Module Handbook

Master of Science in Management

MSc 2027

WHU OTTO BEISHEIM SCHOOL OF MANAGEMENT

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MSc-ACCT-503 - Accounting and Financial Analysis

Code:	MSc-ACCT-503
Course Title:	Accounting and Financial Analysis
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Michael Erkens

Participation Prerequisites	Because the course is right at the beginning of students Master studies, the only prerequisite is some memory of introductory Finance and Accounting classes at the BSc level.
Course Content	We will cover basic finance concepts such as value and capital budgeting rules, portfolio theory, interest rates, risk and returns, and capital structure. We will also cover basic accounting concepts such as accrual accounting, cash flow statements, and value relevance in general.
Intended Learning Outcomes and Competencies	Learn and recap basic fundamentals in accounting and finance for valuation purposes.
Instruction Type	On-campus studies
Teaching and Learning Methods	Lectures based on conceptual examples, theoretical and practical exercises, and accessible scientific evidence. There will be exercises to revisit the concepts from the lectures (primarily on a voluntary basis).
Form of Examination	Exam (100%)
Literature	- Intermediate Accounting – IFRS edition; Kieso, Weygandt, Warfield; 3rd edition - Corporate Finance; Welch, 4th edition (available for free http://book.ivo-welch.info/home/)

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MKT-603 - B2B Pricing: Negotiation, Calculation & Strategy

Code:	MSc-MKT-603
Course Title:	B2B Pricing: Negotiation, Calculation & Strategy
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Ove Jensen

Participation Prerequisites	This course does not require other Master's courses in the program. It stands alone. To successfully participate, be aware that: • The course requires spreadsheet analyses. If you dislike numbers and Excel, do NOT take this course. • The course uses a highly interactive learning method (e.g., role-plays, case discussions). If you do not speak English fluently, do NOT take this course. • The course leverages discussion-based, mutual learning in the class session. If you cannot commit to attending our class sessions, do NOT take this course (Of course, you are excused if the program has scheduled overlapping class hours with another course). • Oral contributions to mutual learning are essential. If you expect to lean back and watch from the sideline, do NOT take this course. • The course requires your full attention to the comments of your classmates. I do not appreciate web browsing on laptops or phone messaging in my classroom. • The course requires a couple of study hours for each session. If you do not prepare, you can neither follow the discussions nor contribute to joint learning. This course is a high-pain, high-gain course. If you are shy of hard work, do NOT take this course.

Course Content	The course comprises three content streams: Stream I: Price Negotiation • Advanced Bargaining Techniques (includes negotiation role play) • Tough Bargaining (includes negotiation role play) • Multi-Item Negotiation (includes negotiation role play) • Price Negotiation Meets Price Calculation (includes negotiation role play) Stream II: Price Calculation • Advanced Price-Quantity-Cost Calculations • Cost Calculation Traps (includes cost calculation case) • Price vs. Working Capital • Best Practices and Limits of Data-Driven B2B Pricing (includes workshop) Stream III: Price Strategy • Pricing Commodities • Pricing Sustainability (includes case) • Pricing Services • Advanced Channel Pricing The course consciously minimizes overlaps with my Foundations of Sales course in WHU's Bachelor program. Thus, it is valuable to students who had a class with me before and those who haven't. To bring everyone to the same level before the course, students with a Bachelor's degree from other schools than WHU receive the pricing material from my BSc course as a complimentary self-study.

Intended Learning Outcomes and Competencies	Pricing is essential to every business because pricing is the key profit driver. Today's B2B salespeople face professionally trained buyers who put enormous pressure on prices, cost-to-serve, and working capital. B2B salespeople need not only to master communication techniques and tactics but also to calculate price concessions and package deals. To take pressure off the negotiation, they need to sell the solution's value to the customer and justify a higher price by overall savings. In summary, they require negotiation skills and proficiency in cost accounting. This course uniquely links cost accounting, price negotiation, and marketing strategy. You will benefit from participating even if you have taken a negotiation course previously. The course goes beyond pricing theory. It dives into pricing practice and embeds price management in sales force management. You will learn that pricing is far more than techniques and analytics. Pricing success critically depends on aligning people. If you have not had a negotiation class before, this course offers a good introduction you don't want to miss. Negotiation is a crucial social skill both inside and outside business. We negotiate all the time - with business partners, with our spouse, and with others. Some say that, in life, we don't get what we deserve but what we negotiate. The course conduces to a wide range of career tracks: Entrepreneurs need to know pricing as it is the No. 1 profit driver. General management careers benefit from implementing pricing excellence in a large sales force. Sales careers benefit from price negotiation techniques. Like chess, negotiating is fun if you know the crucial moves – but it can be a painful experience if you don't. Marketing careers benefit from the content on value-based pricing strategy and the interface between sales and operations. Finance students learn how day-to-day sales activities determine financial concepts such as working capital. Consulting careers benefit from quantifying how managerial decisions affect profit and cash flow. The course intends to enhance five categories of competencies: • Factual knowledge, for example, applying negotiation jargon to discussing the status of negotiation (such as BATNA, ZOPA, walk-away price, logrolling, non-offer offer, good cop – bad cop, and other idioms) and defining pricing performance indicators, • conceptual knowledge, for example, analyzing negotiation interests and positions, analyzing economic value to the customer, calculating price-trade-offs against other profit drivers, and calculating activity-based costs of products and services, • pricing-specific procedural knowledge, for example, applying a structured negotiation blueprint and dealing with negotiation tactics and price objections, • general business-relevant procedural knowledge, for example, preparing for business meetings, making the best out of a limited preparation time budget, making concise contributions to discussions, constructively building on arguments by other participants, and • metacognitive knowledge, for example, evaluating one's negotiation behavior and creating a skill profile for price managers.

Instruction Type	Presence
Teaching and Learning Methods	The learning method in this course follows the ideas of problem-based learning and the "reversed classroom" (a.k.a. "flipped classroom"). The "reversed classroom" replaces classroom lectures ("Frontalunterricht") with a blend of self-study at home and interactive discussions in the classroom. Problem-based learning refutes the traditional, passive learning sequence: "First hearing a concept. Then hearing problems that it could solve". It reverses it to an active learning sequence: "First trying to solve a problem oneself. Then discussing solutions with the group, led by the professor. Finally, getting additional insight from the professor". The learning method mix includes role-play sessions between students with joint debriefings, case-based discussions with concluding mini-lectures, interactive concept lectures, and managerial guest presentations. Watch this video showing the style of case-based sessions: https://www.youtube.com/watch?v=IbNNsq1fC0A . Problem-based learning requires significant energy from both the student and the teacher.
Form of Examination	The course grade wholly rests on individual performance. There are no team grades and no peer evaluations. The course grade is composed as follows: • 45%: negotiation preparation quizzes and case preparation quizzes (take-home, open book) • 55%: 75-minute final exam (on-campus, open book). The final exam is a laptop-based quiz. It is composed of numerical questions, multiple-choice questions, matching questions, and a mini-case. According to WHU rules, average grades should not exceed 1.8. • In the module's Fall 2023 version, the average grade was 1.81. 52% of students achieved a very good grade (1.0, 1.3). Not student failed. • In Fall 2022, the average grade was 2.29. No student failed. • In Fall 2021, the average grade was 1.43. No student failed. • In Fall 2020, the average grade was 1.83 (excluding failed grades). One student failed.
Literature	There is no required textbook. I have not found a book covering all the topics discussed in this course. The learning material for this course includes presentation slides, articles, case studies, role-plays, videos, and whiteboard notes. These and further course-related information are available on the learning management system Moodle.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MKT-607 - B2C Price Management

Code:	MSc-MKT-607
Course Title:	B2C Price Management
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Martin Fassnacht

Participation Prerequisites	Basic marketing knowledge
Course Content	Pricing is (the only) one of the 4Ps generating turnover. Moreover, price is the strongest profit driver! It has direct impact on profits, direct impact on sales volume and indirect influence on fixed costs. Within the scope of price management, participants will become familiar with the price management process, including its four phases: strategy, analysis, decision-making, and implementation. The course structure follows the process-logic of price management. Price management as a process can be divided into four phases that are addressed in the lecture: (1) Strategy phase, (2) Analysis phase, (3) Decision phase, and (4) implementation phase.
Intended Learning Outcomes and Competencies	Students participating in this course will gain advanced knowledge in price management, with a high emphasis on managerial and entrepreneurial practice. Theories and managing practices are supported by current examples that are embedded in the lecture. High profile guest lectures will further provide practical examples to apply the learned theory to real life. Another focus lies on engaging the students' critical thinking and problem-solving skills. Participants have to deal with the challenges of price management in the course of classroom discussions.
Instruction Type	Presence
Teaching and Learning Methods	• Lectures • In-class discussions • Guest Lecture
Form of Examination	Multiple Choice Exam: 100% Details and further requirements will be discussed in class and be made available on Moodle.

Literature	**SUGGESTED READINGS (not compulsory)** *1.* Simon, H./Fassnacht M. (2019): Price Management, 1st ed., Springer International Publishing. *2.* Simon, H., Fassnacht, M., & Schmitz, A.-K. (2024). Preismanagement, 5th ed., Wiesbaden: Springer Gabler. Simon, H./Fassnacht, M. (2016): Preismanagement, 4th ed., Wiesbaden: Gabler. *3.* Nagle, T.T./Müller, G. (2018): The Strategy and Tactics of Pricing: A Guide to Growing More Profitably, 6th ed., New York: Routledge. *4.* Simon, H. (2015): Preisheiten, 2nd ed., Frankfurt: Campus. *5.* Diller, H. (2008): Preispolitik, 4. ed., Stuttgart: Kohlhammer. *6.* Han, S./ Gupta, S./Lehmann, D. R. (2001): Consumer Price Sensitivity and Price Thresholds, in: Journal of Retailing, Vol. 77, No. 4, pp. 435-456. *7.* Kim, J-Y./Natter, M./Spann, M. (2009): Pay What You Want: A New Participative Pricing Mechanism, in: Journal of Marketing, Vol. 73, No. 1, pp. 44-58. *8.* Simonson, I./Drolet, A. (2004): Anchoring Effects on Consumers' Willingness - to - Pay and Willingness - to - Accept, in: Journal of Consumer Research, Vol. 31, No. 3, pp. 681-690. *9.* Monroe, K. B. (2003): Pricing: making profitable decisions, 3rd ed., McGraw-Hill. *10.* Stremersch, S./Tellis, G. J. (2002): Strategic Bundling of Products and Prices: A New Synthesis for Marketing, in: Journal of Marketing, Vol. 66, No. 1, pp. 55-72. *11.* Stephenson, P. R./Cron, W. L./Frazier, G. L. (1979): Delegating Pricing Authority to the Sales Force: The Effects on Sales and Profit Performance, in:Journal of Marketing, Vol. 43, No. 2, pp. 21-28. *12.* Frenzen, H./Hansen, A. K./Krafft, M./Mantrala, M. K./Schmidt, S. (2010): Delegation of Pricing Authority to the Sales Force: An Agency-Theoretic Perspective of its Determinants and Impact on Performance, in: International Journal of Research in Marketing, Vol. 27, No. 1, pp. 58-68. *13.* Frohmann, F. (2018): Digitales Pricing. 1st ed., Wiesbaden: SpringerGabler. Further literature will be announced in the lecture.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-FIN-608 - Corporate Governance

Code:	MSc-FIN-608
Course Title:	Corporate Governance
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Simon Straumann

Participation Prerequisites	Basic finance know-how (equity, debt, stock markets, etc.) required.
Course Content	This course focuses on the following topics: • Real-world examples and consequences of corporate governance failures • Separation of ownership and control & principal-agent problems • Information asymmetry & conflict of interests • Board of directors & executive compensation • The role of shareholders and stakeholders • The value of good corporate governance
Intended Learning Outcomes and Competencies	By the end of this course, students will be able to: • Understand key governance challenges such as agency conflicts and information asymmetries. • Evaluate governance mechanisms and their effectiveness. • Analyze governance structures and identify potential risks. • Propose and justify appropriate governance solutions.
Instruction Type	Lectures, discussions, in-class exercises, case studies, and a group project.
Teaching and Learning Methods	Lectures, group projects, in-class discussions, and assigned readings.
Form of Examination	Final Exam (70%) + Group Project (30%) In the group project, students will select a company and conduct a structured analysis of its corporate governance system. The project should assess key elements of the company’s governance structure (for example, board composition, ownership structure, executive compensation, etc.). Based on their analysis, students are expected to identify potential governance risks or weaknesses and propose realistic, applicable improvements. The final exam is a written exam covering all topics discussed throughout the course.

Literature	Optional: Christine A. Mallin, Corporate Governance, Oxford University Press A detailed list of papers and additional readings will be distributed on Moodle

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-QUANT-610 - Data Visualisation & Storytelling

Code:	MSc-QUANT-610
Course Title:	Data Visualisation & Storytelling
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Tobias Keller

Participation Prerequisites	A basic knowledge of statistics is required.
Course Content	**Motivation** "One picture is worth ten thousand words" –this proverb is especially true in the case of data analysis. Today, almost every business professional, especially in management and consulting, is involved in data analysis. Unfortunately, complex quantitative relationships are often still ineffectively communicated because analysts underestimate the power of (properly executed) data visualization and storytelling. **Key objectives** • Understand the fundamental concepts of data storytelling. • Creating awareness for the importance of data visualization (not only) for storytelling. • Learn to tailor data stories and visualizations to different audience needs. • Learning and applying best practices of data visualization. • Enhance analytical and presentation skills. **Structure of the course** **1. Introduction** • Data Science and the importance of data visualization & storytelling • Examples of actual use cases for data visualization & storytelling in practice

	2. Foundations of data visualization & storytelling • The anatomy of a data story • Requirements for data visualization: skills, data, software • Types of quantitative relations within data and how to best visualize them: time-series, distribution, correlation, etc. • Visual perception: and what we can learn from science on how to communicate using visualizations • When and how to effectively use visual attributes (length, position, size, color, shape, …) • Analytical relationships and patterns **3. Workshop: data visualization & storytelling using Tableau** This partis a practical workshop using the software Tableau. Students learn how to effectively use a professional data visualization & storytelling software. This includes the following topics: • Connecting with your data • Analytical interaction and navigation • Analyzing typical relationships and patterns (using, for example, bar charts, line charts, geographic heatmaps, scatter plots, …) • Best practices for visual design • Calculations • Building interactive dashboards **4. Case studies / group work** In the final part of the course, students work in groups on different case studies. The groups create dashboards for data visualization & storytelling using the software Tableau applying the theoretical and practical skills from the first two parts of the lecture. The results are presented and discussed in the final session.
Intended Learning Outcomes and Competencies	This course aims at enabling students to visually analyze data and to effectively communicate their analytical results. In the first part of the course, examples from practical analytical use cases and scientific insights about visual perception and design lay solid foundations of Visual Data Analysis. Secondly, during a hands-on workshop, students learn how to use a professional Visual Data Analysis software. Finally, students apply what they have learned in a group project and practice their communication skills when presenting their results.
Instruction Type	Lecture
Teaching and Learning Methods	The module is a combination of lectures, exercises, and group-work presentations. Furthermore, project work and self-study are also important teaching and learnings methods of the module.

Form of Examination	Grading is based on the following components: • Mid-term exam: 30% • Group work / presentation: 70% (with peer feedback)
Literature	There will be literature recommendations provided at the beginning of the course.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-ECON-611 - Financial Markets, Banking and Monetary Policy

Code:	MSc-ECON-611
Course Title:	Financial Markets, Banking and Monetary Policy
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Ralf Fendel

Participation Prerequisites	Sound Knowledge in Macroeconomics and Microeconomics
Course Content	*1.* Financial Markets *2.* Financial Intermediation and Commercial Banking *3.* Central Banking and Monetary Policy
Intended Learning Outcomes and Competencies	Understanding of: - Interest rate determination - Term structure of interest rates - Exchange rate determination and exchange rates regimes - Role and business of financial intermediation - Financial crises and financial regulation - Functioning of the European Central Bank (ECB) and the Fed - Monetary policy strategies and their implementation
Instruction Type	Presence
Teaching and Learning Methods	Lectures Class Room Discussions Self Study
Form of Examination	Exam (100%)

Literature	Mishkin, F. S., The Economics of Money, Banking, and Financial Markets, 13th ed., Pearson, Boston, 2021. Allen, F. and Gale, D., Understanding Financial Crisis, Oxford University Press, 2007. De Haan, J., Osterloo, S. and Schoenmaker, D., Financial Markets and Institutions: A European Perspective, 4th ed., Cambridge University Press, New York, 2020. Baglioni, A., Monetary Policy Implementation, Springer Nature, 2024. Additional Papers and Teaching Notes will be distributed during class.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

WHU Otto Beisheim School of Management

MSc-MGMT-501 - Game Theory

Code:	MSc-MGMT-501
Course Title:	Game Theory
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Peter-J. Jost

<table>
<tr><td>Participation Prerequisites</td><td>Elementary mathematics, for example, solving equations or taking derivatives.
Your willingness to solve puzzles!</td></tr>
<tr><td>Course Content</td><td>In the centre of our discussion in this course are multi-person decision making situation in which the outcomes depend on your action and on the actions of others. In Game Theory such a situation is called a game and the actors in such a game are called players, and a player has the move if he is called to act. To classify the variety of games it is useful to consider the following two basic criteria:
Timing of moves: According to the timing of the players' moves, games can either be simultaneous or sequential. In the first case, all players choose their actions without knowing how the others have acted or will act. Such games are called simultaneous-move games. In the second case, at least one of the players knows when acting what another has done before. Such a game is called a sequential-move game.
Degree of private information: Private information arises in those situations in which at least one player knows more about the decision making situation than another player. If this is the case, the game is one of incomplete information. Otherwise, the game is said to be of complete information.
Given these two dimensions, we discuss the following four classes of games in our course: Simultaneous-move Games of Complete Information, Sequential-move Games of Complete Information, Simultaneous-move Games of Incomplete Information, and Sequential-move Games of Incomplete Information.</td></tr>
</table>

Intended Learning Outcomes and Competencies	By the end of the course, students will advance their knowledge in different ways: • Learning the concepts of game theory will help you to understand the basic drivers of interactive behaviour and be helpful for your master thesis • Learning to create value through team work will be useful for other group works and cases • Learning to apply game theoretical basics to practical economic issues and real-world scenarios will improve your critical thinking in other courses • Learning to structure a problem in own words, but also using mathematics will be useful for your university and business career • Asking the right questions or detecting inconsistencies in discussions improves your communication skills
Instruction Type	Presence
Teaching and Learning Methods	Lecture Assignments Presentation
Form of Examination	Group assignments: 40% Individual assignments: 40% Presentation of individual and group assignments: 20%
Literature	Jost, Weitzel: Strategic Conflict Management, 2007, Edward Elgar. Gibbons: A Primer In Game Theory, Princeton University Press, 1992.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-ECON-503 - Industrial Organization

Code:	MSc-ECON-503
Course Title:	Industrial Organization
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Anna Ressi

<table>
<tr><td>Participation Prerequisites</td><td>Students taking this class should demonstrate a certain affinity to analytical thinking.
They are expected to know elemantary mathematics, for example, reformulating and solving equations or taking derivatives.
It helps to be familiar with basic concepts in Microeconomics and Game Theory, though it is not a prerequisite.</td></tr>
<tr><td>Course Content</td><td>The main goal of this course is to provide an introduction to the main concepts and analytical tools of the theory of industrial organization. Industrial organization is a field of microeconomics that studies how firms interact and compete with each other in the market. We will predominantly confront markets characterized by imperfect competition. In these markets, firms can exercise market power and hence need to make strategic decisions, i.e. decisions that have an identifiable impact on other market participants. Examples of such strategic choices are price, product variety, investments in advertising, and research and development. The course aims to teach students to use simple game-theoretic models and reasoning, which will crucially improve their understanding of strategic decision-making by firms. We use this analysis to investigate questions such as:
Why do prices for the same product differ across different customer groups?
How does product differentiation and advertising affect the nature of competition?
Which market characteristics allow and encourage firms to maintain a price-fixing agreement
How does antitrust policy affect market competition?
At the end of the course, students should have developed an economic perspective to understand and suggest managerial policies and comment on existing competition laws aimed at improving market allocations.

