

## Master in Management\*

Core courses and concentrations courses might be combined but it can happen that there is one or two clashes, for scheduling constraints. Please note that some combinations of concentrations might not be compatibles with other courses. These incompatibilities will be indicated on the selection platform.

### Quarter Schedules for courses:

Quarter 1:	Academic period:	01 September – 18 October 2022
	Exam Week:	20 October – 26 October 2022
Quarter 2:	Academic period:	27 October – 13 December 2022
	Exam Week:	15 December – 21 December 2022

Course	Type of course	Quarter
Marketing*	Core course	1+2
Evidence-based Management	Core course	1
Managerial Data Science	Core course	1
Financial Analysis and Performance Management	Core course	2
Operations Management	Core course	2
Corporate Strategy & Scaling	Concentration course	2
Resource Allocation	Concentration course	2
Strategy Execution	Concentration course	1
Persuasive Communication**	Concentration course	1
Diversity Management	Concentration course	1
Change Management	Concentration course	1
Machine Learning for Big Data	Concentration course	1
Data Visualization & Storytelling	Concentration course	1
Business Simulation & Algorithms	Concentration course	1

\*Marketing is scheduled across Q1 and Q2

\*\*module description not available yet

If you combine in your selection core courses and concentrations, it may happen that there will be a clash as they belong to two different intakes. A maximum of two sessions overlap between courses are allowed for international students to enrich the courses portfolio.

**Marketing [MGT71423]**

Module Coordinator		Meinert, Britta			
Programme(s)		Master in Management			
Term		Semester 1 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Compulsory Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Basic Math Skills			

Content	<ul style="list-style-type: none"><li><b>1. Strategic Marketing</b><ul style="list-style-type: none"><li>1.1 Market Analysis</li><li>1.2 Segmenting, Targeting, Positioning</li><li>1.3 Marketing Strategic Concepts</li></ul></li> <li><b>2. Marketing Instruments</b><ul style="list-style-type: none"><li><b>2.1 Product Management</b><ul style="list-style-type: none"><li>2.1.1 Innovation Management</li><li>2.1.2 Management of Established Products</li><li>2.1.3 Brand Management</li></ul></li><li><b>2.2. Price Management</b><ul style="list-style-type: none"><li>2.2.1 Fundamentals of Classical Pricing Theory</li><li>2.2.2 Price Determination and Discrimination</li><li>2.2.3 Principles of Behavioral Pricing</li></ul></li> <li><b>2.3. Sales Management</b><ul style="list-style-type: none"><li>2.3.1 Design and Structure of the Sales System</li><li>2.3.2 Customer Relationship Management</li><li>2.3.3 Managing Relationships with Sales Partners</li></ul></li> <li><b>2.4. Communications Management</b><ul style="list-style-type: none"><li>2.4.1 Communication Planning and Budgeting</li><li>2.4.2 Design of Communication Measures</li><li>2.4.3 Monitoring the Impact of Communication</li></ul></li></ul></li></ul>
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<b>Intended Learning Outcomes</b>	<p><i>Knowledge:</i>  On successful completion of this module, students will have a thorough comprehension of Marketing, i.e. they can</p> <ul style="list-style-type: none"> <li>• Understand the terminology, concepts and tools of modern marketing practice</li> <li>• Thoroughly comprehend strategic marketing and the elements of the marketing mix and the importance of integrating these elements</li> <li>• Explain the key aspects of each of the four marketing instruments (product management, price management, sales management and communications management)</li> </ul> <p><i>Skills:</i>  On successful completion of this module, students will have the proven ability to apply advanced knowledge in Marketing and to solve marketing managerial problems, i.e. they can</p> <ul style="list-style-type: none"> <li>• Apply the key tools that marketers use to analyse market situations</li> <li>• Use the marketing instruments to react accordingly to these situations</li> <li>• Demonstrate effective presentation skills</li> </ul> <p><i>Competences:</i>  On successful completion of this module, students can solve a real life marketing case, i.e. they can</p> <ul style="list-style-type: none"> <li>• Analyse a real life market situation correctly</li> <li>• Apply key marketing principles to real marketing issues</li> <li>• Coordinate decisions between team members</li> <li>• Develop solutions to specific issues in teams and present their results</li> </ul>												
<b>Forms of teaching, methods and support</b>	Lecture, discussion, exercises, quizzes, group work, case studies												
<b>Type of Assessment(s) and performance</b>	<table border="1" data-bbox="480 1384 1378 1597"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Case Study</td> <td>15 minutes</td> <td>60</td> <td>Quarter 2</td> </tr> <tr> <td>Written Exam</td> <td>60 minutes</td> <td>60</td> <td>Exam week of Quarter 1</td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance Points	Due date or date of exam	Case Study	15 minutes	60	Quarter 2	Written Exam	60 minutes	60	Exam week of Quarter 1
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Case Study	15 minutes	60	Quarter 2										
Written Exam	60 minutes	60	Exam week of Quarter 1										
<b>Recommended Literature</b>	<p><b>Textbook:</b></p> <ul style="list-style-type: none"> <li>• Christian Homburg, Sabine Kuester and Harley Krohmer (2013), Marketing Management: A Contemporary Perspective, Second Edition, McGraw-Hill</li> </ul> <p><b>Case study:</b>  In cooperation with Procter &amp; Gamble</p>												

