course list**), the Faculty Council decides on the assignment of modules to the areas of specialization and on the specific required elective areas for each study program.
- ▶ Changes to the course list may be made until **28 October 2026**.
- ▶ FWW homepage → Teaching → During your Studies → Study Organization and Documents → Course List

Course List

On the following page you will find the currently valid course list for the current semester.

Bachelor Programs



Here you can find the current version of the course list for your Bachelor program **BWL, VWL - WuG, IM** or **IBE**.

› [SoSe 2024](#) (version: 13.05.2024)

› [WiSe 2023/2024](#) (version: 08.11.2023)

The course lists from past semesters can be found [here](#).

Master Programs



Here you can find the current version of the course list for your Master program **BWL/BE, EPA, IMME, FINEC** und **ORBA**.

› [SoSe 2024](#) (version: 13.05.2024)

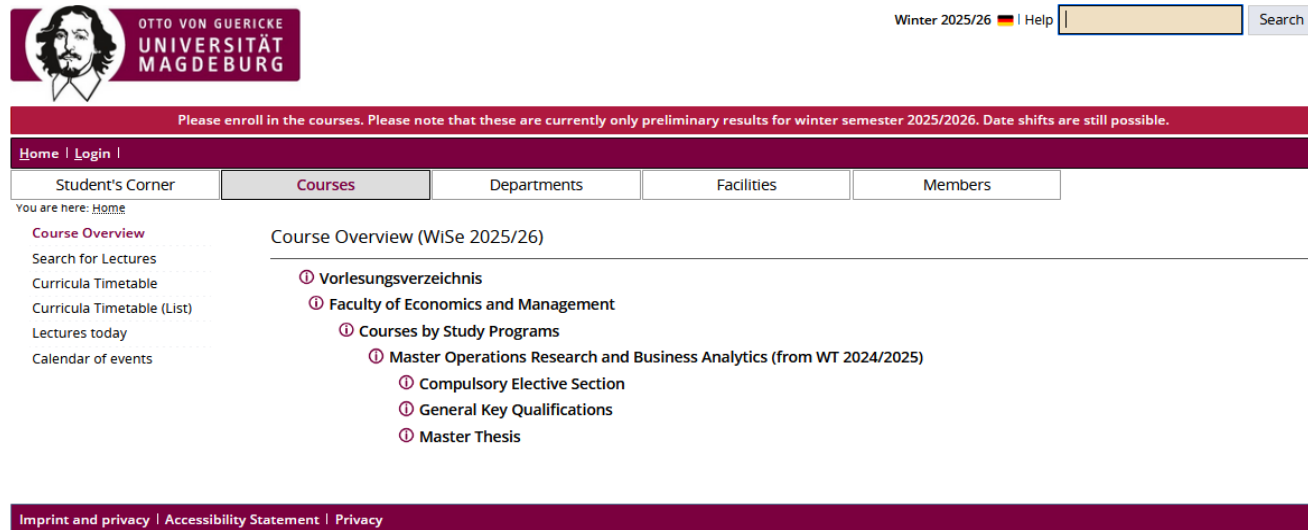
› [WiSe 2023/2024](#) (version: 03.11.2023)

The course lists from past semesters can be found [here](#).

Publication of the course list shortly after the Faculty Council meeting on 04 November 2026

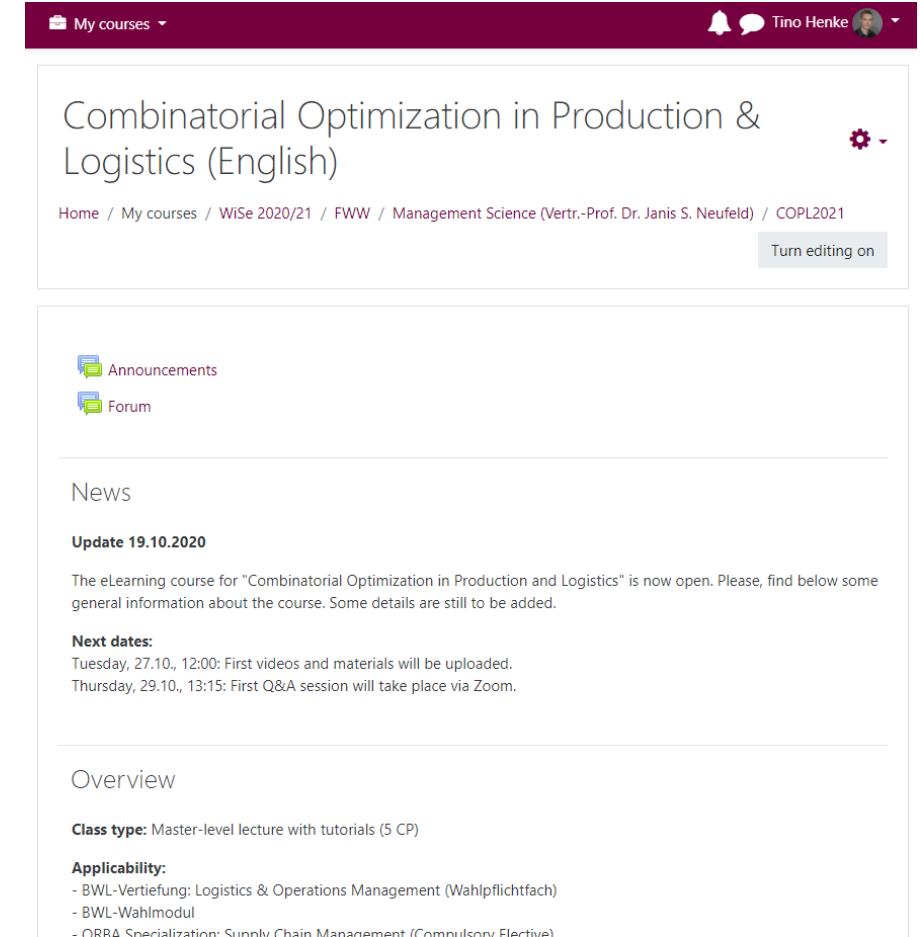
Creating a Timetable Using the LSF Platform