The course consists of 8 sessions and uses a mixture of lectures, a brief in-class assignment, group assignments with open reflection questions to be solved at home, and a group presentation.</td></tr>
</table>

Intended Learning Outcomes and Competencies	By the end of the course, students will advance their knowledge in different ways: Getting familiar with the basic economic concepts and applying them to real-world scenarios and practical issues will • help you to understand the basic drivers of economic and strategic behaviour and be helpful for your master thesis, • improve your critical thinking in other courses, • teach you to structure a complex problem and reduce it to the important core, which will be useful for your university and business career, • and structure your thoughts and help you to ask the right questions, which will improve your communication skills.
Instruction Type	Presence
Teaching and Learning Methods	• Lecture • Group Assignments • Group Presentations
Form of Examination	Final grades are determined on the following basis: • 30% individual in-class assignment • 40% group assignments • 20% group presentation • 10% active class participation
Literature	The course and the lecture slides will go relatively closely along the lines of • Belleflamme, P., & Peitz, M. (2010). Industrial Organization: Markets and Strategies. 2ndedition. Cambridge University Press. This is the main text you can access for further reading. It will be supplemented with chapters from • Pepall, L., Richards, D., & Norman, G. (2014). Industrial Organization. Contemporary Theory and Empirical Applications. 5thedition. John Wiley & Sons. • Vohra, R.V. (2020). Prices and Quantities. Cambridge University Press.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MGMT-612 - International Strategy

Code:	MSc-MGMT-612
Course Title:	International Strategy
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Jane Le

Participation Prerequisites	None, knowledge of management and strategic management is assumed.
Course Content	Strategy is the long-term direction of a firm and critical to the success and survival of all organizations. The expansion of markets and competition is pushing organizations to move into international markets. Yet, key strategic considerations differ across international context; this course increases awareness of such considerations and prepares students to tackle them. Working with an international strategy framework, this course facilitates students applying key strategic principles to varied international settings, thereby developing greater understanding of the diversity and challenges inherent in international strategy. Areas covered in this course include: • Foundations of international strategy • Internationality and distance • Emerging economies • Role of culture and history
Intended Learning Outcomes and Competencies	The primary objective of this course is to provide students with an understanding of the basic principles of international strategy and further develop this understanding based on advanced case study work. The theories and practices taught in this course are applicable in a wide array of positions in all types of organizations students may enter. The principal aims of the course are: • to provide students with a broad and critical understanding of the key issues and concepts in strategy and international strategy • to stimulate both appreciation and critical consideration of current theory and research on international strategy • to build skillsets related to strategy and international strategy, particularly analysis, decision-making and implementation • to allow students to reflect on their own experience, extrapolate and develop better strategy skills • to prepare students for future roles in which they need to work with individuals and groups in organizations
Instruction Type	Presence

Teaching and Learning Methods	**Focal Lectures, Presentations, Small Work Groups, Group Discussions, Case Analysis** As a module featuring in an advanced degree program, International Strategy focuses on the application of strategy essentials to international contexts in order to produce improved understanding of strategy in the real world. The course thus centers on in-class research, application and discussion centered on realtime case studies sampled from a range of international and industry contexts. These exercises serve the purpose of building strategic analysis and development skills, while also advancing and embedding learning. The class exercises are explicitly designed for skill development and to ensure strong performance on the final case study assessment. Participation in these exercises is thus mandatory and will be monitored. If you miss an exercise, you should send an explanation prior to the class, with the assistant in CC. Students are assigned to mixed groups for case work. Switching of groups is not permitted. All groups will need to prepare presentations for each session – presenting groups will be picked at random.
Form of Examination	• In-class attendance and contribution (10%, INDIVIDUAL) • In-class case presentations (25%, GROUP) • Case study assessment (65%, INDIVIDUAL)
Literature	Selected lecture slides will be made available as PDF files and are downloadable from Moodle after the lecture. Journal articles are available electronically via the library. **There Is No Textbook for This Course** We will be using advanced readings, so it is not necessary for you to purchase a textbook for this course. However, if you find a companion textbook helpful, you may use either (or both) of these books to support your learning: Whittington, R., Angwin, D., Regnér, P., Johnson, G. & Scholes, K. (2023). Exploring Strategy (Text and Cases): 13th edition. London: Pearson. **Earlier editions are also fine.** Verbeke, A. & Lee, I.H.I. (2021). International Business Strategy: 3rd edition. Cambridge: Cambridge University Press. ISBN: 9781108488037. **Earlier editions are also fine.** While Whittington et al. (2023) offers a detailed overview of strategy, Verbeke & Lee (2021) focus on elements unique to international strategy. Although these texts offer access to further readings on material central to the course, it will be insufficient to rely solely on these books for course learning. I also reiterate that **these are not required books**. Most strategy and international strategy books will cover the core issues we are focusing on in this course.

Workload

Self-Study:	119
Contact Time:	30

Examination:	1
Total Workload:	150

MSc-ACCT-605 - International Tax Strategy

Code:	MSc-ACCT-605
Course Title:	International Tax Strategy
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Lisa Hillmann

Participation Prerequisites	Prerequisite: Basic finance knowledge, e.g., NPV calculation. Prerequisite in taxation: none.

Course Content	The aim of the course [i]"International Tax Strategy"[/i] is to give insights into the international taxation of corporations, shareholders, and businesses as well as tax planning. The course, for example, deals with the tax influence on international investment and financing strategies. The lecture focuses on concepts that can be applied to different tax systems around the world. After successfully participating in the course [i]"International Tax Strategy"[/i], participants understand the role of taxes in key international business decisions and are able to apply the concepts to practical problems. The course addresses students interested in general management positions as well as students with a focus on finance, accounting, investment banking, or strategy consulting. The course content comprises, for example: *1.* Introduction to tax strategy *2.* Taxation in the national context • Fundamentals of income and corporate taxation • Partnerships: The after-tax ‘Standard Model’ • Corporations: Corporate tax systems • Investment and payout decisions of corporations *3.* Foundations of international taxation • Introduction to international taxation • Definition of residency • Principles of international taxation • Double taxation relief mechanism *4.* International tax strategy • Measuring tax planning: The effective tax rate • Profit shifting of multinationals: Financing structures • Profit shifting of multinationals: Transfer pricing • Location decision of multinationals • Anti-avoidance rules The grading of the course is based on the final exam (90 min).
Intended Learning Outcomes and Competencies	The aim is to give advanced insights into international tax law (corporate taxation and personal income taxation) and tax planning, and to show how international investment and financing strategies are affected by taxes.
Instruction Type	Presence
Teaching and Learning Methods	Lecture and discussion, case studies.
Form of Examination	Exam (100%)
Literature	• Schanz, Deborah / Schanz, Sebastian: Business Taxation and Financial Decisions, 2011 (online available). • Scholes, Myron S. / Wolfson, Mark A. et al.: Taxes and Business Strategy. A Planning Approach, 5th ed., 2015 (online available).

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-QUANT-605 - Predictive Analytics

Code:	MSc-QUANT-605
Course Title:	Predictive Analytics
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Arne Karsten Strauss

Participation Prerequisites	For students unfamiliar with R, we recommend to complete the free online course "Introduction to R" on datacamp.com (should only take about 4 hours or so); any other way to brush up basic programming skills in R is also fine. As part of the course, students will have the option to take any courses on DataCamp for free - this is fully optional and DataCamp courses will not be part of the assessments.
Course Content	This course is dedicated to conveying a sense of how to structure analytic projects systematically in the context of predictive models. The course introduces such a structure with an applied, step-by-step introduction to predictive analytics that mixes theory and practical, hands-on implementation tasks (using programming in R). Fundamental types of predictive data science models are introduced, including decision trees, logistic regression, support vector machines, neural networks, and naïve Bayes. In addition to those supervised models, we also look into unsupervised models including clustering and association rule mining. We also give an introduction to text mining (e.g., to predict sentiment or topic).
Intended Learning Outcomes and Competencies	• Ability to apply the cross-industry standard process for data mining to business problems related to prediction • Ability to apply a range of machine learning models to a range of supervised and unsupervised learning problems • Ability to link business problems to predictive analytics models
Instruction Type	in-person classes
Teaching and Learning Methods	Face-to-face teaching, online quizzes, in-class exercises.
Form of Examination	Moodle quizzes: 15% Group presentation: 35% Exam: 50%
Literature	F. Provost and T. Fawcett. Data Science for Business: What You Need to Know about Data Mining and Data-Analytic Thinking . O'Reilly, 2013

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-SCM-607 - The Analytics' Edge

Code:	MSc-SCM-607
Course Title:	The Analytics' Edge
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc
ECTS Credits:	5
SWS:	2.5
Responsible:	Arnd Huchzermeier

Participation Prerequisites	None
Course Content	In the big data landscape, it becomes imperative to understand what tools are available to gather and subsequently aggregate data into information and how to use this information to make better decisions. In this course, we start with descriptive analytics to summarize and visualize various data types for effective communication. We then discuss different methods for predictive analytics, i.e., the ability to learn patterns from past data to predict future events. In particular, we focus on machine learning algorithms to tackle regression and classification problems as well as unsupervised learning techniques such as clustering and dimensionality reduction. Algorithms covered in this course include penalized regression, tree-based models, gradient boosting, neural networks, PCA, k-means, and hierarchical clustering. Practical applications from different industries combine theory and practice. This module is a combination of lectures and coding exercises in R. No previous experience in R/other programming tools is required for this course, as all the basics are covered in the initial sessions.
Intended Learning Outcomes and Competencies	In this course, you will be introduced to the field of Data Analytics. Among other things, you will: i) Acquire the skills to visualize data and to generate meaningful summary statistics using R; ii) Practice the data analytics process from data preprocessing all the way to assessing the quality of prediction models; iii) Understand the basic concepts of machine learning as well as commonly used analytics techniques, and iv) Apply state-of-the-art machine learning algorithms on real data sets using the programming language R.
Instruction Type	In-class teaching and applied coding exercises (Hybrid for students with visa issues)
Teaching and Learning Methods	Case studies related to real data, programming assignments in R
Form of Examination	Grades are based on three components: Two individual problem sets (20%), an individual assignment (30%), and a final group project (50%)

Literature	Book Recommendations (optional): Wickham, H., & Grolemund, G. (2016). R for data science. (freely available online) James, G., Witten, D., Hastie, T., & Tibshirani, R. (2013). An introduction to statistical learning (Vol. 112). New York: Springer. (freely available online) Hastie, T., Tibshirani, R., & Friedman, J. (2009). The elements of statistical learning. Springer New York. Kuhn, M., & Johnson, K. (2013). Applied predictive modeling (Vol. 810). New York: Springer. (freely available online)

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-SCM-606 - Transportation Management

Code:	MSc-SCM-606
Course Title:	Transportation Management
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Jürgen Ringbeck

Participation Prerequisites	Essential prerequisites include: • Basic knowledge of business administration and strategic management concepts • Foundation of functional management techniques (especially operations & marketing) • Interest in applying quantitative business modeling, e.g., linear programming • Basic Excel skills for the out-of-class case
Course Content	Transportation is one of the fastest growing industries in the world. Travel and logistics serve as a critical backbone in our global business infrastructure, while also playing an essential role in our personal lives. Increasing supply disruptions and geopolitical tensions are causing supply chains to shift, while at the same time, growing ESG regulations and climate change associated costs have to be managed. The objective of this course is to provide a comprehensive introduction to strategic, commercial, and operational transportation management, current and future sustainability trends, as well as best practices of global industry players. Key economic principles of the transportation industry will be discussed, with in-depth coverage of the major modes of transportation, including passenger airlines, truck freight, rail cargo and container shipping. Emphasis will be placed on the effective and practical implementation of these principles. In two case studies, students will explore the role of data and economic KPI in transportation decision-making. Strategic market assessments and quantitative benchmarks will be conducted, supported by the informed use of Business Analytics Tools and Generative AI. In addition, several high-profile keynote speakers will complement the course. This course is an elective for all Master’s students across programs, as it is considered highly relevant for all students from diverse backgrounds who aspire to future leadership positions.

Intended Learning Outcomes and Competencies	• Building on their basic knowledge of business administration, students will apply specific economic principles and management approaches to the transportation industry. • Students will master the collection and analysis of diverse sets of information relevant to their management endeavors. • Students will evaluate scientific publications and apply key economic concepts. • Students will make data-driven decisions based on their business administration knowledge. • Students will creatively solve quantitative problems and implement solutions under time and resource constraints. • Students will contribute to the team's achievement of a common goal. • Students will deliver compelling oral presentations.
Instruction Type	Presence: On-campus, in-person (Präsenzstudium)
Teaching and Learning Methods	• Lecture • Two case studies in different teams • Guest lecturers
Form of Examination	The first case study (passenger air transport) will be an in-class case (20% of final grade). The second case study (freight transport) will be worked on out-of-class (30% of final grade). The final exam will make up 50% of the final grade.
Literature	An extensive literature list will be provided as part of the course materials. These readings are voluntary. As basic readings we also suggest: • Hensher, David A., & Brewer, Ann M. (2001): Transport: an economics and management perspective. Oxford: Oxford University Press. • Vasigh, B., & Pearce, B. (2024). Air Transport Economics: From Theory to Applications (4th ed.). Routledge

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

WHU Otto Beisheim School of Management

MSc-MKT-611 - Actionable Customer Analytics

Code:	MSc-MKT-611
Course Title:	Actionable Customer Analytics
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Christian Schlereth

Participation Prerequisites	

Course Content	Actionable customer analytics is about making data-informed or data-driven business decisions. In making these decisions, managers choose from among alternative courses of action in a complex and uncertain world. Eventually, they enable the creation of business intelligence through customer insights, i.e., better decisions through a better understanding of customer behavior. In this master course, we will work with the most essential data analysis technique on a range of artifical and real data sets. These techniques include regression, logistic regression, and k-means. However, the focus is not on the method alone, but in particular on translating the results into recommendations for management decisions. Using various types of data sources, models, and related exercises tied to recommended software components, course participants will develop marketing plans in various decision contexts. The preliminary course plan is: Week 1: Introduction + data briefing Week 2: Descriptive analytics, regression, and JMP Week 3: Logistic regression and actionable customer analytics Week 4: Team coaching sessions & guest lecture Week 5: Assumptions Week 6: K-Means Week 7:Team coaching sessions Week 8: Nudging & steering customers & debriefing
Intended Learning Outcomes and Competencies	
Instruction Type	Presence
Teaching and Learning Methods	During the course, we will use in particular Excel and JMP(belonging to SAS). Licenses for JMP will be provided free of charge to course participants. In the later sessions, we will briefly look at alternative software, such as Grepsr for scrapping, python and Jupiter-files. Experience in using Excel is expected, nevertheless, this course is designed such that participants without any experience in JMP, Pythin or Gepsr will be able to complete all assignments. Content-wise, we will apply a mixture of traditional teaching methods, hands-on assignments, applied on real-world data sets.