Module Structure	This course provides an introduction to strategic marketing and a detailed overview of the four marketing instruments (product management, price management, sales management and communications management). A close cooperation with Procter & Gamble provides students with the opportunity to apply the key concepts to practical business situations.
Usability in other Modules/Programmes	Marketing modules in the concentrations
Last Approval Date	2022/04/29

**Evidence-based Management [MGT71584]**

Modulkoordinator		Atalay, Selin; Wihler, Andreas; Sele, Kathrin			
Studiengang		Master in Management			
Studienabschnitt		Semester 1 Q1			
Moduldauer		1 Semester			
Pflicht- /Wahlpflichtmodul		Pflicht			
Credits:		6			
Häufigkeit des Angebots		Jährlich			
Sprache		Englisch			
Gesamt Workload	150 h	Akademische Lehrstunden:	44	Verbleibender Workload:	Selbststudium
		Eine akademische Lehrstunde entspricht 40 Minuten.			
		Das Selbststudium umfasst die Vor- und Nachbereitung von Veranstaltungen, Leseaufgaben, die Vorbereitung von Tests und Klausuren, Hausarbeiten usw.			
Voraussetzungen für die Teilnahme		-			
Kurzbeschreibung / Lerninhalte		<p>Our world has become increasingly data-driven. While intuition and isolated anecdotes remain an integral part of leadership and managerial decision-making, the rapidly increasing availability of (big) data and technologies has fostered a strong push towards evidence-based decision-making in practice. As a result, a successful career in consulting or management requires substantive knowledge and skills in a variety of empirical research methods to make evidence-based decisions that have merit. Thus, students in management need to develop strong competencies as creators, recipients, and applicants of scientific studies.</p> <p>This course focuses on the design and implementation of high- quality empirical studies in the areas of management. The course serves a dual purpose:</p> <ol style="list-style-type: none"> <li>1) The overarching goal is to prepare students for increasingly “evidence-driven” (i.e., scientific) decision making in management and consulting practice.</li> <li>2) The added goal is we provide students with the methodological toolkit for any research project such as their MSc theses.</li> </ol>			