- ▶ In LSF, select “Course Overview” → “Faculty of Economics and Management” → “Courses by Study Programs” – to view all courses available for your program.



- ▶ Select the course you wish to take and click “apply now” → Schedules: Personal Timetable: “save schedule”
- ▶ Changed your mind? → Personal Timetable: “cancel application”
- ▶ Enrollment deadline: 30 November 2026

- ▶ Almost all lecturers provide their course materials online via <https://elearning.ovgu.de>
- ▶ There, you can access course materials and receive announcements via email.
- ▶ In addition to registering via LSF, you must also enroll in the course via the e-learning platform.
- ▶ This semester's password for all FWW courses: **FWW26-27**
- ▶ Courses with tips and information regarding your study program:
 - ▶ [2026/2027 FEM Winter Semester Plan](#)
 - ▶ [Study Program: News, Dates, Counseling, Links](#)
 - ▶ [M.Sc. Operations Research and Business Analytics](#)



The screenshot shows the eLearning platform interface. At the top, there is a navigation bar with 'My courses' and a user profile 'Tino Henke'. The main heading is 'Combinatorial Optimization in Production & Logistics (English)'. Below this, a breadcrumb trail reads: 'Home / My courses / WiSe 2020/21 / FWW / Management Science (Vertr.-Prof. Dr. Janis S. Neufeld) / COPL2021'. A 'Turn editing on' button is visible. The interface includes sections for 'Announcements' and 'Forum'. The 'News' section features an 'Update 19.10.2020' with the text: 'The eLearning course for "Combinatorial Optimization in Production and Logistics" is now open. Please, find below some general information about the course. Some details are still to be added.' It also lists 'Next dates': 'Tuesday, 27.10., 12:00: First videos and materials will be uploaded.' and 'Thursday, 29.10., 13:15: First Q&A session will take place via Zoom.' The 'Overview' section specifies the 'Class type' as 'Master-level lecture with tutorials (5 CP)' and lists 'Applicability' for 'BWL-Vertiefung: Logistics & Operations Management (Wahlpflichtfach)', 'BWL-Wahlmodul', and 'ORRA Specialization: Supply Chain Management (Compulsory Elective)'.

Study and Examination Regulations

- ▶ All official documents can be found on the ISP webpage.
- ▶ It is highly recommended that you read the study/exam regulation documents and module handbook entries for the courses you plan to take!

WELCOME HALL | BACHELOR | MASTER | SUPPORT | FAQs | STUDY ABROAD | DOCUMENTS | GET INVOLVED

Home > Master > ORBA > Program Structure & Courses | Tour of OVGU Campus | ORBA at a Glance | Students' Documents

Operations Research and Business Analytics (ORBA)

Study Program Details



Are you interested in studying at our school? Find more information about application procedure, school dates, and much more here!

Program Structure & Courses

Semester	Semester	Semester	Semester
1st Semester	2nd Semester	3rd Semester	4th Semester
Mathematics I	Mathematics II	Mathematics III	Mathematics IV
Statistics I	Statistics II	Statistics III	Statistics IV
Operations Research I	Operations Research II	Operations Research III	Operations Research IV
Business Analytics I	Business Analytics II	Business Analytics III	Business Analytics IV

OVGU Campus Video



Tour through our compact, modern, bike friendly and cosmopolitan campus. Close to the city center, near to parks, and the river Elbe.

Applicants' Checklist



ORBA at a Glance



Students' Documents



► Exam Registration via LSF:

- For WW courses: check the examinations office website:
15 – 30 November 2026
- For other faculties, esp. INF, dates may vary → check the respective websites.



If you miss a deadline, neither YOU nor WE can do anything about it!

► Registration procedure for master's **seminars** and **scientific projects** (central distribution):

- Register at the end of the 1st semester for a master's seminar in the 2nd semester.
- Register at the end of the 2nd semester for a scientific project in the 3rd semester.