Form of Examination	~5% assignments ~45% report ~50% exam
Literature	The content of this course is mainly based on the lecture slides. Selected articles are provided, but the main resources for learning are lecture slides, exercises and hands-on sessions on the software Excel, JMP (SAS), and Grepsr.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

WHU Otto Beisheim School of Management

MSc-FIN-602 - Advanced Corporate Finance

Code:	MSc-FIN-602
Course Title:	Advanced Corporate Finance
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Pascal Kieren

Participation Prerequisites	none
Course Content	The objective of this course is to provide students insights about central questions in modern corporate finance based both on fundamental theoretical results and on established empirical findings. After a brief introduction in which we motivate the goals of a firm, we move to the famous Modigliani-Miller (MM) theorems. Under some conditions a firm's financial structure, i.e., its choice of leverage or of dividend policy, is irrelevant. In other words, the size of the corporate pie is unaffected by the way it is carved. In this frictionless world, we have little to say about firms' financial choices and governance. Rather the MM theorems act as a benchmark whose assumptions need to be relaxed in order to investigate the determinants of financial structures. To this end, we will study the effects of taxes, bankruptcy costs, information asymmetries, and agency costs at various levels of the corporate structure. We will then cover the consequences for firms by discussing corporate investment policies and sources of finance, dividend policy, as well as mergers and acquisitions. Additional topics include executive compensation, the role of Environmental, Social, and Governance (ESG) Factors and the firm's societal role.
Intended Learning Outcomes and Competencies	Students will be able to analyze and solve problems that arise when corporations raise funds to finance their investments. In doing so, the students will be able to (1) apply the major corporate finance theories to decision-making under global influences; (2) understand conflict of interests that can arise in corporations; and (3) successfully communicate financial information and engage more effectively with financial stakeholders.
Instruction Type	Presence
Teaching and Learning Methods	• Lectures • Interactive development of main results and discussions • Problem sets • Online questions

Form of Examination	Written Exam (100%)
Literature	• Brealey, R., S. Myers, F. Allen, and A. Edmans (2022): "Principles of Corporate Finance", McGraw?Hill, 14th edition. • Tirole, J. (2006): "The Theory of Corporate Finance", Princeton University Press. • Academic papers, industry reports, and newspaper articles (will be made available during the lectures)

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-QUANT-501 - Advanced Methods of Market and Management Research

Code:	MSc-QUANT-501
Course Title:	Advanced Methods of Market and Management Research
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Walter Herzog

Participation Prerequisites	Basic knowledge in statistics (e.g., regression analysis)
Course Content	This course covers two fundamental aspects of research methodology: Measurement and causality. The first part of the lecture (chapters 2-5) provides an extensive introduction to the measurement of organizational concepts (e.g., salesperson motivation) and consumer psychological variables (e.g., customer satisfaction). The second part of the lecture (chapters 6 and 7) focuses on causal inference, that is, we discuss how to estimate causal relationships among important business variables and test research hypotheses. In the final part of the lecture (chapter 8), a free and easy to use software tool is introduced which enables participants to implement all discussed methods and models for their own work (e.g., in the course of their MSc thesis). 1. Introduction • Relevance versus rigor: A misconception • The relevance of rigorous measurement • The relevance of rigor in causal inference • Measurement and causality: An overview 2. Foundations of psychometric measurement • Observed variables • Latent variables • Classical latent variable theory • Operationalism • Properties of measurement models: Dimensionality, reliability, and validity 3. Dimensionality • Local independence • Partial correlations • The one-factor model

- *Observed and implied covariance matrix*
- *Model identification*
- *Maximum likelihood estimation*
- *Model fit*
- *Confirmatory factor analysis*

4. Reliability

- *Cronbach's alpha coefficient*
- *Composite reliability*
- *Indicator reliability*
- *Average variance extracted*

5. Validity

- *Discriminant validity*
- *Criterion validity*
- *Content validity*

6. Structural equation modeling

- *Introduction of a structural or "causal" model component*
- *Observed and implied covariance matrix*
- *Model identification and estimation*
- *Model fit*
- *Interpretation of structural parameters*
- *Limitations and extensions*

7. Causality, experiments, and instrumental variables

- *Classical conditions of causality*
- *Limitations of observational studies*
- *Advantages of experiments*
- *Experimental design and analysis of experimental data*
- *Measurement models and causal models: An integrative perspective*
- *Instrumental variable analysis*

8. Software

- *Introduction of a powerful statistical software package ("R") that enables participants to estimate all models discussed in chapters 1-7*
- *"R" is available for free and can be used by participants for their own analyses (e.g., for their MSc theses)*
- *"R" is the standard statistical software package in many research areas and it is used by firms for many purposes (market research projects, finance applications, etc.)*

Intended Learning Outcomes and Competencies	This course provides excellent preparation for students interested in writing a quantitative MSc thesis. Specifically, students will learn how to create reliable measures of variables, test causal relationships among variables, and defend their methodological approach against critical comments. Moreover, students will acquire the skills to implement all introduced methods using the free statistical software package R. Importantly, knowledge of the discussed analytical methods is also a valuable asset in the corporate world: • First, understanding analytical methods equips you to address crucial questions facing any business: How do our customers and employees perceive us? How do our activities influence customer and employee behavior? Thus, familiarity with analytical methods empowers you to make informed decisions. • Second, proficiency in analytical methods enables you to back up your discussion position with empirical evidence and quantitative facts. In internal debates, individuals who can provide empirical evidence and quantitative facts often present the most compelling arguments. Therefore, expertise in analytical methods enhances your internal authority and equips you to better champion your ideas. • Third, mastery of analytical methods allows you to identify methodological flaws and challenge false claims made by others, such as management consultants or market researchers. As Benjamin Disraeli noted, 'there are three kinds of lies: lies, damned lies, and statistics.' Therefore, expertise in analytical methods enables you to defend against assertions and manipulative tactics.
Instruction Type	Presence
Teaching and Learning Methods	Students attend lectures, which are mainly based on original research articles. Students apply the knowledge they gained during those lectures by solving corresponding practice sets after each lecture. A mock exam is provided to prepare students for the written examination at the end of the course.
Form of Examination	Exam (100 %)

Literature	Basic readings: The content of this course is mainly based on original research articles. The "essence" of these articles is summarized in the lecture slides. Selected articles are provided (for examples see "optional readings"), but the main resources for learning are lecture slides and exercises. Optional readings: - Bagozzi, R. P., & Yi, Y. (1989). On the use of structural equation models in experimental designs. Journal of Marketing Research, 26, 271-284. - Bollen, K. A. (1989). Structural equations with latent variables. New York: Wiley. - Bollen, K. A. (2002). Latent variables in psychology and the social sciences. Annual Review of Psychology, 53, 605-634. - Gerbing, D. W., & Anderson, J. C. (1988). An updated paradigm for scale development incorporating unidimensionality and its assessment. Journal of Marketing Research, 25, 186-192. - Jöreskog, K. G. (1971). Statistical analysis of sets of congeneric tests. Psychometrika, 36, 109-133. - Netemeyer, R. G., Bearden, W. O., & Sharma, S. (2003). Scaling procedures: Issues and applications. Thousand Oaks, CA: Sage. - Rubin, D. B. (2007). Statistical inference for causal effects. In C. R. Rao and S. Sinharay (Eds.), Handbook of Statistics: Psychometrics (pp.769-800). Amsterdam: Elsevier.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MGMT-509 - Advanced Organizational Behavior

Code:	MSc-MGMT-509
Course Title:	Advanced Organizational Behavior
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Lukas Löhlein

Participation Prerequisites	**This course introduces the key challenges faced by modern organizations.** Topics include organizational culture and transformation, power and politics, misbehavior and control, as well as gender and sexuality in organizational settings. Prior coursework in Organizational Behavior (OB) is not required; you will receive guidance on essential foundational readings before the first session.

Course Content	**Welcome to Advanced Organizational Behavior 2025** This course is designed to deepen your awareness and understanding of human behavior in organizations, enhancing your ability to lead people effectively and improve organizational performance. While technical skills in finance, accounting, or marketing are crucial for organizational success, your ability to understand and manage individuals, teams, and broader organizational systems is equally essential. Understanding the often **“messy” human side** of management is a vital complement to the technical expertise you gain in other core business courses. This course equips you with the tools to **critically analyze** and respond to contemporary organizational challenges, offering managerially relevant solutions grounded in theory and practice. It will help you develop a critical mindset and a solid foundation in organizational theory, preparing you to be an effective leader and a catalyst for organizational transformation. In addition, you will become familiar with contemporary **qualitative research methods**—such as in-depth interviews and observations—that are essential for analyzing, understanding, and influencing organizational dynamics. You will encounter ideas drawn from various disciplines, including sociology, psychology, economics, and management. Although the course focuses on business organizations, you’ll find that the concepts also apply to non-profits, sports teams, political groups, and other organizational forms. A special feature of this course is thus the inclusion of a **guest speaker from a non- traditional organizational background**. These sessions offer unique insights into leadership and organizational behavior under unconventional or extreme conditions. In previous years, guest speakers have included a commander from a police special operations unit and the captain of a refugee rescue vessel. Their experiences shed light on decision-making, coordination, and resilience in high-pressure environments, **providing fresh perspectives that challenge conventional management thinking.**

Intended Learning Outcomes and Competencies	This course is aimed at students who seek to: • Actively shape organizational structures and behavioral dynamics. • Provide meaningful guidance to drive real organizational impact and transformation. • Connect academic insights with the practical realities of organizational life. • Cultivate critical thinking to challenge assumptions, question dominant narratives, and look beyond contemporary buzzwords—such as “agility”, “resilience”, “purpose-driven culture”, or “employee empowerment”. By the end of this course, you will be able to: • Identify and explain foundational and advanced concepts of organizational behavior. • Critically assess how culture can be shaped and influenced in context-sensitive ways. • Apply concepts to diagnose organizational challenges and design interventions. • Analyze and interpret qualitative data to uncover behavioral patterns and provide actionable recommendations.
Instruction Type	Presence
Teaching and Learning Methods	Assigned readings will give you a clear understanding of major topics in organizational behavior. Case studies will help you apply these concepts to real-world examples, and experiential activities will support you in putting theory into practice. This course will be **highly interactive and participatory**. You are expected to take an active role by sharing your knowledge, experiences, and perspectives to enrich the academic discussion and demonstrate the practical application of theory. You will be encouraged to reflect on your own experiences and consider how to connect the material to organizations you are familiar with.

Form of Examination	**Organizational Analysis: Paper I Individual Assessment I Weight: 50%** The concepts taught in this course will only contribute to your leadership and business success if you apply them to real-world situations. Organizational Analysis in Action is designed to give you practical experience in using an organizational behavior (OB) lens to examine and make sense of complex workplace dynamics. For this individual assignment, you will thus reflect on an organizational problem that you have experienced or closely observed. The term “organizational” is used broadly: your example may come from an internship, a sports team, a student group, a workplace, or any other setting where people worked together toward a shared goal. You are expected to describe the context and the nature of the problem in sufficient detail to allow for a meaningful and structured analysis. You will then apply relevant OB concepts and theories to interpret the situation and uncover underlying behavioral and structural patterns. As part of this assignment, you are required to conduct at three interviews with members of the organization you are analyzing. These interviews will serve as empirical evidence to support your analysis and deepen your understanding of how organizational dynamics unfold in practice. Your analysis should result in a thoughtful, evidence-based diagnosis of the issue, supported by concrete, theory-informed recommendations for addressing the challenge. Rather than offering a purely descriptive or anecdotal account, this assignment invites you to integrate academic insight with practical experience—demonstrating analytical rigor, critical self-reflection, and the capacity to question your own assumptions. Ultimately, the exercise is designed to deepen your understanding of leadership, organizational complexity, and your evolving role as a future change agent. More detailed guidelines and expectations will be provided during the first lecture. **Oral Examination & Case Simulation: Group Assessment I Weight: 50%** The **oral examination (25%)** and the **case simulation (25%)** will take place during the final session of the course. The oral examination, which you will approach as a team, is designed to assess your ability to apply the full range of course content—including the recommended readings, assigned book, slide decks, classroom discussions, and casework. The best way to prepare for the oral examination is to engage actively throughout the course: attend all sessions, participate meaningfully in discussions, and contribute consistently to case preparation and group activities. The exam will assess not only your conceptual understanding but also your ability to connect theory to the practical scenarios discussed in class. Following the oral examination, you will work in the same team to analyze a real-time case scenario within a fixed time period. Your team’s solution and recommendation must be submitted within a deadline of about 2 to 3 hours. Each group will receive a grade for the oral examination and a separate grade for the case simulation. However, if several team members feel that individual contributions within the group varied significantly, I reserve the right to assign differentiated individual grades based on peer input and observed engagement.

Literature	We will use the following textbook for this course: • Stephen Robbins & Timothy Judge (2023): Organizational Behavior, Global Edition. • Fiona Wilson (2018). Organizational Behaviour and Work. A critical introduction. Additional readings will be provided in class.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-QUANT-511 - Decision Support & Analytics

Code:	MSc-QUANT-511
Course Title:	Decision Support & Analytics
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Irina Heimbach

Participation Prerequisites	At least two semester undergraduate math and statistics courses Knowledge of linear regression analysis
Course Content	• Decision-making process (Simon's model) • Decision heuristics, biases, and fallacies • Introduction to Decision Support Systems • Nature of data, data preparation • Deriving value from textual data • Deriving value from network data • Visual analytics with Tableau • Introduction to predictive analytics and AI • Logistic regression • Decision trees • Artificial neural nets, single perceptron • Generative AI • Digital nudging, recommender systems and robo-advisors • Implementation and usage issues • Legal, privacy, and ethical issues • Impact of AI on future work
Intended Learning Outcomes and Competencies	Improved data literacy and data-analytic skills Improved working skills with Tableau Understanding of main concepts of technology-mediated decision support
Instruction Type	Presence
Teaching and Learning Methods	Lecture Integrated exercises and in-class discussions Practice with software (Tableau) and data sets Quizzes

Form of Examination	100 % final exam
Literature	Sharda et al. 2021 Analytics, Data Science, & Artificial Intelligence: Systems for Decision Support, 11th edition, Pearson.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

WHU
Otto Beisheim School of Management

MSc-QUANT-608 - Generative AI for Business

Code:	MSc-QUANT-608
Course Title:	Generative AI for Business
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Stefan Spinler

Participation Prerequisites	none
Course Content	This course will help students to the gain insights about the functioning of Large Language Models (LLMs) and transformer technology that is the basis for Generative AI. With this in mind, we will explore business applications of Generative AI in a variety of industries. We also shed light on current limitations that relate to data, biases and unexpected behavior.
Intended Learning Outcomes and Competencies	1. Understand the recent evolution of LLMs. 2. Attain a conceptual understanding of transformer models. 3. Understand the type of business problems that can be addressed via AI. 4. Learn using a variety of open-source and proprietary Gen AI models. 5. Build agents to address specific business problems.
Instruction Type	presence
Teaching and Learning Methods	Lectures, guided programming, guest lectures from industry representatives
Form of Examination	Case studies (2x25%) and final project (50%)
Literature	C. M. Bishop, H. Bishop: Deep learning. Springer, 2024.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

WHU Otto Beisheim School of Management

MSc-EAI-602 - Heinz-Nixdorf-Lecture: Strategic Intellectual Property Management

Code:	MSc-EAI-602
Course Title:	Heinz-Nixdorf-Lecture: Strategic Intellectual Property Management
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	James Conley

Participation Prerequisites	
Course Content	This course covers the broad agenda of using intellectual capital for competitive advantage. With globalization, intangible assets such as human capital, intellectual property, brands and relationships have become the dominant proportion of a firm's market value. Yet most firms do a poor job of managing this intellectual capital strategically. This course adopts a "lifecycle" approach to the management of an intangible asset covering the creation of the asset, the codification of the asset in the form of intellectual property (IP), the valuation of the assets, leveraging of some into future markets for growth. Case studies examine management challenges in various industrial settings, such as artificial intelligence (AI), entertainment, finance, pharmaceuticals, consumer electronics, agribusiness, consulting, venture capital, telecommunications, software and other contexts.
Intended Learning Outcomes and Competencies	Multiple managerial theories
Instruction Type	Presence
Teaching and Learning Methods	Lecture (50 %), Case studies (50 %)
Form of Examination	Final Exam (50 %), Case Study (30 %), Class Participation (20 %)
Literature	To be announced.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MGMT-617 - Performance Management and Controlling

Code:	MSc-MGMT-617
Course Title:	Performance Management and Controlling
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Utz Schäffer

Participation Prerequisites	Basic management accounting knowledge from a BSc program

Course Content	The course Performance Management and Controlling will give you a comprehensive perspective on how to design, implement and use management control systems (MCS). More specifically, we will talk about target setting, reporting of actual and forecasting of future performance, resource allocation and early warning and how these processes and systems can be used, implemented and diffused successfully, in particular how they can be put in place in order to facilitate learning processes within an organization. In the second half of this course, we will talk about the tasks of controllers and cover extensively how digitalization and analytics, the trend towards more sustainability, and the increasing number of external shocks force and help us to reinvent performance management and controlling. Our lectures are as interactive as can be and will be complemented with case discussions and guest lectures by high-profile practitioners. They will enable you to gain additional insights on the transformation of finance and controlling and the “real-life” use of the management control systems covered in class. For a comprehensive understanding of the course structure and content, we invite you to view our introductory video: Click this link here to open the video. **Course Overview** Section I: Learning versus influencing Section II: Reporting and dashboards Section III: Planning and budgeting Section IV: Early warning systems Section V: Use, implementation and diffusion Section VI: The role of controllers
Intended Learning Outcomes and Competencies	Through this course, students gain comprehensive knowledge of Management Control Systems (MCS), insights into the tasks of controllers, and an understanding of how current (mega-)trends influence controllers’ activities. After this course, students will be able to critically evaluate designs, implementions and uses of MCS.
Instruction Type	Presence
Teaching and Learning Methods	Interactive lecture, assignments and case studies, in-class discussion

Form of Examination	30% Case assignments 30% of your evaluation will be based upon your individual solutions to five out of six case assignments. 70% Exam (closed book) The final exam will ask you to reflect upon the concepts covered in class. For module retakes (following a 5.0 grade): 100% Oral Examination
Literature	Optional readings (books, articles, cases) will be provided on our Moodle course page.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-QUANT-604 - Prescriptive Analytics and Machine Learning

Code:	MSc-QUANT-604
Course Title:	Prescriptive Analytics and Machine Learning
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Arne Karsten Strauss

Participation Prerequisites	MSc Prep Quantitative Methods (optimization coverage) Students should familiarize themselves with a primer document (which will be made availabe ahead of the first session) featuring a review of basic mathematical foundations needed for the course (such as vectors, matrix calculus, gradients etc). This is a course focussed on mathematical optimization progressing quickly from basic to more advanced concepts.