<p>Qualifikationsziele / Lernergebnisse</p>	<p>The course introduces principles and tools designed to understand the utility of evidence-based management, and its relevance for managerial decision-making.</p> <p><b>Knowledge</b> Students will acquire fundamental knowledge of the key concepts of evidence-based management, i.e. they can</p> <ul style="list-style-type: none"> <li>• read and understand scientific literature,</li> <li>• identify and select the appropriate qualitative or quantitative methods to answer specific research questions,</li> <li>• point out potential ethical problems of various research designs,</li> <li>• evaluate and apply scientific knowledge to solve business problems,</li> <li>• structure and write research reports.</li> </ul> <p><b>Skills</b> Students will be able to apply a variety of research methods to business research problems and draw conclusions from the results, i.e. they can</p> <ul style="list-style-type: none"> <li>• create a research proposal,</li> <li>• develop strategies on how to obtain data,</li> <li>• assess ethical pitfalls of research methods,</li> <li>• critically evaluate various types of research designs.</li> </ul> <p><b>Competencies</b> In a business environment students will be able to apply the skills and knowledge, i.e. they can</p> <ul style="list-style-type: none"> <li>• define a relevant research question,</li> <li>• select a method for answering it,</li> <li>• draw the appropriate conclusions from the results,</li> <li>• act responsibly while implementing management practices or making managerial decisions.</li> </ul>																				
<p>Lernformen, Methodik und Betreuung</p>	<p>The course is taught interactively. A variety of exercises and discussion questions are used to train participants. Participants are expected to cover the course contents by preparation, follow-up work, and self-study.</p>																				
<p>Art der Prüfungsleistungen im Modul und Akkumulationspunkte</p>	<table border="1"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>In class exercises &amp; participation</td> <td>tbd</td> <td>30</td> <td></td> </tr> <tr> <td>individual reflection paper</td> <td>tbd</td> <td>15</td> <td>last day of class, canvas submission</td> </tr> <tr> <td>Research proposal - presentation</td> <td>tbd</td> <td>25</td> <td>last day of class, all online</td> </tr> <tr> <td>Research proposal - write-up</td> <td>tbd</td> <td>50</td> <td>3 weeks after the presentation, canvas submission</td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance Points	Due date or date of exam	In class exercises & participation	tbd	30		individual reflection paper	tbd	15	last day of class, canvas submission	Research proposal - presentation	tbd	25	last day of class, all online	Research proposal - write-up	tbd	50	3 weeks after the presentation, canvas submission
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Research proposal - presentation	tbd	25	last day of class, all online																		
Research proposal - write-up	tbd	50	3 weeks after the presentation, canvas submission																		

Literaturhinweise	<p><u>General readings</u></p> <ul style="list-style-type: none"> <li>• Cooper, D. R. &amp; P. S. Schindler (2013). Business research methods (12th edition). New York: McGraw-Hill Irwin.</li> <li>• Rousseau, D. M. (2006). Is there such a thing as “evidence-based management”? <i>Academy of Management Review</i>, 31, 256-269.</li> <li>• Pfeffer, J., &amp; Sutton, R. I. (2006). Evidence-based management. <i>Harvard Business Review</i>, 84, 62-72.</li> </ul> <p><u>Additional readings</u></p> <p>Students will be required to read additional literature for most class sessions. These readings will be made available prior to the specific sessions.</p>
Modulstruktur	<p>Session 1 introduces the fundamentals of the scientific method. The module focusses on important steps that need to be taken before collecting and analyzing data. These steps include research design, construct measurement, and sampling. We also cover ethical boundaries for evidence-based management.</p> <p>Sessions 2-10 cover the main methods for collecting high-quality data to rigorously test research questions (or explore new ones).</p> <p>Part 1. Survey Research  Part 2. Experimental Research  Part 3. Qualitative Research</p> <p>Session 11 is group project presentations.</p> <p>A more detailed break-down will follow at the beginning of the course.</p>
Verwendbarkeit für andere Module und Programme	Master's Thesis
Letztes Freigabedatum	01.06.2021



**Managerial Data Science [QUM71413]**

Module Coordinator		Bleier, Alexander			
Programme(s)		Master in Management			
Term		Semester 1 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Compulsory Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Understanding of basic mathematical concepts (basic calculus, algebra, and probability). Completion of R pre-course.			
Content		<p>In today's rapidly moving business world, data and its inherent value gain more and more importance. While the sheer amount, complexity, and frequency of data evolve at unprecedented speeds, so do the statistical methods available for its analysis. The primary goal of this course is therefore to equip students with the necessary statistical foundation to navigate their future roles as managers that base decisions on solid data and analyses. To achieve this goal, the course will introduce students to relevant vocabulary as well as statistical concepts and tools, drawing on descriptive and inferential statistics. In essence, the course will focus on ways to assess, comprehend, and exploit data to produce well-informed business decisions.</p>			