Information About the Exams

- ▶ **Exams** are generally offered only once at the end of the lecture period.
- ▶ **Withdrawal from an exam** is generally permitted up to three days before the exam. Check the module handbook and the relevant Examination Office website!
- ▶ **If you fail an exam**, you can retake it as many times as needed or choose a different module in the next semester.
 - ▶ Note that not all exams are offered every semester!
- ▶ Exams that have already been passed cannot be retaken.
- ▶ **Post-exam review is possible.** See the announcement on the professor's webpage.



Check announcements!



FACULTY OF
ECONOMICS AND MANAGEMENT



Faculty of
Computer Science



FACULTY OF
MATHEMATICS

- ▶ The workload for a module is measured in **credit points (CP)**. Most modules have a workload of 5 CP.
- ▶ ECTS = European Credit Transfer System
 - ▶ 1 CP = 30 hours of student workload
 - ▶ 5 CP = 150 hours of student workload
 - ▶ Some modules require **attendance at tutorials** and the **submission of coursework!**
 - ▶ Pay attention to announcements made in class and check the module handbook!
- ▶ Even if not mandatory, we strongly recommend **attending** lectures and tutorials. Be sure to prepare for the tutorials.
- ▶ Preparation for exams starts **NOW!**



- ▶ **ISP Office:** for general questions about your ORBA schedule:
 - ▶ Dipl.-Phil. Grit Voigt, office hours Tuesdays 10:00 a.m.–11:30 a.m. and 2:00 p.m.–3:00 p.m., and Thursdays 10:00 a.m.–11:30 a.m., www.isp.ovgu.de, isp@ovgu.de
- ▶ **Examination Offices:** for formal questions regarding deadlines, exams, grades:
 - ▶ For WW and MATH modules: Dr. Toni Richter, pruefungsamt@ovgu.de
 - ▶ For INF modules: Ms. Warnecke-Timme, fin-pruefungsamt@ovgu.de
- ▶ **Lecture Catalogue and Exam Registration:** LSF
- ▶ Official ORBA Study Regulation Documents: ISP Office
- ▶ For **ORBA-related questions** that cannot be answered by the offices listed above, contact the Program Director, Prof. Lukas: LS_ifm@ovgu.de



- ▶ Responsible for the success of your studies: **YOU!**
- ▶ Responsible for staying up to date: **YOU!**
- ▶ Responsible for knowing what needs to be done when and how:
 - **No one else—only YOU!** 😊
- ▶ Hence, **stay informed**, especially about:
 - ▶ registration deadlines,
 - ▶ course offerings and requirements,
 - ▶ study regulations.
- ▶ **Plan ahead!**
- ▶ Do your **research first**—then ask questions!

Communication with professors and faculty/university staff:

- ▶ Only write an email if:
 - ▶ you were unable to find an answer to your question in the literature or online; and
 - ▶ none of your fellow students were able to help you.
- ▶ Avoid contacting the professor directly with questions related to the course; instead, contact the research assistants responsible for the corresponding course.
- ▶ Write in a **respectful** and **formal** manner.
- ▶ Be mindful of the cultural norms within the German university system.
- ▶ **Guidelines** can be found online (e.g. on the homepage of the Chair of Financial Management and Innovation Finance).

5 Steps to Writing an Email

- ▶ Email subject line: Include the subject of your email:
 - ▶ E.g. “Financial Engineering/Lecture: Question about XY”, “1st Meeting regarding the Thesis”
- ▶ Salutation: Be sure to address the person correctly (title and surname, **not** by their first name!):
 - ▶ E.g. “Dear Professor Lukas”, “Dear Dr. Kupfer”, “Dear Ms. Cordes”
- ▶ Background information: If you have not spoken to the person before, you can provide some background information:
 - ▶ E.g. “I am a student in the ORBA program and currently taking your ‘Financial Engineering’ course.”
- ▶ Purpose of your message: Why are you writing to the person? Get to the point; only include information necessary for your question or request.
- ▶ Signature: End your email in a respectful manner:
 - ▶ E.g. “I look forward to your feedback.” or “I look forward to your reply.”
 - ▶ Sign off with your full name, followed by your matriculation number (student ID):
“Yours sincerely, [Full name (Matriculation Number)]”, “Best regards, [Full name (Matriculation Number)]”

- ▶ ORBA is a study program designed to teach you **analytical thinking**.
- ▶ Therefore, don't just memorize the material—make sure you **understand** what you are learning. Ask yourself:
 - ▶ Why does this approach make sense for the intended purpose?
 - ▶ Why does it work?
 - ▶ How would I solve this problem?
- ▶ Don't rely solely on lectures and tutorials. **Take matters into your own hands:**
 - ▶ Read books and reputable online resources!
 - ▶ Watch educational videos!
 - ▶ Create your own exercises to practice the course content!

- ▶ **Students International Mentoring Program & Social Organizational Network**
 - ▶ Faculty Mentoring/Buddy program
- ▶ Mentors with experience studying and living in Magdeburg
- ▶ Activities and assistance
- ▶ Complete the buddy registration form and send it to the International Study Program Office.
 - ▶ Email: isp@ovgu.de
- ▶ More information [here](#)



Any Questions? 😊



Welcome to ORBA!

We hope you get off to a flying start at OVGU! 😊