Course Content	This module seeks to familiarize students with the main tools used in the domain of prescriptive analytics (i.e., decision support via optimization techniques) and the use of machine learning methods within this domain. The module builds loosely on the module "Predictive Analytics" where basic machine learning methods for prediction were already introduced.
	
	1. Introduction: overview of prescriptive analytics
	2. Static optimization problems & applications:
	    1. Continuous nonlinear optimization
	    2. Linear programming
	    3. (Mixed) Integer optimisation: branch & bound, meta-heuristics
	3. Dynamic optimization problems & applications:
	    1. (Approximate) dynamic programming
	    2. Reinforcement learning (Q-learning).
	
	These topics are introduced in the context of business application case studies and discussed to highlight challenges and benefits. We will use R programming throughout the course.

Intended Learning Outcomes and Competencies	• Ability to link business problems to fitting optimization frameworks • Ability to implement and solve optimization problems for a number of common use cases
Instruction Type	In-person teaching
Teaching and Learning Methods	Lectures, in-class exercises, group project

Form of Examination	Moodle quizzes: 15% Group presentation: 35% Exam: 50%
Literature	No compulsory text book. Relevant references will be provided during the course.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MGMT-616 - Strategy Making in Professional Sports

Code:	MSc-MGMT-616
Course Title:	Strategy Making in Professional Sports
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Sascha Schmidt

Participation Prerequisites	Since the format of the course is highly interactive, the number of students will be limited to 30. Students will be admitted to the course based on the "first-come, first-served" principle. No specific course prerequisites are required for participation.
Course Content	This hands-on course guides students through the process of developing a concrete growth strategy for Borussia Dortmund, which they will present in teams of six on-site at Borussia Dortmund's SIGNAL IDUNA PARK to the club's decision-makers at the end of the course. This final deliverable is the central objective and shapes the structure and content of the entire course from the outset. The course is structured across four sessions that build on each other in a logical, step-by-step manner. Students gradually develop their strategic thinking through the analysis of real-world challenges in professional sports and apply their insights to Borussia Dortmund's context. To prepare for this task, students work with Harvard Business School case studies from the sports industry, co-authored by Professor Sascha L. Schmidt. These case studies offer concrete examples of how strategic decision-making unfolds in different corporate environments. • TSG 1899 Hoffenheim to understand why and how the club applies an early adopter innovation strategy to its football business. • FC Bayern Munich to understand why and how the club entered a new market and nurtured growth in China. • Dirk Nowitzki Foundation to understand why and how you should start early to invest in marketing and build up a brand. Each session features guest speakers from the organizations discussed in the case studies. These industry professionals share their experience with students and provide insights into the strategic challenges they have faced. They also engage in open dialogue with students to discuss possible future

	developments in the sports business landscape. Throughout the course, students are taught using the case study method, which involves analyzing complex business situations, applying strategic tools and frameworks, deciding on the most viable course of action, and defending their conclusions. This approach fosters critical thinking, structured reasoning, and collaborative problem-solving. The strategic tools and frameworks taught follow the PEAK strategy process. This four-step process (Purpose, Evaluate, Architect, Kickstart) helps students develop effective strategies by guiding them to clarify the core purpose and formulate a clear vision, assess current conditions and future trends, design a portfolio of initiatives to obtain a competitive advantage, and choreograph their execution. It emphasizes key questions such as "Who are we?", “Where are we?”, "Where do we play?", and "Who is doing what by when and why?". In the first session, students are assigned to teams and given their core assignment: to develop a growth strategy for Borussia Dortmund. This includes identifying promising areas for growth, such as adjacent businesses or new target markets. In the second part of the first session and in the second and third sessions, students participate in in-depth case discussions and apply their learnings to the Dortmund case in group work. The fourth and final session is dedicated to the presentation of the teams’ strategic recommendations to Borussia Dortmund’s executives, which will take place on-site in Dortmund. The course includes continuous support through coaching by the professor and a research assistant, both during class and in between sessions. Students receive guidance tailored to their team’s approach and progress, helping them refine their ideas and sharpen their presentation. Final presentations will be delivered in teams of six and are expected to include clearly defined growth initiatives, estimates and approximations of potential business impact, and a practical implementation plan.
Intended Learning Outcomes and Competencies	In this course, students will learn to follow a structured strategy-making process using the PEAK framework—Purpose, Evaluate, Architect, Kickstart—which guides them step by step from defining a clear strategic vision to implementing actionable initiatives. They will analyze the situation of Borussia Dortmund, develop strategic options, decide on the best possible solution, and defend their conclusions. This approach strengthens their problem-solving skills and enhances their ability to think strategically and reason in a rigorous and systematic way.
Instruction Type	Presence
Teaching and Learning Methods	Interactive Lecture, Case Studies, Discussions with Industry Experts, Group Work, Team Coaching, Presentation
Form of Examination	50% Final team presentation plus hand-in of presented slides (incl. notes), 25% case write-ups, 25% individual participation

Literature	(voluntary) 21st Century Sports: https://www.whu.edu/en/faculty-research/entrepreneurship-and-innovation-group/center-for-sports-and-management/21st-century-sports/ Course package of obligatory readings will be announced (case studies, papers and additional readings)

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-EAI-613 - Value Creation in Family Firms

Code:	MSc-EAI-613
Course Title:	Value Creation in Family Firms
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Julian Enrik Schenkenhofer

<table>
<tr><td>Participation Prerequisites</td><td>No course prerequisites required for participation</td></tr>
<tr><td>Course Content</td><td>This course explores about the most important type of organization: the family firm. Don't believe us? Here are some fun facts: Family firms...

Make up 70–95% of all companies worldwide
Contribute 70–90% of the global GDP employ more than 60% of the global workforce
Make up 91% of all companies in Germany
Can be as small as 1 and as big as 2.1m employees (Walmart)

So let's dive right in and find out more about family firms, their context, idiosyncrasies, advantages, and disadvantages!

You will also learn about:

Term definition
Meaning and characteristics of family businesses
Differences between family businesses and non-family businesses, especially in relation to goals, long-term orientation, structure, and resources
Concepts and frameworks to work with family firms
Strategic management of the business owning family and the family-owned business
Topics related to succession and leadership (among others)
</td></tr>
</table>

Intended Learning Outcomes and Competencies	Upon completion of the course, you will be able to: • Be aware of the specific relevance of family firms to both research and practice • Understand characteristics of family firms and differences to non-family firms • Become sensitive to the heterogeneity of family firms • Learn about family firm theories and their applications • Apply theoretical frameworks to a real-life family firm case • Acquire consulting experience • Prepare for working in a family firm or in a consulting firm (for family firms)
Instruction Type	☒ Presence ☐ Online synchronous ☐ Online self-paced ☐ Hybrid
Teaching and Learning Methods	The course consists of six sessions. Typically, we divide the sessions into a theoretical lecture part and a practical part where different guest speakers from different family businesses share their experiences and impressions, including discussion and Q&A. In addition to class lectures, exercises and case discussions, pre-class readings and after-class quizzes are included per session to supplement the in-class material. The course includes group work in which one family business per group is selected and presented, as well as individual coaching sessions.
Form of Examination	see table below
Literature	Required reading is uploaded to Moodle and can be found under the relevant lecture section and should be read in preparation for the course.

Assessment Type	**Format**	**% of Grading**
Final Presentation	Group Work	40%
Questions on group work & Individual contribution	Individual Work	10%
Participation grade: Classroom Contribution & After-Class Quizzes	Individual Work	20%
Reflection Paper	Individual Work	30%
Total		**100%**

Workload

Self-Study:	118
Contact Time:	30
Examination:	2

Total Workload: 150

MSc-EAI-614 - Venture Capital Finance

Code:	MSc-EAI-614
Course Title:	Venture Capital Finance
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Serden Ozcan

Participation Prerequisites	
Course Content	Venture capital is an important financial intermediary for, and component of entrepreneurship, innovation and organizational change. By one estimate, over 1,200 VC firms around the world are evaluating more than 20,000 business plans on a given day. The media extensively glorifies venture capitalists, policy-makers increasingly look to venture capital as a source of jobs and economic growth and hardly a day goes without another celebrity in the entertainment industry making a foray into the world of venture capital. Nonetheless, little is understood about the structure, governance, strategy, incentives, culture, capabilities and operational processes of venture capital organizations. These gaps in understanding yield significant missteps and frustration for those intersecting with venture capital and in fact so much that especially many entrepreneurs feel venture capital is the “dark side” and inherently evil. By offering a window into the inside dynamics and the intricacies of venture capital, this course aims to bridge these gaps for students and prepare them as a potential entrepreneur, venture capitalist, institutional investor, management consultant or a policy-maker. The course is divided into four modules.

Intended Learning Outcomes and Competencies	Upon successful completion of the course, you should be able to: *1.* Describe how different forms of venture capital organizations are organized, capitalized and managed and address the costs and benefits of working with them as an entrepreneur. *2.* Explain how VC firms compete, make money and create value for entrepreneurs, fund investors and the economy. *3.* Describe why and how venture capital firms syndicate and illustrate different patterns of syndication. *4.* Articulate a strategy for generating a deal flow and identifying deals. *5.* Discuss how venture capital incentives play into deal selections and negotiations with entrepreneurs. *6.* Demonstrate a rigorous understanding of how deals are valued, structured and harnessed. *7.* Appraise what constitutes a more appropriate type of investment capital for a new venture. *8.* Discuss the nature of post-investment interactions between the VC and founders and recommend strategies for working with management teams to maximize value. *9.* Evaluate the relative attractiveness of alternative exits for a portfolio firm and formulate exit preparation strategies. *10.* Identify the key challenges to the current venture capital model and propose policy and strategies for enhancing the entrepreneurial finance ecosystem.
Instruction Type	Presence
Teaching and Learning Methods	The course will be delivered in a highly interactive environment using a combination of presentations, class discussions and simulations. The readings will give you a broad as well as a deep picture on all aspects of entrepreneurial finance ecosystem. Course slides will raise several questions for in-class debates. There is no textbook. We will use our brand new, proprietary “WHU VC Simulation Package” to run waterfall games.

Form of Examination	**Overall Grading:** • Individual essay: 30% • Group assignment: 20% • Group project: 40% • Class participation: 10% For details please see Syllabus!
Literature	Please also see Syllabus for details: • De Clerq, D., Fried, V. H. Lehtonen, O. & Sapienza, H. J. 2006. An Entrepreneur's Guide to the Venture Capital Galaxy • Diane, M. 2013. 6 Myths About Venture Capitalists, Harvard Business Review • European Investment Fund (EIF) 2017. The European Venture Capital Landscape: an EIF Perspective • Ewens, M. and Rhodes-Kropf, M. 2015. Is a VC Partnership Greater than the Sum of Its Partners?, Journal of Finance • Petty, J.S. & Gruber, M. 2011. In Pursuit of the Real Deal: A Longitudinal Study of VC Decision Making, Journal of Business Venturing • Friend, T. 18/5/2015. Tomorrow's Advance Man. The New Yorker Magazine. • Malhotra, D. 2013. How to Negotiate with VCs, Harvard Business Review • WHU Lecture Note: Convertible Debt • WHU Lecture Note: Waterfall Distribution • Davila, A., Foster, G. & Ning, J. 2010. Building Sustainable High-Growth Start-up Companies, California Management Review

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

WHU Otto Beisheim School of Management

MSc-SCM-612 - Carbon Analytics

Code:	MSc-SCM-612
Course Title:	Carbon Analytics
Program:	MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Arnd Huchzermeier

Participation Prerequisites	
Course Content	• Introduction to Carbon Analytics • Scope 1, 2 and 3 Emissions • Analytical challenges in Carbon Accounting and sustainability reporting • Carbon accounting systems and procedures • Case studies in Carbon Analytics • Emerging trends in Carbon Analytics
Intended Learning Outcomes and Competencies	
Instruction Type	• Lectures • Group project • (Assignments)
Teaching and Learning Methods	Written examination, written work and Presentation / Seminar Papers
Form of Examination	
Literature	

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

WHU
Otto Beisheim School of Management

MSc-EAI-615 - E-commerce Operations Management

Code:	MSc-EAI-615
Course Title:	E-commerce Operations Management
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Arnd Huchzermeier

Participation Prerequisites	A basic understanding of statistics—probability theory, regression analysis etc.—and operations management—process flow and lean management, inventory management under demand risk (EOQ and Newsboy model), quality management, continuous improvement, operations strategy formation and deployment—is assumed. These concepts can be studied, among others, in the textbook of Cachon, G.P./Terwiesch, C. (2019): Matching Supply with Demand: An Introduction to Operations Management, Fourth Edition, McGraw Hill.

Course Content	Course description This course provides students with current show cases how leading e-commerce startups and companies advance their operational performance through digitalization. Target group Students interested in designing, managing and advancing digitally enabled supply chains. Target In today's business world, technology increasingly plays a major role in determining a company's future competitiveness. In this course, we focus on six main topics that are critical for the success of omni-channel players: i) employee engagement and leadership, ii) managing the forward chain, iii) promotional and judgmental demand forecasting, iv) demand generation through churn prevention and customer reactivation, v) managing the backward chain and vi) customer online interaction to curtail mindless shopping. Theories Newsvendor Problem, Risk Pooling, Optimization, Heuristics, Competitive Pricing, Machine Learning, Business / Retail Analytics, Design of Experiments.
Intended Learning Outcomes and Competencies	
Instruction Type	
Teaching and Learning Methods	(Guest) lectures and case discussions.
Form of Examination	Open book, multiple choice exam(40%), group case studies (30%),class participation (20%) and online simulation game (10%)

Literature	Required Readings Bulk pack including case studies. • Kohli, Sajal; Becca Coggins; Praveen Adhi; Steven Begley; Manik Aryapadi; Hannah Yankelevich (2021): Retail speaks – Seven Imperatives for the Industry.McKinsey & Company, and https://www.mckinsey.com/~/media/McKinsey/Industries/Retail/Our%20Insights/retail%20speaks%20seven%20imperatives%20for%20the%20industry/retail-speaks-full-report.pdf Recommended Readings • Cachon, Gerard P.; Christian Terwiesch (2019):Matching Supply with Demand: An Introduction to Operations Management, 4th Edition, McGraw Hill • Cachon, Gerard P.; Christian Terwiesch (2019):Operations Management, 2nd Edition, McGraw Hill • Chopra, Sunil; Peter Meindl (2016):Supply Chain Management: Strategy, Planning and Operations, Pearson • Schniederjans, Marc J.; Qing Cao; Jason H. Triche (2014):E-commerce Operations Management, Second Edition, World Scientific

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-FIN-613 - Financial Technologies

Code:	MSc-FIN-613
Course Title:	Financial Technologies
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Besim Burcin Yurtoglu

Participation Prerequisites	No formal reqirements. However, a basic understanding of money and banking and affinity with IT topics is advantageous.

Course Content	The financial industry had until recently a very high degree of concentration. This situation is rapidly changing as disruptive technologies enable new forms transacting, reduce the barriers to entry and intensify the competition among financial service providers. New and disruptive technologies are leading to major changes in the realms of payments, lending and borrowing, insurance, wealth management, venture capital. To understand these massive changes, we need to have a good understanding of technological innovations as well as of the economics of the financial sector. This course studies technology-driven innovations in the financial sector; highlighting the potential role and applications of blockchain, cryptocurrencies, and artificial intelligence in various stages of the financial services industry. Such innovations can potentially disrupt existing industry structures, reshape their boundaries, and change the way firms create and deliver products and services. At the same time, they create privacy, regulatory and law-enforcement challenges. The framework of the course combines three major building blocks: (1) Two-sided Markets / Platform Businesses: The rise of FinTechs cannot be solely understood by focusing on advances in technology. Equally important is the structure of many financial markets. In the words of Rochet & Tirole "...many if not most markets with network externalities are two-sided. To succeed, platforms in industries such as software, portals and media, payment systems and the Internet, must “get both sides of the market on board.” Accordingly, platforms devote much attention to their business model, that is, to how they court each side while making money overall." (2) The Role of Technology: We focus broadly on Blockchain and AI, but treat these terms as broad categories within which many finer classifications are useful (such as smart contracts, machine learning and deep learning methods) (3) Regulation: The emergence of players that offer digitally enabled financial services poses both opportunities and risks at many levels of analysis. Changes in regulatory frameworks will shape various outcomes and are therefore a necessary ingredient for a sound understanding of upcoming developments in this area. We study these issues in a format, which combines lectures, case studies, and expert opinions and state-of-the-art practices from the industry.
Intended Learning Outcomes and Competencies	Students will be able to understand the global FinTech landscape and describe the role of banks, financial service providers and the customers in shaping and responding to innovation and disruption. In doing so, the students will focus on the blockchain technology and analyze the challenges and opportunities offered by its potential applications. The students will also be able to effectively communicate their analysis by being able to present, discuss, and defend their ideas using appropriate terminology.
Instruction Type	We study these issues in a format, which combines lectures, project work/case studies, and experts from the industry/guest speakers.