<b>Intended Learning Outcomes</b>	<p><i>Knowledge:</i>  Successfully completing this course will enable students to comfortably navigate fundamental statistical concepts and their application in business. In particular, they will be able to</p> <ul style="list-style-type: none"> <li>• assess and evaluate outcomes of statistical analyses</li> <li>• describe the strengths and weaknesses of relevant procedures</li> <li>• explain the value of data and exploit it to inform business decisions</li> </ul> <p><i>Skills:</i>  Upon successful completion of this course, students will know how to apply statistical tools and concepts to identify and extract potential gains from available data. In particular, they will be able to</p> <ul style="list-style-type: none"> <li>• collect, access, and structure data</li> <li>• select adequate statistical methods in particular business situations</li> <li>• derive reasonable business decisions based on appropriate statistical analyses</li> </ul> <p><i>Competencies:</i>  Having successfully completed this course, students will be capable of assessing, structuring, and solving statistical problems based on their analytical and logical problem solving capacities. In particular, they will be able to</p> <ul style="list-style-type: none"> <li>• handle, assess, and analyze data sets</li> <li>• develop and organize concepts and projects with a focus on data analysis</li> <li>• derive and defend business decisions based on their statistical knowledge and reasoning</li> </ul>												
<b>Forms of teaching, methods and support</b>	This course may contain traditional lecturing, discussions, projects, homework, team work, and applications.												
<b>Type of Assessment(s) and performance</b>	<table border="1"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Written exam</td> <td>80 minutes</td> <td>80</td> <td>Exam week</td> </tr> <tr> <td>Quizzes</td> <td>40 minutes</td> <td>40</td> <td>During the module</td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance Points	Due date or date of exam	Written exam	80 minutes	80	Exam week	Quizzes	40 minutes	40	During the module
Type of examination	Duration or length	Performance Points	Due date or date of exam										
Written exam	80 minutes	80	Exam week										
Quizzes	40 minutes	40	During the module										

Recommended Literature	<p>Introductory statistical and data science literature (also recommended as pre-reading), e.g.</p> <ul style="list-style-type: none"> <li>• Bruce L. Bowerman, Richard T. O'Connell, and Emily S. Murphree, Business Statistics in Practice - Using Data, Modeling, and Analytics, McGraw-Hill, 2017</li> <li>• Gareth James, Daniela Witten, Trevor Hastie, and Robert Tibshirani, An Introduction to Statistical Learning - with Applications in R, Springer, 2017</li> <li>• Alan Anderson, Business statistics for dummies, Wiley, 2013</li> <li>• Deborah J. Rumsey, Statistics for dummies, Wiley, 2016</li> <li>• Deborah J. Rumsey, Statistics Essentials for dummies, Wiley, 2010</li> <li>• Richard A. DeFusco, Dennis W. McLeavey, Jerald E. Pinto, and David E. Runkle, Quantitative Methods for Investment Analysis, Second Edition, CFA Institute</li> </ul>
Module Structure	This module comprises an introduction to basic statistical techniques as well as applications to specific business problems to help managers arrive at better-informed decisions based on data.
Usability in other Modules/Programmes	Subsequent modules of the programme, Master's Thesis.
Last Approval Date	2022/05/02

**Financial Analysis and Performance  
Management [ACC72212]**

Modulkoordinator		Ramasubramanian, Hari			
Studiengang		Master in Management			
Studienabschnitt		Semester 1 Q2			
Moduldauer		-			
Pflicht- /Wahlpflichtmodul		Pflicht			
Credits:		6			
Häufigkeit des Angebots		Jährlich			
Sprache		Englisch			
Gesamt Workload	150 h	Akademische Lehrstunden:	44	Verbleibender Workload:	Selbststudium
		Eine akademische Lehrstunde entspricht 40 Minuten.			
		Das Selbststudium umfasst die Vor- und Nachbereitung von Veranstaltungen, Leseaufgaben, die Vorbereitung von Tests und Klausuren, Hausarbeiten usw.			
Voraussetzungen für die Teilnahme		- Pre course on book-keeping; - Middle-high school algebra; - Basic knowledge of Microsoft Excel; - Any course in accounting is not required but will be useful.			
Kurzbeschreibung / Lerninhalte		<ol style="list-style-type: none"> <li>1. Preparing and understanding Financial Statements</li> <li>2. Corporate Performance Measurement</li> <li>3. Analyzing Corporate and Divisional Performance</li> <li>4. Designing Accounting Systems to Measure Performance</li> <li>5. Role of Governance and Incentives in Accounting Choices</li> </ol> <p><i>More detailed break-down of what is exactly covered in these broad areas will follow at the beginning of class.</i></p>			

<p>Qualifikationsziele / Lernergebnisse</p>	<p>On completion of the module, the student</p> <ul style="list-style-type: none"> <li>• Be able to understand and process the information provided in financial statements</li> <li>• Can interpret and communicate accounting information to improve strategic outcomes</li> <li>• Enhance your decision-making skills through acritical evaluation of costs and benefits of each possibility and convincingly supporting your evaluations and conclusions</li> <li>• Be familiar with accounting systems used in most large organizations</li> <li>• Understand the role of corporate governance in the design of accounting and management control systems</li> <li>• Understand the underpinning theories behind the design of performance measurement systems</li> <li>• Understand the interdependencies among various sub-fields of accounting such as financial and managerial accounting</li> </ul>
<p>Lernformen, Methodik und Betreuung</p>	<p>The course is a combination of <b>case study discussions, lectures, problem solving, and games.</b></p> <p>The class instructional format will be discussion based. Adequate preparation is a foundation for strong class participation and enhanced understanding of the course content. A thorough reading of the case and review of material is expected before the class discussion. A thorough analysis based on specific questions is expected. It cannot be overstressed that when students are prepared, everyone benefits as the class discussions are greatly enhanced.</p>

Art der  
Prüfungsleistungen im  
Modul und  
Akkumulationspunkte

Type of Assessment	Duration	Performance Points	Due Date or Date of Exam
Class Participation	Ongoing	15	Throughout the course
Case Quizzes	20 mins	15	10:00pm on the day before class
Case Analyses and Assignments	Throughout the course	20	10:00pm on the day before class
Mid-term Quiz (unproctored)	30 mins	30	Nov 13, 2021
Final Exam	40 mins	40	Exam week

### 1. Class Participation (Individual)

It is only possible to participate in class discussion if you show up. The discussions will be free flowing, and anyone is encouraged to contribute. Everyone can benefit if you know of a similar issue to the one discussed in the class/case or have encountered while working in industry. Comparing the learning points of a class to practice is often a fantastic learning experience. The evaluation will be based on the quality of the contributions and not only on quantity.

**Case Quizzes (Individual)** To prepare for the quiz, the case should be carefully read. The quiz will consist of a series of multiple-choice questions and will have a time limit of 20 mins. Late quiz submissions will be assigned a score of zero.

**Case Analyses and Assignments (Group)** There will be four group assignments (to be done in groups of 3 students) in which you will be asked to solve quantitative and qualitative problems or write case analyses. Exact number of students in a group will be decided based on class size.

**Mid-term Quiz and Final Exam** The mid-term exam of 30 minutes will be on Nov 13, 2021 and will be unproctored. The students need not be on campus to attempt the midterm quiz. The final exam of 40 minutes length will be during the official exam week. Both exams are closed-book and closed-notes. A practice mid-term exam and final exam will be provided at appropriate times.

Literaturhinweise	<p>Assigned chapters of J. R. Dyson, Accounting for Non-Accounting Students (10th Edition 2020), Pearson Prentice Hall. ISBN: 9781292286938</p> <p>The textbook can be found in the FS library in reasonable numbers. You may choose to use the 9th or 8th edition of this book for reading.</p> <p>All other course materials (slides, quizzes, assignments, case studies) will be distributed electronically through the Learning Management System (Canvas)</p>
Modulstruktur	<p>Sessions 1-3 deal with the measurement of corporate performance. Building on these sessions 4-7 will focus on analyzing performance (financial analysis, divisional and customer profitability, and variance analysis).</p> <p>Sessions 8-9 discuss the role of accounting systems in coordinating economic activities within organizations.</p> <p>Sessions 10-11 deal with how corporate governance influence incentives and accounting choices.</p> <p>More detailed break-down will follow at the beginning of class.</p> <p>We will focus on key ideas to capture important tradeoffs in each setting, leaving some of the ideas to self-study. While the course is not intended to make you an accounting professional but often you will be a user of accounting information as future managers, and hence the course is designed to provide you a working knowledge of essential managerial and financial accounting concepts.</p>
Verwendbarkeit für andere Module und Programme	All concentrations; some electives
Letztes Freigabedatum	09.11.2021