Teaching and Learning Methods	We study these issues in a format, which combines lectures, project work/case studies, and experts from the industry/guest speakers.
Form of Examination	Grading is based on the following components: - Group Work: 40% - Final Exam: 60%
Literature	***1.*** **Introduction: Financial Systems, Money, and Blockchain** Böhme, Rainer, Nicolas Christin, Benjamin Edelman and Tyler Moore, 2015, Bitcoin: Economics, Technology, and Governance,Journal of Economic Perspectives29(2): pp. 213-238. Carnell, Richard Scott and Macey, Jonathan R. and Miller, Geoffrey P., Banks: Fundamental Concepts (October 2016). Carnell, Macey & Miller: The Law of Banking and Financial Institutions (Wolters Kluwer 2017 Forthcoming); NYU Law and Economics Research Paper No. 16-37. Friedman, Milton and Anna J. Schwartz, 1986, Has Government any Role in Money?Journal of Monetary Economics17(1): pp. 37-62. McLeay, Michael, Amar Radia, and Ryland Thomas, 2014, Money Creation in the Modern Economy,Bank of England Quarterly BulletinQ1, pp. 14–27. The Economist, 2015, The Great Chain of Being Sure About Things. The Economist, 2017, Disrupting the Trust Business. Varian, Hal, 2004, Why Is That Dollar Bill in Your Pocket Worth Anything?New York Times(January 15, 2004). ***2.*** **Emergence of Blockchains and Cryptocurrencies** Haber, Stuart W. and Scott Stornetta, 1991, How to Time-Stamp a Digital Document,Journal of Cryptology3(2): pp 99–111. Harvey, Campbell R., 2016, Cryptofinance. Lamport, Leslie, Robert Shostak, and Marshall Pease. 1982, The Byzantine Generals Problem,ACM Transactions on Programming Languages and Systems4(3): pp. 382-401. Nakamoto, Satoshi, 2008, Bitcoin: A Peer-to-Peer Electronic Cash System. Narayanan et al, Preface pp 3-22. ***3.*** **How do Blockchains Work?**

Antonopoulos, Selected parts of Chapter 7 and 8.

Narayanan et al, Selected parts of Chapter 1, 2, and 3.

Turing, Alan Mathison, 1937, On Computable Numbers, with an Application to the Entscheidungsproblem,Proceedings of the London Mathematical Society2: pp. 230–265.

***4.* Smart Contracts, Ethereum, and the DAO**

Buterin, Vitalik, 2014, Ethereum: A Next-generation Smart Contract and Decentralized Application Platform.

Cong, Lin William and He, Zhiguo, 2017, Blockchain Disruption and Smart Contracts.

Khapko, Mariana and Zoican, Marius, 2017, Smart Settlement, Rotman School of Management Working Paper No. 2881331.

Szabo, Nick, 1997, Formalizing and Securing Relationships on Public Networks, **First Monday** , [S.l.], Sep. 1997. ISSN 13960466.

Szabo, Nick, 1998, Secure Property Titles with Owner Authority.

***5.* Blockchains, Capital Markets, and FinTechs**

Darolles, S., 2016, The Rise of FinTechs and their Regulation,Financial Stability Review20, pp. 85-92.

Goldman Sachs Equity Research, 2016,Profiles in Innovation: Blockchain.

Philippon, Thomas, 2017, The FinTech Opportunity, BIS Working Papers, No 655.

Yermack, David, 2017, Corporate Governance and Blockchains,Review of Finance21(1): pp. 7–31.

Hinkes, Andrew M., 2016, A Legal Analysis of the DAO Exploit and Possible Investor Rights, Bitcoin Magazine.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-QUANT-506 - Managing Data Science

Code:	MSc-QUANT-506
Course Title:	Managing Data Science
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Tobias Keller

Participation Prerequisites	No special requirements

Course Content	Objectives and focus of the course
	“The world’s most valuable resource is no longer oil, but data” – The Economist, May 2017 Data has the potential to create immense business value, to disrupt existing, and to create new business models. With the recent advances in artificial intelligence (AI), the competitive pressure to harness the potential of the companies’ data has further increased. However, it is not enough to hire data scientists and give them some data. Data science, including the development of artificial intelligence systems, is a team sport that needs to be managed. Despite being enabled by technology, data science is a business-centric discipline – managers therefore must understand and think like data scientists and implement the necessary organizational changes in order to facilitate a data-driven business model. This lecture aims at enabling students to build and lead data science teams, to understand and deal with typical risks throughout the lifecycle of data science projects and the development of AI systems. Throughout the whole lecture, examples from “real life” AI & data science projects will be used to illustrate the presented concepts and methods. Understanding the essentials of AI & data science methods including statistics and machine learning will enable the students to ask the right questions and what (not) to expect from AI & data science. Finally, the students will learn about the technical and organizational requirements for utilizing the full business potential of AI & data science. **Structure of the course** 1. Business Potential and Lifecycle of Artificial Intelligence (AI) & Data Science • Artificial Intelligence & (Big) Data Science for Competitive Advantage • Defining Artificial Intelligence & Data Science 2. Organizational Challenges in Artificial Intelligence & Data Science – Part 1 • Why AI & Data Science pose specific challenges • The Data Science Lifecycle • Building and Managing AI & Data Science Teams 3. AI & Data Science Methods - Essentials and Practical Applications • Statistical Analysis and Modeling • Machine Learning • Evaluating AI & Data Science Results – What Questions to Ask 4. Technical Foundations of Artificial Intelligence & Data Science • Software Toolbox and Technical Infrastructure for AI & (Big) Data Science • Deploying and Managing Analytical Models and AI systems 5. Organizational Challenges in Artificial Intelligence & Data Science – Part 1

	• Integrating AI & Data Science (Teams) in the Organization • Data Governance, Data Quality, and Privacy
Intended Learning Outcomes and Competencies	
Instruction Type	Lecture.
Teaching and Learning Methods	Lectures, exercises, self-study
Form of Examination	Grading is based on the following components: 100% Exam
Literature	There will be literature recommendations provided at the beginning of the course.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

WHU Otto Beisheim School of Management

MSc-EAI-622 - Managing The Family Business

Code:	MSc-EAI-622
Course Title:	Managing The Family Business
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Julian Enrik Schenkenhofer

Participation Prerequisites	**No course prerequisites required for participation.** The course is designed for both, students that have and students that have not taken the course “Value Creation in Family Firms” in the fall semester.
Course Content	Family firms are the dominant form of organization around the world. Despite their prevalence, they come along with many challenges, but also strengths. This course will provide a deep dive into certain family firm challenges including family firm conflicts, succession, governance, and transformation. The goal of this interactive course is to a) familiarize oneself with current knowledge on family firms through reading and presenting relevant literature and b) to apply this knowledge to family firm case studies. The first two lectures will serve to teach basic knowledge about family firms (these two lectures are optional for prior participants of the Value Creation in Family Firms course). The remaining lectures will combine literature presentations and discussions on family firm literature as well as case work on (real) family firm cases.
Intended Learning Outcomes and Competencies	Upon completion of the course, you will be able to: Know about the particularities of family firms Know about relevant family firm literature Apply knowledge on family firms to real-life cases
Instruction Type	Presence
Teaching and Learning Methods	**Course Structure:** • ***1* input and 1 discussion session** Topic: “Family firm basics” • ***2* “coaching” sessions** Focus: How to read and understand literature and answer family firm cases • **Remaining sessions** Content: Literature discussion and case study discussion

Form of Examination	<u>Grading is based on the following components:</u> 1. Presentation of family firm research in class (40%) 2. Participation in class discussions (10%) 3. Case studies (50%)
Literature	Literature will be provided in class

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-FIN-601 - Mergers & Acquisitions

Code:	MSc-FIN-601
Course Title:	Mergers & Acquisitions
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Nihat Aktas

Participation Prerequisites	• sound knowledge in the English language • knowledge in the area of the relevant mathematical and statistical methods • knowledge in corporate strategy and corporate decision making • knowledge of financial markets, corporate finance and in economics
Course Content	The course aims at providing participants general knowledge on M&As from a corporate finance perspective. After successful completion of the course, the course participants will have a solid understanding of the most fundamental issues and concepts in the M&A field. Without being exhaustive, the following topics will be covered during the course: wealth effects associated with M&As, motivations of companies to enter the M&A market, role and value added of investment banks in the takeover process, choice of the sale process, business valuation, merger arbitrage, role of CEOs in large transactions, and further issues related to regulation and social utility associated with the existence of an active M&A market.
Intended Learning Outcomes and Competencies	Students are expected to take a very active role in their learning. The course relies on interactive lessons, and includes transmitting problem-centered information, collaborative learning in small groups, case studies, and testimony from practitioners.
Instruction Type	
Teaching and Learning Methods	Students are expected to take a very active role in their learning. The course relies on interactive lessons, and includes transmitting problem-centered information, collaborative learning in small groups, case studies, and testimony from practitioners.
Form of Examination	• Written Examination • Presentation/Seminar Papers - 40% of the final grade are based on a group project - 60% of the final grade are based on the result in the exam

Literature	• DePamphilis Donald M., 2014. Mergers, acquisitions, and other restructuring activities. Elsevier Academic Press, 7th Edition. • Berk, Jonathan, and Peter DeMarzo, 2014. Corporate finance, Pearson International. • Damodaran, Aswath, 2012. Investment valuation: Tools and techniques for determining the value of any asset. Wiley Finance, 3rd edition. • Stowell, David, P., 2013. Investment banks, hedge funds, and private equity. Elsevier Academic Press. Second edition

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MGMT-510 - Negotiations

Code:	MSc-MGMT-510
Course Title:	Negotiations
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Ayse Karaevli Yurtoglu

Participation Prerequisites	**no prior negotiation course**

Course Content	Negotiation is the art and science of securing agreements between two or more interdependent parties who seek to maximize their outcomes. It is a key leadership skill. While leaders need analytical skills to develop optimal solutions, they also need negotiation skills to win acceptance and implementation of these solutions. We negotiate often, but many of us know very little about the strategy and psychology of effective negotiations. In this module, students will have the opportunity to evaluate their existing approach to negotiations, learn new strategies, and learn how to apply these strategies to the wide variety of negotiations they will encounter across their career. The module is designed for students in all managerial and entrepreneurial careers. The module has six major parts, adding more complexity as we proceed in the module: *(1)* Single-Issue, Two-Party Negotiations *(2)* Multiple Issues, Two-Party Negotiations *(3)* Multi-Party Negotiations *(4)* Conflict Resolution *(5)* Cross-Cultural Negotiations

Intended Learning Outcomes and Competencies	*(1)* Gain a broad intellectual understanding of central concepts in negotiations to understand the structure and dynamics of negotiations in different contexts *(2)* Learn to develop strategic plans and improve ability to lead the negotiation process to formulate and execute win-win agreements *(3)* Handle complexities, such as dealing with multiple issues, parties, principal-agent relationships, and ethical dilemmas in negotiations *(4)* Build confidence in negotiation skills by understanding one's own and the other parties' strengths, weaknesses, and biases *(5)* Learn how to resolve conflicts effectively and create value out of them *(6)* Negotiate effectively across cultural boundaries
Instruction Type	in-person
Teaching and Learning Methods	The best way to learn negotiation skills is to negotiate in a safe environment that provides insight, feedback, opportunity for reflection and risk taking, and where careful analysis is required. Therefore, this course has been designed to foster learning principally by **concrete experiences - by doing**, trying things during negotiations while thinking about the concepts we will read about and discuss in lectures. The module will be largely **experiential,** enabling students to develop their skills by participating in negotiation role-plays and integrating their experiences with the principles presented in the assigned readings and module discussions. The negotiation role-plays will treat a variety of situations (e.g., company acquisition, employment and salary, multi-party coalition building, and resolving conflicts between business partners) and will provide students with an opportunity to attempt strategies and tactics in a low-risk environment and learn about themselves and build their confidence.
Form of Examination	Oral Participation (15%) Presentation (40%) Written Paper (45%)

Literature	Required Readings: Since class time is limited and we will predominantly focus on your experiences and core issues, readings will be used to prepare students for the negotiation role-plays, substantiate their intellectual learning of negotiation concepts, and provide them with variety of examples from international contexts. R. Lewicki, D. M. Saunders, B. Barry. Essentials of Negotiation (8th Editions) R. Fisher & W. Ury (and B. Patton as Editor of the Revised Edition) (4th Edition), Getting to Yes: Negotiating Agreement Without Giving In, New York, NY: Penguin Books J.K. Sebenius. "The Hidden Challenge of Cross-Border Negotiations", Harvard Business Review, March 2002.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MKT-610 - Product and Shopper Marketing

Code:	MSc-MKT-610
Course Title:	Product and Shopper Marketing
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Tim Oliver Brexendorf

Participation Prerequisites	Basic Marketing Knowledge, BSc module "Consumer goods marketing" (Brand Management/Shopper & Trade Marketing)(not obligatory)
Course Content	A - Introduction and relevance of product and shopper marketing B - Product packaging and shopper marketing C - Product variety and product line management D - Workshop, case and get-together day with Procter & Gamble at WHU E - Product management topic - Group presentations F - Product management challenge - Group presentations G - Product performance measurement
Intended Learning Outcomes and Competencies	Theories concerning product managers' interfaces and too. The participants should ... ... know about the principles and basics of product & shopper marketing. ... understand how consumers evaluate products. ... know how to leverage consumer insights into actionable product and shopper marketing recommendations. ... know how to formulate strategies to build, leverage, and defend products. ... know how to develop successful (smart) products and avoid product failures. ... understand how to create compelling product packages and product lines/assortments and how to succeed at the POS. ... know how to evaluate product performance.
Instruction Type	Presence

Teaching and Learning Methods	Lecture, guest lecture, student presentations, case workshop and get-together day with Procter & Gamble at WHU The course consists of six sessions of about three hours each. In addition to class lectures, guest lectures and in-class discussions are included. With every group, an individual discussion of the status quo of the presentation takes place.
Form of Examination	The grading is based on *1)* one individual take-home assignment (50%) *2)* one group Product Management Topic presentation (35%) *3)* one group Product Management Challenge presentation (15%)
Literature	Recommended literature will be uploaded on Moodle.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-FIN-622 - Psychology & Economics: Applications in Leadership, Entrepreneurship, and Finance

Code:	MSc-FIN-622
Course Title:	Psychology & Economics: Applications in Leadership, Entrepreneurship, and Finance
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Lutz Johanning

Participation Prerequisites	There are no formal prerequisites. Knowledge of basic statistics/econometrics (in particular, regression analysis), data analysis, and finance and economics are a plus.
Course Content	In Psychology and Economics, we discuss the relevance of emotions, culture and experiences for economic decision-making. · We start our discussion by revisiting neoclassical and behavioral economics and introducing the concept of emotions and emotional finance. · Psychological theories, especially development psychology, are fundamental building blocks for understanding human perception and decision-making. We give a comprehensive overview of the most important theories. · In the following, we study how psychological traits impact financial and economic decision-making. Specifically, we investigate the relevance of personality, identity, trust, and leadership on the personal level as well as culture, gender, religiosity, socialism and populism on the group level. · Finally, we study herding in capital markets and with that loss aversion, risk aversion, and risk perception. We analyze how these concepts are related to emotions and might result in exuberance, panics, and financial crises. The lectures combine presentations, including by students, and, with a particular emphasis,group discussions on the aforementioned timely topics like trust, gender, and populism. As an essential part of the course, students engage with academic literature at the intersection of psychology and economics. In small groups, they choose between working on either a paper replication, or a literature review. For both,

paper replication and literature review, we provide a list of papers students can select from. Each group does two presentations: an initial one on the chosen paper's methodology, results, and contribution, as well as a final one on either the paper replication, or the literature review.

The paper replication is based on the German Socio-Economic Panel (SOEP), which is a comprehensive panel dataset of German households. The SOEP contains in-depth information on individuals' attitudes, values, and personalities. The data are enriched by respondents' biographical background and financial balance sheet. Using the SOEP, students can replicate one key result of the chosen paper. In addition, we ask students to come up with (and possibly implement) an idea to extend the result at hand or apply main insights to current societal debates. Any codes (in Stata, R, or Python) or Excel sheets students create in the process have to be submitted at the day of the final presentation.

For the literature review, the chosen paper serves as a point of departure. Students then need to identify related and relevant work to provide a summary and discussion of the current state of the literature.

In addition, we ask students to make an individual presentation reflecting on a key personal experience and its long-run effects. Course concepts serve as a theoretical underpinning. For example, as single children, students might have been shaped by parents' indulging behavior. Students might identify that this is why Riemann's hysterical form of fear suits their character, and how this affects their decision-making today. Students present their results only to the professors (not to the entire audience).

1. Introduction

1. Neoclassical and Behavioral Economics Revisited

2. Introduction to Psychology and Economics

3. Introduction to Group Assignment

2. Literature Review on Culture, Experiences, and Economics

1. Student Presentations of Paper Summary

4. Psychological Foundation

	1. Psychological Theories *2.* Freud's Psychoanalysis and Mass Psychology *3.* Jung's Archetypes and the Collective Unconscious ***5.*** **Introduction to Student Work** *1.* Introduction to Empirical Part and Literature Review of Group Assignment *2.* Introduction to Individual Presentation ***6.*** **Personalities, Identity, Trust, and Leadership** *1.* Jung's Psychological Types, The Big Five, Riemann's Personalities, and Neurobiological Personality Model *2.* Trust, Identity, and Leadership ***7.*** **Culture, Religiosity, Populism, Socialism, and Gender** *1.* Culture, Religiosity and Populism *2.* Socialism and Gender *3.* Clash of Civilizations and Why nations fail? ***8.*** **Guest lecture:** tba ***9.*** **Herding and Hording at Capital Markets** *1.* Loss Aversion, Risk Aversion, and Risk Perception *2.* Exuberance, Panics, Crises, and Financial Regulation ***10.*** **Student Presentations of Empirical Work or Literature Review**
Intended Learning Outcomes and Competencies	Students will have improved competencies in understanding personal and organizational perception and decision-making. Students will have an improved ability to understand top-tier academic research in finance and economics, in the subfield of cultural economics in particular. Students will have sharpened their empirical skillset. Students will have obtained foundations in psycholanalysis.
Instruction Type	

Teaching and Learning Methods	Teaching method is lectures. Within these, there are exercises, as well as discussions. Through independent project work, students focus on certain aspects of the course.
Form of Examination	individual presentation (40%) group assignment (40%) class participation (20%)
Literature	• Lucy Ackert and Richard Deaves (2009): Behavioral Finance: Psychology, Decision-Making, and Markets (chapter 7), South-Western College Pub. • Stefan Betz (2016): Uncovering the Power of the Unconscious: In-Depth Lessons from Modern Psychoanalysis for Management (chapter 2), WHU Master Thesis. • Robert Shiller (2015, 3. Edition): Irrational Exuberance (part three on psychological factors), Princeton University Press. • David Tuckett (2011): Minding the Markets: An Emotional Finance View of Financial Instability • Additional literature will be announced during the lectures

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MGMT-615 - Responsible Leadership

Code:	MSc-MGMT-615
Course Title:	Responsible Leadership
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Miriam Müthel

Participation Prerequisites	
Course Content	The environmental, economic, and social crises of recent times revealed the threat of so-called societal grand challenges, such as climate change, to our economic and social well-being. At the same time, the breadth and depth of these crises raised people's expectations about the role of business in solving societal grand challenges, resulting in a call for responsible leadership. It is thus important for future leaders to understand societal grand challenges, to know how to tackle them, and to do so with passion and confidence – jointly with others. Responsible leaders are aware of and understand societal grand challenges and their root causes. They constantly strive to address these grand challenges, using their resources to tackle them through innovation, collaboration, and entrepreneurial thinking. Furthermore, responsible leaders obtain specific leadership skills. These include systems thinking, stakeholder relations, change and innovation, self-awareness, ethics, and values. In this course, you will explore key leadership skills through three integrative assignments. Working in a team, you will begin by analyzing a grand societal challenge and presenting a conceptual model that maps out its root causes and systemic effects. Building on this foundation, you will then develop an individual case example that showcases practical responses to the challenge, drawing on academic literature or real-world practices. To bring it all together, you will step into the role of a decision-maker in a business simulation. Your task is to transform a traditional business into a sustainable operation while balancing competing interests, navigating complexity, and putting your leadership skills into action. Please note that the **number of participants is limited to 30 students**. Places will be distributed on a first-come-first-served basis. In case more than 30 students sign up, we will inform those who are over the limit and therefore cannot participate.

Intended Learning Outcomes and Competencies	**Content-wise, students will learn to:** • Grasp the scope and complexity of societal grand challenges • Analyze the root causes and stakeholder dynamics underlying these challenges • Apply theoretical frameworks to develop solution-oriented approaches • Identify effective leadership practices for managing sustainable transformation • Reflect on their own role and responsibility as future leaders **Methodology-wise, students will learn to:** • Conduct targeted literature reviews to build research-based arguments • Analyze real-world examples to inform case-solutions • Derive actionable managerial implications from research and simulation outcomes
Instruction Type	For each deliverable, students will be taught – step-by-step – what is expected and how to accomplish the given targets. Thereby, we prepare students conceptually, but also help them manage the process. For this aim, we provide: 1. A precise definition of expectations for grading the respective deliverables so that students know exactly what to do. 2. Checklists to help students manage the respective deliverables and deadlines. 3. Hands-on practical advice to support you regarding deliverables. In addition, during the entire class, students will also be mentored by the teaching assistants. We will thus smoothly guide you through the learning process and enable you to perform in class. **This is an in-person course. Attendance is mandatory, as the course is interactive and requires teamwork.**

Teaching and Learning Methods	The course adopts an interactive and applied teaching format, combining theoretical input with structured group and individual work. Students will be organized into groups and assigned to a societal grand challenge. In the **kick-off session**, students receive an overview of the course structure, deliverables, and grading, along with a brief introduction to key theoretical concepts. Between sessions, groups are expected to independently advance their presentation beyond scheduled class time. To support this process, dedicated feedback sessions with the teaching assistant are offered, allowing groups to discuss their ideas and critically refine their presentation. **Seminar Day 1** focuses on the understanding of societal grand challenges and their root causes and consequences in detail. The focus of the session will be the group presentations, where each team presents a grand societal challenge. The session includes additional theoretical input and guidance for the next assignment: an individual solution-based case. Between sessions, students work independently on this task beyond scheduled class time and submit their materials ahead of the final session. **Seminar Day 2** focuses on the solutions to societal grand challenges and the managerial role of future leaders. The session will consist of two parts. **Part 1** begins with a structured discussion of the individual submissions, synthesizing key insights and managerial implications. **In part 2**, students apply their learning in a business simulation, managing a hotel transformation toward sustainability. Throughout the course, students are actively involved in shaping the sessions. While instructors provide theoretical framing and conceptual integration, the learning experience is driven by student presentations, peer feedback, and practical application.

Form of Examination	Student performance will be assessed through a combination of group and individual deliverables linked to the two seminar days: **Seminar Day 1 (20%)** • Group Presentation on a Societal Grand Challenge Students will present in teams, with 80% of the grade based on individual contributions and 20% on overall team performance. **Seminar Day 2 (80%)** • Individual Case Solution (70%) Students submit a written analysis proposing solutions to a societal challenge, demonstrating theoretical and practical understanding. • Individual Business Simulation (30%) Students apply course insights in a business simulation exercise.
Literature	**Scientific Introductory Literature** • Siegel, D. S. (2014). Responsible leadership [Editorial]. The Academy of Management Perspectives, 28(3), 221–223.https://doi.org/10.5465/amp.2014.0081 • Waldman, D. A., Siegel, D. S., & Stahl, G. K. (2020). Defining the Socially Responsible Leader: Revisiting Issues in Responsible Leadership.Journal of Leadership & Organizational Studies,27(1), 5 20. https://doi.org/10.1177/154805181987220 **Practitioner Introductory Literature** • Shaping the Sustainable Organization Report by Accenture in Collaboration with the World Economic Forum • Responsible Leadership for a Sustainable and Equitable World Report by the Global Shapers Community and the Forum of Young Global Leaders in Collaboration with Accenture

Workload

Self-Study:	120
Contact Time:	30
Total Workload:	150

MSc-EAI-616 - Strategic Technology and Innovation Management

Code:	MSc-EAI-616
Course Title:	Strategic Technology and Innovation Management
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Holger Ernst

Participation Prerequisites	This class complements other classes in the Master of Science program such as Strategic Intellectual Capital Management, New Product Development and Corporate Entrepreneurship. Some fundamental knowledge on innovation management is required in this class. Some basic and relevant innovation management content is reviewed and discussed in sessions 1 and 2.
Course Content	In detail, the course will cover the following aspects: technology, innovation and competitive advantage, disruptive technologies, linking business and R&D/innovation strategy, defining and implementing R&D and innovation strategies, technology and innovation portfolio management, R&D investment decisions, assessing and measuring R&D productivity, inbound and outbound open innovation strategies, strategic R&D alliances, technology-driven Mergers and Acquisitions (M&A), external technology commercialization strategies, globalizing innovation, management of international R&D locations and global R&D networks, management of basic research (# development) as a major engine of breakthrough innovations, frugal innovations, reverse innovation, patent analytics and key success factors of technology-based innovations. The course will also cover new and important technology trends such as Artificial Intelligence (AI), Big Data and Analytics and their use for technology and innovation management.
Intended Learning Outcomes and Competencies	The main objective of this course is to get across the most critical aspects of the strategic management of technology-based innovations and firms at a sufficient level of depth to the students. Students will learn and apply essential management concepts and tools that help them to increase the strategic and financial returns from investments in technology-based innovations. The course strongly emphasizes what it takes to successfully convert investments in technology-based innovations into long-lasting competitive advantage and superior corporate performance. The key learnings from this course apply to all major industries. The course has a strong focus on applying the learned technology and innovation management tools and concepts into practice.
Instruction Type	Presence
Teaching and Learning Methods	Lecture, Case Studies
Form of Examination	Case studies (50 %), Class participation (10 %), Final Exam (40 %)

Literature	In the following, you can find some exemplary course readings (the final course readings will be communicated in the course syllabus): Ernst, H. (2003): Patent information for strategic technology management, World Patent Information, Vol. 25 (3): pp. 233-242. Bower, J. L., Christensen, C. M. (1995): Disruptive technologies: Catching the wave, Harvard Business Review, Vol. 73 (1), pp. 43-53. Fountaine, T., McCarthy, B., Saleh, T. (2019): Building the AI-Powered Organization. HBR (July-August 2019). Iansiti, M., Lakhani, K. (2020): Competing in the Age of AI. HBR (January-February 2020). Ernst, H., Omland, N. (2011): The Patent Asset Index – A New Approach to Benchmark Patent Portfolios, World Patent Information, Vol. 33: pp. 34-41. Weiblen, T., Chesbrough, H. W. (2015): Engaging with startups to enhance corporate innovation. California Management Review, 57(2), 66-90. (skim) Dubiel, A., & Ernst, H. (2012a): Industrial R&D Centers in Emerging Markets: Motivations, Barriers and Success Factors. In T. Pedersen, L. Bals, & P. Ø. Jensen (Eds.), The Offshoring Challenge: Strategic Design and Innovation for Tomorrow's Organization. Springer: Heidelberg, pp. 191-209. (skim) Dubiel, A., & Ernst, H. (2012b): Success Factors of New Product Development for Emerging Markets. In K. Kahn, S. E. Kay, G. Gibson, & S. Urban (Eds.), PDMA Handbook of New Product Development, 3rd Edition, Hoboken, NJ: John Wiley & Sons, pp. 100-114. (skim)

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MKT-613 - Sustainability and Marketing

Code:	MSc-MKT-613
Course Title:	Sustainability and Marketing
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Anna-Karina Schmitz

Participation Prerequisites	None Note: This course is highly interactive and active participation in discussions is required. The course includes a real-life case study and a company visit at Henkel in Düsseldorf (if regulations allow), participation in the entire day is mandatory.
Course Content	This course offers students a comprehensive exploration of sustainability from a business perspective, emphasizing how marketing plays a crucial role in driving sustainable business practices. The course is designed to help students understand how companies can balance profitability with sustainability, transforming the often-perceived trade-off between the two into a powerful synergy that benefits both the business and society. It introduces students to the evolving challenges businesses face in a world that is increasingly focused on environmental, social, and economic sustainability. The course is structured around four central questions. First, students will explore "What are we talking about?" by learning the concept of the triple bottom line: People, Planet, and Profit. They will also discuss the trade-offs that arise in sustainability and how adopting a growth mindset can help businesses manage complex, or "wicked," problems. Next, the course examines "What’s in it for business?" by uncovering the economic potential of sustainability and understanding the business cases for adopting sustainable practices. Students will gain insight into the tangible benefits sustainability can offer to businesses in terms of competitive advantage and long-term viability. The third question, "How to get there?" focuses on guiding students through sustainability strategies, sustainable business models, and the importance of value creation. The final question, "Why is marketing essential?" dives into the role of marketing in delivering and communicating sustainability. It covers consumer behavior, the sustainability-driven marketing mix, and effective sustainability communication strategies. This course places special emphasis on the integration of marketing and sustainability, aiming to equip students with the tools and knowledge to lead businesses toward a sustainable future.

Intended Learning Outcomes and Competencies	Students participating in the course will learn that 1. Trade-offs are an integral part of sustainability management. 2. Continued growth in its previous form is unrealistic due to environmental and resource constraints. 3. Sustainability is a complex task that requires smart management and thinking ahead. 4. Sustainability comes with a huge economic potential. 5. There is always a business case for sustainability, if there isn‘t one yet, there will be soon. 6. Companies with a clear purpose are more successful as profit is the result of value creation. 7. There are three basic sustainability strategies: eco-efficiency, consistency and sufficiency. 8. Sustainable business models create monetary and nonmonetary value for stakeholders. 9. Marketing delivers and extracts value from sustainable business. 10. Communication is key to success or failure of resolving sustainability trade-offs
Instruction Type	Presence
Teaching and Learning Methods	Lectures, in-class discussions, guest lectures, (real-life) cases, business simulation, Henkel company visit, presentations
Form of Examination	The course grade is composed as follows: • 50%: Final exam (individual grade, multiple-choice format) • 50%: Group presentation of real-life case study at Henkel in Düsseldorf (individual grade based on a group grade adjusted by peer evaluation)
Literature	No textbook, relevant literature will be announced in the lecture.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-EAI-620 - Building and Scaling Successful Companies – the WHU founder lecture

Code:	MSc-EAI-620
Course Title:	Building and Scaling Successful Companies – the WHU founder lecture
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Marco Vietor

Participation Prerequisites	No prerequisites beyond a Bachelor degree in business-related subjects needed.

Course Content	After setting up a start-up company, founders usually face a series of challenges when developing their start-ups into truly operating organisations that employ an increasing number of people and develop a rising level of complexity as they grow and diversify geographically and in terms of product offering. While there are many existing lectures on specific managerial functions in a more stable corporate context (Finance, Marketing, Sales, HR, Supply chain management, Accounting, Innovation management, etc) as well as lectures on general challenges of creating a start-up company (Idea origination, Business plan development, Proof of concept development, etc), this lecture aims at teaching insights on deeply functional topics in a rapid growth company context. The course provides content-driven lectures by WHU alumni that have experienced these challenges as a founder/CEO/COO of a successful growth company (>100 Mio EUR revenue) and that have developed solutions for these functional challenges. Students will be able to discuss real-world solutions to challenges in growth setups that are best in-class. Central coordination will ensure that lectures are building upon each other without overlaps. These lectures will provide students with in-depth knowledge on challenges in growth company setups and how to overcome them by content-driven functional solutions. Moreover, the lecture will foster students' entrepreneurial mindset as to how challenges and risks can be managed.
Intended Learning Outcomes and Competencies	
Instruction Type	Presence

Teaching and Learning Methods	**Relevant topics taught by WHU alumni lecturers:** **Block 1 (in Vallendar, Day 1 and 2):** • From Idea to Company: Roman Kirsch (lesara) • Securing Funding: Ferry Heilemann (forto, AENU) • Avoiding Pitfalls: Stephan Schubert (OnVista) • Managing the Equity Story: Marco Vietor (True Growth Capital) • Developing a Scalable Product: Marcus Stahl (Tonies) • Managing Complexities: Niklas Plath (Flaschenpost) **Block 2 (in Berlin, Day 3 and 4):** • Diversifying Product Portfolio: David Schröder (Enpal) • Managing Suppliers: Christoph Cordes (Flink, Home24) • Leveraing IT Systems: Michael Stephan (Raisin) • Attracting Customers: Jochen Ziervogel (Enpal) • Controlling & Steering Scaling Organizations: Jan Kemper (N26) • Building Partnerships: Christian Gaiser (numa, Kaufda) • Developing People & Mindset: Marco Vietor (audibene) **Berlin Experience:** The second block of the lecture series offers an opportunity to get to know the WHU Berlin Start-Up Ecosystem. We are adapting the very positive experience of the MiE for the entire MSc. Program. Lecturers will be conducted within the offices, providing a platform for direct interactions with founders. In-person participation is mandatory. The experience is designed to offer profound insights into the operational intricacies and entrepreneurial spirit that drive successful startups. We are aware that a trip to Berlin involves some cost, so we encourage you to book train tickets as early as possible. Besides offering the course, the city of Berlin, known as the hub of Europe’s most vibrant start-up scene, is always a worthwhile destination for a visit. It’s a good chance to meet with your friends and to network within this dynamic environment.

	[Speakers are subject to change.]
Form of Examination	• 90% on-campus open-book exam (printed materials only) • 10% pre-quizzes
Literature	There will be literature recommendations provided at the beginning of the course.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total workload..h:	150

MSc-EAI-624 - Data Driven Entrepreneurship

Code:	MSc-EAI-624
Course Title:	Data Driven Entrepreneurship
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr MSc 2025
ECTS Credits:	5
SWS:	2.5
Responsible:	Dries Faems

Participation Prerequisites	Basic knowledge of python is required. Students will be expected to self-learn the basics of python (relevant learning material will be provided).
Course Content	Data are an increasingly important source for founders and investors to make entrepreneurial decisions. Moreover, the introduction of novel digital technologies has facilitated actors to collect and analyze a wide variety of data. The core purpose of this course is to introduce students to multiple methodological approaches and tools that can help them in executing data-driven entrepreneurship. To do so, the following topics will be addressed: - Automate data cleaning and data merging - Setting up a dashboard to generate business intelligence for startups - Leveraging tools to generate competitor intelligence - Applying natural language processing algorithms to identify potential partners/competitors Throughout the different modules, we will use several software packages (e.g. Power BI, Python) to execute assignments. In the modules, we will focus on applying these software packages to execute specific group and individual assignments. For the assignments, real entrepreneurial data will be provided and analyzed.
Intended Learning Outcomes and Competencies	

Instruction Type	Präsenzstudium
Teaching and Learning Methods	Lecture, group work, in-class workshop
Form of Examination	Group assignment: 50% Individual assignment: 50%
Literature	The course will be structured as follows: Week 1: Introduction to course + Introduction to data cleaning and merging with Python Week 2: Building a dashboard using Power BI Week 3: Expanding databases with APIs Week 4: Building a knowledge graph with Neo4j Week 5: Expanding databases with generative AI Week 6: Building a chatbot with generative AI

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-ACCT-602 - Financial Statement Analysis and Valuation

Code:	MSc-ACCT-602
Course Title:	Financial Statement Analysis and Valuation
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Dennis Jullens

Participation Prerequisites	The course builds on "International Financial Reporting I" and serves as an ideal counterpart to "Financial Valuation" for students enrolled into Master in Finance program.
Course Content	Stakeholders such as managers, shareholders, bankers and analysts rely on accounting information to understand, compare and forecast financial performance. This course provides the knowledge and skills to derive and interpret important metrics in assessing, comparing and forecasting financial performance in a capital markets setting. You will then learn how to transform these forecasts into estimates of company valuation by using equity and enterprise-based valuation techniques. The course 'Financial Statement Analysis & Valuation' takes the user perspective of financial statements (investment analyst, portfolio manager and business analyst) as she interprets financial reports, analyses performance and prepares forecasts. We will start with a refresher on the role of financial reporting in market economies and the development of International Financial Reporting Standards (IFRS). Next, we will review the key accounting concepts and the primary financial statements. Focus is on interpreting financial statements to forecast key value drivers such as earnings, cash flows and returns for equity valuation. We cover the intricacies of major valuation methodologies (Discounted Cash Flow, Residual Income Model and Valuation Multiples) as well as the concept of equity and enterprise value. Several well-known, large international companies will be used as cases to illustrate the practical aspects of financial analysis and valuation in capital markets.