**Operations Management [MGT71596]**

Module Coordinator		Kremer, Mirko			
Programme(s)		Master in Management			
Term		Semester 1 Q2			
Module Duration		1 Semester			
Compulsory/Elective Module		Compulsory Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Basic Statistics (in particular, probability distributions), elementary calculus and algebra, basic spreadsheet engineering skills (i.e., working knowledge of Microsoft Excel).			
Content		<p>Firms can create substantial value and competitive advantage if they manage to properly structure their operating system (people, technology, processes). This course introduces principles, technologies, and tools designed to increase organizational performance by better matching supply with demand in an uncertain world. A key objective is the acquisition of a set of key methods you can use as a manager to control and improve operations and understand and solve the fundamental inherent strategic trade-offs to align with the strategic goals of the firm. Besides illustrating the underlying principles of these tools, the course will illustrate how the operations view (via measures such as capacity utilization, or inventory turnover) link with the financial view (via measures such as EVA or ROI). Generally, the course will challenge your managerial skills and ask you to apply them in realistic settings.</p>			



<p>Intended Learning Outcomes</p>	<p><i>Knowledge:</i> On successful completion of the module, the participants will have knowledge of a wide range of operations management tools, i.e. they</p> <ul style="list-style-type: none"> <li>• understand the fundamental concepts of any business process: throughput, throughput time, work in process and the relationship between the three.</li> <li>• can explain and operate the toolset introduced in this module</li> <li>• can evaluate the tools and discuss their strengths and weaknesses</li> <li>• can articulate the link between Operations and Finance</li> </ul> <p><i>Skills:</i> On successful completion of the module, students will have the proven ability to apply advanced knowledge in Operations Management and to solve practice-oriented challenges, i.e. they can</p> <ul style="list-style-type: none"> <li>• analyse, structure and classify operations management challenges in practice and theory</li> <li>• identify the problem adequate quantitative model or qualitative strategy</li> <li>• use spreadsheets to support quantitative modeling, and spot a banana from distance</li> <li>• apply the adequate quantitative model or qualitative strategy to solve an operations management challenge</li> </ul> <p><i>Competencies:</i> Successful module participants develop the requisite know-how to provide responsible contributions in establishing concepts and processes in operations management. They acquire the ability to further develop and adapt to the needs in practice. They can</p> <ul style="list-style-type: none"> <li>• articulate the operational rationale behind a successful business process</li> <li>• present operations management challenges to a broad audience</li> <li>• argue competently about problem solution strategies</li> <li>• develop the links between Operations and Strategy</li> </ul>
<p>Forms of teaching, methods and support</p>	<p>The course is a combination of case study discussions, lectures, tutorials, technical exercises, and games. The course is based on the text book shown under recommended literature.</p> <p>Essentially, the class instructional format will be a dialogue between the students and the instructor. It is important to note that strong class participation is founded on adequate preparation. Students are expected to thoroughly review the material on every case or reading prior to its discussion in class. It is expected that students do a thorough analysis of the case based on specific questions that will be provided, and prepare a plan of action appropriate to the circumstances. When students are prepared, the class discussion is greatly enhanced and everyone learns far more than otherwise.</p>

Type of Assessment(s)  
and performance

Type of examination	Duration or length	Performance points	Due date or date of exam
Class participation	ongoing	30	Throughout the module
Assignments (Group)	4-8h each	40	During the module
Final Exam	50 minutes	50	Exam week

### 1. Class participation (Individual)

You can earn credit towards your class participation score by a) contributing to our in-class discussion (of case studies etc.) and b) engaging in an online discussion forum on contemporary topics. In order to contribute to in-class discussion, of course, you must show up. Please arrange your other activities to permit you to attend class; drop me a note if you cannot come. Mostly, our discussions will be free form: anyone who has something to contribute can and should. If you have worked in the industry of the case study or come across a similar issue to the one discussed in the case, I encourage you to share your experience. The greatest learning experience often comes from comparing the learning points of a case to industry practice. Students will be evaluated on the quality of the contributions (not the quantity).