Intended Learning Outcomes and Competencies	**Objectives:** The objective of this course is to give student a solid understanding of the relevant disciplines of financial accounting and financial analysis for business valuation. Specific objectives and topics include: Learning areas Learning outcomes *I.* Content-related To become acquainted with financial reporting requirements and practices applied by global firms To understand the limitations of International Financial Reporting Standards (IFRS) as a global accounting language To appreciate the differences / similarities in the various valuation methodologies (Discounted Cash Flow, Residual Income Model and Valuation Multiples) *II.* Skills-related To apply the basic tools in analyzing financial statements To become savvy in analyzing, interpreting and forecasting information in financial statements. To become a knowledgeable communicator in financial reporting; the language of business To obtain exposure to, and familiarity with, the financial statements of real companies To interpret the communication between company and financial markets on financial performance, forecasts and valuation *III.* Attitude-related To critically review a firm's key performance metrics within an industry context To question financial reporting requirements and firms reporting practices To appreciate the role of judgment in financial accounting and analysis
Instruction Type	Attendance study programme

Teaching and Learning Methods	**General policies:** This course is interactive and will make use of everyday examples. Students should prepare the pre-reading prior to class and will be encouraged (and occasionally invited) to contribute to the discussion.
Form of Examination	**Workload:** • Group assignment (40%) – The group assignment will involve a comprehensive financial analysis and valuation of a listed European company of your choice; • Individual assignments (60%) – A thorough analysis of a company / industry situation
Literature	**Study materials:** • The course will involve articles, cases and excel files that will be made available. • Useful reference book is 'Valuation' by Koller, Goedhart and Wessels (6th or 7th Edition).

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-ECON-608 - Health Economics, Policy and Management

Code:	MSc-ECON-608
Course Title:	Health Economics, Policy and Management
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Christian Hagist

Participation Prerequisites	Bachelor course in Micro- and Macroeconomics
Course Content	The health care market is one of the biggest and most important markets around the world. Expenditures on health are expected to continue to grow due to several reasons, like advanced medical science, aging of the population, and a shift towards chronic diseases. Health Care is not a regular economic commodity and is widely considered a right, not a privilege. Specific features of health care can easily result in market and/or government failure. Hence, gaining a solid framework in Health Economics, Policy, and Management is beneficial for versatile careers ranging from science to business, e.g. in the health insurance, health care, or pharmaceutical market. This course will provide you with an adequate framework to understand the health care market, its industries, and the (regulating) role of the governments within this sector. Therefore, the course contains a combination of lectures, workshops, group assignments, student presentations, and cases about the following topics: • Introduction to Health Economics • The role of governments in modern health care systems • Health Insurance and Demography • Market Access Management and Economic Evaluation • Health Care Provider • Digitalization of Health Care • The Pharmaceutical Industry
Intended Learning Outcomes and Competencies	
Instruction Type	E-Learning
Teaching and Learning Methods	
Form of Examination	Written exam (50%), presentation (40%), quiz (10%)

Literature	Zweifel , P., Breyer , F., Kifmann , M. (2009), Health Economics, Springer Further Literature will be provided in moodle

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-SCM-601 - Industrial Excellence

Code:	MSc-SCM-601
Course Title:	Industrial Excellence
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Arnd Huchzermeier

Participation Prerequisites	An introductory course to Production and Service Operations Management as well as Statistics is recommended, but not required.

Course Content	**Industrial Excellence: Managing Cost Efficiency, Growth Opportunities, Supply Chain Resilience and Sustainability in Global Supply Chains** (NEW DESIGN) **I Management Quality for Global Manufacturing Competitiveness** *1.* Operations Strategy Formation and Deployment (ah) *2.* Bottom-up Operations Strategy Supportive Behavior (ah) **II Unlimited Product Individualization** 3. Variable Takt for Mixed-Model Assembly Lines / CASE STUDY: Fendt (pp) – Work equilibrium for random product customization **III Data Analytics and AI in Manufacturing and Service Operations** *4.* TUTORIAL: Machine Learning Basics (pp) *5.* Industry 5.0 (cv) – Analytics for zero defect manufacturing *6.* CASE STUDY: Vytal (np) – Analytics for circular economy in food services **IV Supply Management and Disruption Risk Mitigation** *7.* Supply Risk Hedging (ah) *8.* Supply Options (ah) *9.* CASE STUDY: Lufthansa Cargo – Dynamic pricing and information sharing (ah) **V Cost Efficiency through Outsourcing and Offshoring** *10.* TUTORIAL: Monte Carlo Simulation (ah) *11.* Supply Network Optimization (ah) *12.* Operational Hedging / CASE STUDY: Applichem – The benefit of postponement (ah) **VI Preparing for the Future: An Integrated Resilience & Sustainability Analysis Tool for Dealing with Deep Uncertainty** *13.* Bespoke Supply Chain Resilience (ah) *14.* Supply Chain Resilience & Sustainability (ah) *15.* Supply Chain Restructuring in the COVID Pandemic / Geopolitical Risk Hedging Strategies (nw)

	ah – Arnd Huchzermeier cv – Caroline Vaessen np – Niclas Popovic (Vytal, Cologne) nw – Niklas Werle pp- Philipp Pithan
Intended Learning Outcomes and Competencies	
Instruction Type	Präsenzstudium, E-Learning
Teaching and Learning Methods	Lectures, case discussions and online simulation game.
Form of Examination	Group case write-ups (40%), quizzes (30%), final exam (30%). The case studies, both tutorials and 3 lectures covered by the quizzes are exempted from the final exam.
Literature	Course package including case studies Optional: • Cachon, G.P., & Terwiesch, C. (2019): Operations Management, Second Edition, McGraw Hill • Chopra, S., & Meindl, P. (2016): Supply Chain Management: Strategy, Planning and Operations. Pearson • Lund, S., Manyika, J., Woetzel, J., Barriball, E., Krishnan, M., Alicke, K., Birshan, M., George, K., Smit, S., Swan, D., & Hutzler, K. (2020): Risk, resilience, and rebalancing in global value chains. McKinsey Global Institute

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-EAI-627 - Innovating for a sustainable future

Code:	MSc-EAI-627
Course Title:	Innovating for a sustainable future
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Priscilla Sarai Kraft

Participation Prerequisites	This course does not have formal prerequisites. However, students who have previously taken courses in Innovation Strategy, Sustainable Business, or Environmental Economics will find it easier to engage with the material and apply relevant frameworks.
Course Content	"Innovating for a Sustainable Future" positions students at the crossroads of accelerating environmental crises and disruptive trends. The class begins by mapping the end of "business as usual," using empirical risk assessments and the Planetary Boundaries framework to show why the current economic model is on a collision course with ecological limits. From there the spotlight turns to sustainable innovation: We talk about the foundations of sustainable innovation, beginning by asking what sustainable innovation is, how it differs from conventional innovation, and why it is becoming a core strategic concern across industries. Drawing on current grand challenges, we explore how sustainable innovation can either accelerate or hinder meaningful progress. From there, we examine why sustainable innovation sometimes fails in practice, uncovering typical pitfalls such as flawed incentives, shallow commitments, or systemic resistance. In the second half of the course, the focus shifts toward measurement and implementation: We explore how organizations can trace their impacts, design effective innovation partnerships, and embed sustainability into their core innovation cycles. Lastly, the course centres on the future realities that will shape 2030 and beyond. We scan global megatrends such as demographic shifts and use foresight tools to anticipate next-big-thing opportunities. Sessions combine theoretical frames, analysis tools, and real-world cases. Emphasis is placed on critical reflection, peer learning, and practice-oriented methods to help students shape future-fit, impactful innovation strategies.

Intended Learning Outcomes and Competencies	• Identify and analyze key sustainability challenges. • Understand the concept of sustainable innovation • Understand the business and innovation opportunities emerging from the sustainability transformation • Evaluate barriers and drivers of sustainable innovation within organizations and ecosystems • Apply sustainability tools and frameworks in real-world cases • Co-create SI solutions and communicate effectively for change
Instruction Type	Presence
Teaching and Learning Methods	The course consists of eight sessions, each lasting approximately three hours. In addition to class lectures, students will engage in case discussions, and in-class workshops designed to deepen their understanding of key concepts. Each session is accompanied by pre-class (case) readings that complement and enrich the in-class material. Over the duration of the course, students will work on three case studies, two of which will be graded.
Form of Examination	*1.* Quizzes and participation in class (10%) *2.* Group Case Study I. (15%) *3.* Group Case Study II. (15%) *4.* Individual Assignment: (60%)
Literature	Readings (e.g., articles, cases) will be provided on Moodle during the course.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MGMT-619 - Leadership in Professional Services

Code:	MSc-MGMT-619
Course Title:	Leadership in Professional Services
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Martin Scholich

Participation Prerequisites	No course prerequisites required for participation.

Course Content	For several decades, the **professional services market** has experienced significant growth, driven by increased demand for specialized expertise, technological advancements, and the global expansion of client businesses. This course provides a comprehensive examination of the unique dynamics within this sector, as well as the **leadership styles and concepts essential for success**. It begins by defining the market, highlighting its dependence on human capital rather than the tangible assets emphasized in other industries. Participants will investigate the distinctive business and leadership models that focus on personalized client services and billable hours, contrasting them with those of product-centered sectors. The lecturer of the course has over 30 years of experience in the consulting field, including more than 20 years spent in leadership positions. He introduces key players in the industry, such as consulting and accounting firms, and highlights their roles and market influence. A major emphasis is placed on understanding the crucial importance of **leadership and culture** in these firms, specifically the necessity for a collaborative, team-based environment that promotes innovation and client satisfaction. There is a special focus on meeting the expectations of Gen Z, who value transparency, ethical leadership, and purpose-driven workplaces. The course also examines the role of leadership in transforming service delivery and business models in response to the disruptive impact of technology, especially artificial **intelligence**. The curriculum covers strategies for **leading international teams**, acknowledging cultural diversity and communication dynamics in global work settings. Participants will learn techniques for effectively managing remote teams and leveraging cross-cultural strengths. Students will engage in discussions on the challenges of implementing change, including resistance to new practices and the complexities of maintaining client and staff trust during transitions. Through **case studies**, students gain practical insights, examining both successful and challenging scenarios within professional services firms, offering concrete examples of leadership in action.
Intended Learning Outcomes and Competencies	Upon completion of the course, you will be able to: 1. Understand the difference between the **professional services sector and other industries** 2. Gain familiarity with the **major players in the industry** 3. Gain insights about the **role of culture and leadership** for the success of professional services firms 4. Learn how to **lead international teams** 5. Critically evaluate the **role of trust** for professional services firms
Instruction Type	Presence

Teaching and Learning Methods	The course consists of five sessions, each four hours long: 1. Introduction to Leadership in the Professional Services Market 2. Leadership and Culture 3. Leadership and Transformation 4. Leading International Teams 5. Leadership Concepts in Practice Additionally, there are two five-hour sessions focused on team presentations of case studies. Each session includes pre-class readings to enrich the lectures and case discussions.
Form of Examination	Grading is based on the following components: 1. Course participation: 30 points (30%) 2. Group presentation of case study: 30 points (30%) 3. Group paper on the case study: 40 points (40%)
Literature	Mandatory readings: This course manual Recommended readings: Birkinshaw, J., Lancefield, D. (2023). How Professional Services Firms Dodged Disruption. MIT Sloan Management Review, Summer 2023, 34-39. Deloitte (2025). 2025 Gen Z and Millennial Survey. Maister, D. H. (1997). Managing the Professional Service Firm. Maister, D. H. (2021). The Trusted Advisor.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MKT-609 - Leading the High-Performance Sales Force

Code:	MSc-MKT-609
Course Title:	Leading the High-Performance Sales Force
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Ove Jensen

Participation Prerequisites	This module does not require other Master's courses in the program. It stands alone. To successfully participate, be aware that: • The course requires spreadsheet analyses. If you dislike numbers and Excel, do NOT take this course. • The course uses a highly interactive learning method (e.g., role-plays, case discussions). If you do not speak English fluently, do NOT take this course. • The course leverages discussion-based, mutual learning in the class session. If you cannot commit to attending our class sessions, do NOT take this course (Of course, you are excused if the program has scheduled overlapping class hours with another course). • Oral contributions to mutual learning are essential. If you expect to lean back and watch from the sideline, do NOT take this course. • The course requires your full attention to the comments of your classmates. I do not appreciate web browsing on laptops or phone messaging in my classroom. • The course requires a couple of study hours for each session. If you do not prepare, you can neither follow the discussions nor contribute to joint learning. This course is a high-pain, high-gain course. If you are shy of hard work, do NOT take this course.

Course Content	Part One: Steering Sales Performance (Transactional Sales Leadership) Week I: Steering by Pay · Class Session 01: Theories and Ideologies of Sales Incentives · Class Session 02: Advanced Sales Compensation Solutions Week II: Steering by Process · Class Session 03: Sales Coaching · Class Session 04: Sales Forecasting & Pipeline Management Week III: Steering by Potential · Self-Study: Sales Response Functions · Class Session 05: Territory Management · Class Session 06: Priority Setting and Customer Classification Week IV: Steering by Prediction · Class Session 07: Sales Augmentation and Automation · Class Session 08: Analytics for Sales Force Deployment Part Two: Shaping Sales Performance (Transformational Sales Leadership) Week V: Shaping Culture · Class Session 09: Identity-Based Motivation · Class Session 10: High-Performance Sales Culture Week VI: Shaping Collaboration · Class Session 11: Structuring the Sales Organization Matrix · Class Session 12: Team Selling in High-Tech Firms Week VII: Shaping Change · Class Session 13: Managing Up and Managing Down · Class Session 14: Initiating Change as a Young Sales Manager · Class Session 15: Commercial Excellence Programs The course consciously minimizes overlaps with my Foundations of Sales

	course in WHU's Bachelor program. Thus, it is valuable to students who have had a class with me and those who haven't.

Intended Learning Outcomes and Competencies	Profit has two sides: revenues and costs. Most curricula include a great deal of cost management. However, what about managing revenues? Most students learn in their Bachelor's program that innovation, pricing, and advertisement influence revenues. These are important, but not enough. M anaging revenues means managing the people who make sales, i.e., those who talk to customers, communicate innovations, negotiate prices, and obtain signatures under a contract: the sales force. Andrew Carnegie (1835-1919), an entrepreneur in the 19th century, stated the significance of his sales force: "You can take away my money and take away my factories, but leave me my sales staff – and I'll be back where I was in two years." The cost side is traditionally transparent and overmanaged in most firms. In comparison, the revenue side is intransparent and undermanaged. Top management often has little grip on the activities of their key account executives, field reps, and first-line sales managers. Sales performance is a black box to them. This course teaches how to lighten the black box and systematically manage sales performance. Not only is the sales force the No. 1 revenue driver, but it is also a significant cost driver. On average, firms spend 10% of their revenues on the sales force. In the economy, the overall amount spent on sales forces is three times the combined spending on advertising. In most multinational companies, most international subsidiaries and employees are in sales. Consequently, leading a firm requires learning to lead the sales force. The course prepares for a wide range of career tracks: In corporate careers, successfully managing a sales organization is the ultimate career test before a candidate makes it to top management. For entrepreneurial ventures, building a sales organization is one of the most challenging tasks on the growth path. Toparticipants in a finance career track, the course removes the mystery around sales forecasts and sales productivity. Consulting careers benefit from the insight into the mentality of salespeople and the course content on implementing change. The course intends to enhance five categories of competencies: • Factual knowledge, for example, applying sales management jargon (such as quota, forecast, accelerators, boosters, contexts, pipeline, DSM, and other idioms) and defining sales performance indicators, • conceptual knowledge, for example, classifying different types of sales forces and sales positions, analyzing the optimal size and deployment of the sales force, evaluating territory structures, classifying elements of compensation plans, classifying the dimensions of sales force performance management, critically assessing motivation theories, identifying and comparing rationalist and humanist management ideologies, and explaining the evolution of sales organizations and sales positions, • sales force leadership-specific procedural knowledge, for example, providing constructive feedback, appraising sales performance, analyzing sales pipelines and generating sales forecasts, communicating policy changes to a sales team, and building work

	relationships with employees older than oneself, • general business-relevant procedural knowledge, for example, preparing for business meetings, making the best out of a limited preparation time budget, making concise contributions to discussions, constructively building on arguments by other participants, and • metacognitive knowledge, for example, evaluating one's leadership behavior, assessing the ethical dimension of sales leadership, creating a skill profile for salespeople and sales leaders, and measuring the excellence of sales organizations.
Instruction Type	Presence
Teaching and Learning Methods	The learning method in this module follows the ideas of problem-based learning and the "reversed classroom" (a.k.a. "flipped classroom"). The "reversed classroom" replaces classroom lectures ("Frontalunterricht") with a blend of self-study at home and interactive discussions in the classroom. Problem-based learning refutes the traditional, passive learning sequence: "First hearing a concept. Then hearing problems that it could solve". It reverses it to an active learning sequence: "First trying to solve a problem oneself. Then discussing solutions with the group, led by the professor. Finally, getting additional insight from the professor". The learning method mix includes role-play sessions between students with joint debriefings, case-based discussions with concluding mini-lectures, interactive concept lectures, and managerial guest presentations. Watch this video showing the style of case-based sessions: https://www.youtube.com/watch?v=IbNNsq1fC0A . Problem-based learning requires significant energy from both the student and the teacher.

Form of Examination	The module grade wholly rests on individual performance. There are no team scores, peer evaluations, or oral participation scores. The score is composed as follows: • 60% rest on case preparation quizzes (take-home, open book). They are due the day before a class session, starting Week II. • 40% rest on a 60-minute final exam (on-campus, open book). Participants receive practice quizzes and mock exams to prepare. The final exam is a proctored, bring-your-own-device, laptop-based quiz with numerical, multiple-choice, sorting, matching questions, and a mini-case. Each student gets a randomized set of numbers and a shuffled sequence of questions. The exam is open-book; you may bring any printed or handwritten paper, but no digital resources are allowed. The proctoring software prevents you from opening laptop apps besides the assessment tool. The only other electronic device permitted is a non-programmable calculator. According to WHU rules, average grades should not exceed 1.8. • The average passing grade in the module's Spring 2023 version was 1.90. 39% of students accomplished a very good grade (1.0, 1.3). No student failed. Students needed 50% of the points to pass the class and 92% to get the highest grade. • The average passing grade in the module's Spring 2022 version was 1.79. 55% of students accomplished a very good grade (1.0, 1.3). No student failed. Students needed 50% of the points to pass the class and 99% to get the highest grade.
Literature	There is no required textbook. I have not found a book covering all the topics discussed in this course. The learning material for this course includes presentation slides, articles, case studies, role-plays, videos, whiteboard notes, and practice quizzes. These and other course-related information are available on the learning management system Moodle.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MKT-606 - Luxury Brand Management

Code:	MSc-MKT-606
Course Title:	Luxury Brand Management
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Tim Oliver Brexendorf

Participation Prerequisites	Basic Marketing Knowledge
Course Content	A - Understanding Luxury B - The Luxury Market C - Luxury Brand Identity D - Creating Luxury E - Pricing Luxury F - Communicating Luxury G - Selling and Representing Luxury
Intended Learning Outcomes and Competencies	A variety of concepts and theories from the areas of luxury goods and brand management.
Instruction Type	Presence
Teaching and Learning Methods	Lecture, guest lecture, and student presentations The course consists of six sessions of about three hours each. In addition to class lectures, guest lectures and in-class discussions are included. With every group, an individual discussion of the status quo of the presentation takes place.
Form of Examination	The grading is based on *1)* one individual take-home assignment (50%) *2)* one insight or industry presentation (50%)
Literature	Kapferer, J.-N./Bastien, V. (2012): The Luxury Strategy – Break the Rules of Marketing to Build Luxury Brands, 2nd ed., London et al.: Kogan Page. Kapferer, J.-N./Kernstock, J./Brexendorf, T.O./Powell, S.M., (2018): Advances in Luxury Brand Management, London: Palgrave. Further recommended literature will be uploaded on Moodle.

Workload

Self-Study:	118
Contact Time:	30

Examination:	2
Total Workload:	150

MSc-SCM-615 - Managing Resilient and Sustainable Supply

Code:	MSc-SCM-615
Course Title:	Managing Resilient and Sustainable Supply
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Felix Reimann

Participation Prerequisites	There are no formal prerequisites, all students can take the course. Previous knowledge of basic supply management concepts (e.g., from a BSc course on sourcing) can be helpful, but we will start the module with a wrap-up of basics so that all participants are on the same page.
Course Content	In recent years, the role of supply management has evolved dramatically. Global disruptions, competitive pressures, and demands from regulators and other stakeholders have made the effective management of risks and sustainability standards in the supply chain a business imperative. This course is designed to equip you with the knowledge and tools you need to navigate these complex challenges. In the course, we will explore advanced strategies that encompass effective risk identification and mitigation, the role of insourcing and outsourcing as approaches to manage resilience and competitiveness of the firm, strategies for measuring and managing scope 3 emission footprints, and dealing with corporate social responsibility in the deeper supply chain. The curriculum is structured to provide a robust understanding of these strategies from both theoretical and managerial perspectives, with real-life applicability being a focal point. Course highlights include: • In-depth case studies: We will engage with current and complex issues in supply management through the analysis of case studies. • Industry insights: You will learn from guest sessions with practitioners who are at the forefront of industry developments in sustainability and resilience. • Become an expert: As a team, you will immerse yourself in one current, highly relevant supply management challenge. You will prepare and present a “mini lecture” on your topic, which is designed to share your knowledge with the other course participants. Next to becoming a content expert, the format will also help you to further build your communication and workshop moderation skills.

Intended Learning Outcomes and Competencies	You can expect to take away the following learning outcomes from the course: 1. Acquire comprehensive knowledge of resilient and sustainable supply chain strategies, including risk management, carbon management, and workers' rights protection. 2. Understand frameworks and paradigms for sustainable supply chain management, including theoretical and practical frameworks. 3. Gain new perspectives from class discussions with faculty, managers, and classmates, fostering a holistic understanding of the field. 4. Enhance your supply management knowledge and improve your research and communication skills by preparing and delivering a “mini lecture” on a bleeding-edge topic related to resilient and sustainable supply chain management.
Instruction Type	Presence
Teaching and Learning Methods	In this course, we combine lecture-style sessions with in-depth class discussions and case-based in-class group work. You will actively apply the frameworks and knowledge that you learn. An important part of the course is the "Mini Lecture" project. You will team up with other students to work on an assigned practical and current topic in the field of risk and sustainability in supply chains. Based on your literature research, you will hold a short lecture for the other course participants to educate them about the topic, including implications for management practice. You can chose your own teams for the project.
Form of Examination	• In-Class Participation (15%) • Pre-Class Polls (5%) • Team Project (25%) • Final Written Exam (55%)
Literature	All course materials will be made available on Moodle. Materials will include case studies, topic readings, and videos. There is no textbook required for this course.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MGMT-511 - Psychology of Leadership

Code:	MSc-MGMT-511
Course Title:	Psychology of Leadership
Program:	MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Pisitta Vongswasdi

Participation Prerequisites	
Course Content	Leadership is best learned not through passive listening, but through active experimentation, reflection, and feedback. This course takes an experiential approach, engaging students in a dynamic cycle of action, feedback, and learning across realistic leadership challenges. Each session blends theoretical grounding with live, high-stakes team exercises in which students rotate as leaders and receive structured feedback on their performance.
Intended Learning Outcomes and Competencies	By the end of this course, students will be able to: • Practice key leadership behaviors across diverse, high-pressure scenarios. • Translate leadership theories into actionable, context-sensitive decisions. • Receive and apply constructive feedback to improve leadership effectiveness. • Reflect critically on their personal leadership development. • Collaborate effectively within diverse teams to address complex challenges.
Instruction Type	In-class Participation, E-Learning
Teaching and Learning Methods	Working in small teams, students will explore pressing leadership topics—such as ethical decision-making, crisis communication, influence, and vision—through immersive scenarios that simulate organizational and societal challenges. By stepping into the role of a leader each week, students will develop self-awareness, practice influence, and refine their leadership skills in real time.

Form of Examination	Team Performance (across simulations) Group Integrated Group Reflection Report Group Individual Leadership Performance (when leading the team) Individual Individual Leadership Reflection Individual
Literature	

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-MGMT-604 - Strategy Execution

Code:	MSc-MGMT-604
Course Title:	Strategy Execution
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Utz Schäffer

Participation Prerequisites	None
Course Content	Strategy execution matters. In a lot of cases, it is the critical bottleneck to successful strategic management. However, the task is complex and off-the-shelf theories and techniques tend to fall short of corporate reality. Therefore, this class discusses the key challenges in strategy implementation by asking the eight questions stated below. Additionally, management control systems associated with each of the questions will be presented. Part One: Build a strong foundation for strategy execution: *1.* Allocating resources to customer: Who is your primary customer? *2.* Prioritizing core values: How do your core values help to execute strategy? Part Two: Focus everyone's attention on your strategic agenda: *3.* Creating accountability: How do you manage performance? *4.* Controlling strategic risk:What strategic boundaries have you set? Part Three: Facilitate the behaviors needed for success: *5.* Spurring effort and innovation: How do you generate creative tension? *6.* Building commitment: How do you foster collaborative behavior? Part Four: Focus on your company's ability to adapt to change: *7.* Adapting to change: What strategic uncertainties keep you awake at night? *8.* Leading change: How can leadership make a difference? We will discuss these questions based on several teaching cases (Sydney IVF, Citibank, Volkswagen, Henkel, Hydro One, GE). In the process, we cover aspects of capital budgeting, value statements and beliefs systems, boundary systems and risk management, diagnostic control systems (such as the balanced scorecard) and performance measurement, accountability issues, stretch goals, performance rankings and compensation issues, and last but not least interactive control systems.

Intended Learning Outcomes and Competencies	Drawing on various theories from the field of management, students will be enabled to recognize success factors and pitfalls regarding the execution side of strategic management.
Instruction Type	
Teaching and Learning Methods	Interactive lectures, case assignments and in-class case studies, guest speakers
Form of Examination	30% Case assignments 30% of your evaluation will be based upon your individual solutions to four out of five case assignments 70% Exam (closed book) The final exam will ask you to reflect upon the concepts covered in class. For module retakes (following a 5.0 grade): 100% Oral Examination
Literature	Simons, R. (1995): Levers of control: How managers use innovative control systems to drive strategic renewal. Boston: Harvard Business School Press. Simons, R. (2005): Levers of organization design: How managers use accountability systems for greater performance and commitment. Boston: Harvard Business School Press. Additional literature: Will be announced and made available in class.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-SCM-613 - Supply Chain Optimization

Code:	MSc-SCM-613
Course Title:	Supply Chain Optimization
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Liji Shen

Participation Prerequisites	Participants are expected to have mathematical competence at undergraduate level. In addition, basic understanding of business and operations is beneficial.

Course Content	The course provides an introduction to concepts and techniques essential to manage and to optimize diverse operations in supply chain. Throughout the semester, participants investigate various areas of operations management, beginning with fundamental principles and strategies for operations analysis in both manufacturing and service sectors. Key models are discussed and explored, enabling students to actively interpret, to fine-tune, and to implement optimization approaches. The course first addresses the topic of forecasting, where best-performing time-series methods are used to detect development tendencies and to determine future demands. Based on the primary demand forecasts, methods to specify detailed production quantities are presented next. Students can thus grasp the complex supply chain interactions, production structures, as well as material requirements planning. Furthermore, participants will better understand production processes through advanced inventory management strategies connecting supply and manufacturing. Topics cover classic inventory models with extensions, deterministic and dynamic lot sizing problems, and inventory management in uncertain environments. The course also considers long-term decision problems such as network design with facility location. Solution methods include mathematical programming and analytic hierarchy process. In addition, classical problem settings in distribution logistics are discussed, where students master optimization techniques for determining delivery routes to improve distribution performance.
Intended Learning Outcomes and Competencies	Upon successful completion of this course, students gain a comprehensive overview of operations management principles and strategies to enhance operational efficiency within organizations. Participants also develop profound understanding of mathematical modelling, optimization instruments, along with their applications.
Instruction Type	Presence
Teaching and Learning Methods	Learning encompasses a wide range of activities, including interactive lectures, an immersive business simulation game, and self-paced take-home exercises.
Form of Examination	Exercises, Case Analysis and Presentation (100%)

Literature	- CHASE, R. B. / AQUILANO, N. J. / JACOBS, F. R. (1998): Production and operations management: manufacturing and services. 8th ed., Irwin. - GAITHER, N. / FRAZIER, G. (2002): Operations management. 9th ed., South-Western/Thomson Learning. - VOLLMANN, T. E. / BERRY, W. L. / WHYBARK, D. C. (2005): Manufacturing planning and control systems. 5th ed., Irwin/McGraw-Hill. - SILVER, E. A. / PYKE, D. F. / PETERSON, R. (1998): Inventory management and production planning and scheduling. 3rd ed., Wiley. - HYNDMAN, E. J. / ATHANASOPOULOS, G (2018): Forecasting: Principles and Practice, 2nd ed., Otexts. - AXSÄTER, S (2015): Inventory Control, 3rd ed., Springer Cham. - PTAK, C. A. / SMITH, C. (2011): Orlicky's Material Requirements Planning, 3rd ed., McGraw Hill Professional.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-SCM-502 - Sustainable Operations Management

Code:	MSc-SCM-502
Course Title:	Sustainable Operations Management
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Stefan Spinler

Participation Prerequisites	none
Course Content	Overview sustainability and the sustainable development goals Deep dive into the various dimensions of sustainable OM: • Sustainable energy • Sustainable urban design • Sustainable mobility • Sustainable food and agriculture
Intended Learning Outcomes and Competencies	Understand the relevance of sustainability in today's business world Master the dimensions of sustainable OM Connect local initiatives to global goals
Instruction Type	Präsenzstudium
Teaching and Learning Methods	lectures, guest lectures, case studies
Form of Examination	Case studies (50%), final exam (50%)
Literature	Will be announced in class.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-QUANT-603 - Text, Image, and Video Mining

Code:	MSc-QUANT-603
Course Title:	Text, Image, and Video Mining
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr
ECTS Credits:	5
SWS:	2.5
Responsible:	Martin Prause

Participation Prerequisites	Python programming skills. Do not attent this course if haven't programmed in python brefore. This is an advanced course in Deep Learning for Text, Image and Video Mining to quickly get your AI driven ideas to market.
Course Content	Various commentators have claimed that “data is the new oil” (Economist, 2017). This analogy typically refers to the economic impact of data on the industry and society today in comparison to oil and the second industrial revolution. However, while data could be the driving force of future economic growth, its characteristics, to refine economic value, are entirely different from the skill set needed during the second industrial revolution. First, data comes in numerous shapes (variety, e.g., structured and unstructured), sizes (volume) and speed (velocity, e.g., real-time data) coining the term Big Data. Second, while data can be replicated at almost zero cost (no transportation cost), the cost for creating and aggregating meaningful data can be substantial. Third, the extraction of information or knowledge requires additional analytical techniques. Data per se has no economic value. Fourth, and finally, the usage of data implies new problems concerning privacy, ownership and trade regulations. This course focuses on methods to aggregate textual, audio-visual and numerical data from different sources and types and processes them using appropriate methods to extract valuable information from it. Typical use cases are • Understanding the structure of the web as a distributed network using various protocols and standards (HTTP, SOCKS, REST, …). • Automatic news extraction from a website (Web crawling) such as Newspaper websites, data services or social networks. • Text analysis of PDF documents using natural language processing for classification, sentiment analysis, semantic analysis and topic modeling. • Cognitive data processing and generation for visual and audio analysis for image and video classification, face and gesture recognition, voice and music pattern recognition.

Intended Learning Outcomes and Competencies	• You will learn the skills and tools to download unstructured data (text and images and videos) from websites using various scraping tools. • You will transfer the data to a readable format. • You will learn the essentials of API based programming and integrate it in your own products. • We will dive into the technical details of deep learning to understand its potential and limitations. • You will learn how to use AI SaaS Solutions for vision and text from AWS and build your own products. • You will learn the foundations of Large Language Models. • You will learn to use your own local LLM and build your own products. • You will learn about the limits and potential of Generative AI and explore the vast landscape of products and services.
Instruction Type	
Teaching and Learning Methods	• Follow-me-through the code examples • Coding exercises • Live data / real-world data analysis • Lecture
Form of Examination	Group Assignments (50%) Individual case study (50%)
Literature	1) “Python for Everyone”: https://www.py4e.com/book

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150

MSc-EAI-621 - Visual Prototyping

Code:	MSc-EAI-621
Course Title:	Visual Prototyping
Program:	MiB 120 cr MiE 120 cr MiE 90 cr MiM 120 cr EXCH MSc MiBA 120 cr MiBA 90 cr MSc 2025
ECTS Credits:	5
SWS:	2.5
Responsible:	Christoph Hienerth

Participation Prerequisites	There are no specific prerequisites. However, participants in this course should be open and willing to perform basic sketching and drawing as well as creative thinking.
Course Content	In this course I want to provide simple and important tools and skills that will help you visualizing and communicate your ideas and content in many different business settings. The course is divided into two major parts: 1: Basic visual skills In this part of the course we train all the important basic skills that are needed to visualize content, such as simple forms, basic shapes, containers and connectors, structures, icons, people, writing, color, etc. 2: Business visual/structuring/analytic skills In this part of the course we investigate and learn visual skills for business, mainly for structuring, understanding, communicating and explaining, such as business structures, business tools and infographics, etc.

Intended Learning Outcomes and Competencies	For the basic part of this course, students will master: • Independent development of visual components, such as: Icons, shapes, containers, connectors, arrows, people, writing, color, structure. For the business part of this course, students will master: • Visual structure • Visual analytics • Visual processes for business • Visual models for business • Information Graphics • Visual communication and analysis of audiences • Visual storytelling
Instruction Type	Presence
Teaching and Learning Methods	This is a course in which you will learn and develop a basic human skill – visualizing. Therefore, in addition to the usual teaching and learning methods (lectures, discussion, guest speakers, etc.), be prepared to apply and train your visual and creative skills, i.e., you will be drawing and sketching a lot, both physically (pen and paper) as well as digitally (concepts, procreate, and other programs).

Form of Examination	Various individual “mastery projects” (icons, business structures, sketchnote). One/some individual 'mastery projects' will be done in class. One group “mastery project” (development of an infographic).
Literature	There is no required literature, however if you are looking for one or two general books on visual thinking, these two are great: UZMO – Thinking With Your Pen (Martin Haussmann) Qvist-Sorensen, O., & Baastrup, L. (2019). Visual collaboration: A powerful toolkit for improving meetings, projects, and processes. John Wiley & Sons.

Workload

Self-Study:	118
Contact Time:	30
Examination:	2
Total Workload:	150