To ensure a rich discussion, you are expected to read and analyse all cases before class. For all cases, you may be called on in class to provide your top two recommendations related to the case with a concise but compelling justification for each - imagine you have 30 seconds in the elevator with the CEO (or whoever the case protagonist is), during which time you need to spark his or her interest enough to get you a follow-up appointment to go into more detail.

### 2. Assignments (Group)

There will be a number of group assignments in which you will be asked to solve quantitative and qualitative problems based on the material covered in and outside of class. Assignment can comprise small-scale technical exercises, simulation-based exercises, and case-related questions. The exercises are designed to further the students' intuition for some of the concepts discussed in class.

### 3. Final exam

Exam preparation is based on mandatory assignments, optional exercise tasks, and a mock exam. More details will be given during the course.

<b>Recommended Literature</b>	<p>The course relies heavily on case study discussions, and I will provide self-paced online tutorials that cover some of the methodological foundations required to have in-depth case discussions. The class is not structured around a particular textbook, but the following provides most of the methodological backbone for this class:</p> <p>Cachon and Terwiesch. Matching Supply With Demand - An Introduction to Operations Management. 3rd edition. McGraw Hill.</p> <p>The textbook can be found in the FS library in reasonable numbers.</p> <p>All other course materials (slides, quizzes, assignments, tutorials, case studies) will be distributed electronically on the Learning Management System.</p>
<b>Module Structure</b>	<p>Sessions 1-5 cover the fundamentals of designing and managing the operational system (people, technology, processes) to align with the firm's competitive priorities (cost, flexibility, speed, and quality), and develops important links between operations and finance. Building on the fundamentals, Sessions 6–11 deal in more detail with matching supply with demand in uncertain, highly variable environments. Managing variability is a key underlying theme across the course, and many business model innovations revolve around it.</p> <p>A detailed break-down follows at the beginning of class, and on the course page on the Canvas Learning Management platform.</p>
<b>Usability in other Modules/Programmes</b>	All concentrations; some electives.
<b>Last Approval Date</b>	2022/05/20

**Corporate Strategy & Scaling [MGT71482]**

Module Coordinator		Reuer, Jeffrey J.			
Programme(s)		Master in Management			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		None			
Content		<p>In 1965, Gordon Moore proposed that the number of transistors on a silicon chip would double every year. Since then, Moore's Law has been delineating the superlinear scaling of technological development, an exponential progress so spectacular as to lead to a radical transformation of the economy and to the emergence of hyperscalers such as Google, Uber, Microsoft, and Amazon. The Scaling course sheds light on these trends, examining some of the different and far-reaching ways technology is shaping the modern organization. It provides a unique blend of theory and practice, applying concepts from the world of technology, where venture capitalists, entrepreneurs, and managers alike discuss the strategies of technology firms in terms of scaling laws (such as Moore's Law). At the end of the course, you will be brought up to speed with the "Silicon Valley way" of doing business and with the novel techniques for strategic decision-making that are necessary to navigate the modern economy.</p>			

Intended Learning Outcomes	<p>The objectives for the course are as follows:</p> <ol style="list-style-type: none"> <li>1. Understand the implications of digital technologies on strategy.</li> <li>2. Understand how digital technologies affect environmental forces and strategic interactions between firms and their competitors.</li> <li>3. Become proficient in analytical and critical thinking; develop skills in reporting conclusions effectively in written and oral form.</li> </ol> <p><i>Knowledge:</i> Apply the principles of strategic decision-making to the digital economy.</p> <p><i>Skills:</i> Expand and elaborate on traditional tools to examine the new business models of the digital economy.</p> <p><i>Competence:</i> Critical, creative, and data-driven thinking; ability to understand and use novel strategies in the digital economy.</p>																
Type of Assessment(s) and performance	<table border="1"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Class participation</td> <td></td> <td>24</td> <td>During the semester</td> </tr> <tr> <td>Assignments (Strategy)</td> <td>Tbd</td> <td>36</td> <td>During the semester</td> </tr> <tr> <td>Written exam</td> <td>Tbd</td> <td>60</td> <td>During the exam week</td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance Points	Due date or date of exam	Class participation		24	During the semester	Assignments (Strategy)	Tbd	36	During the semester	Written exam	Tbd	60	During the exam week
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Class participation		24	During the semester														
Assignments (Strategy)	Tbd	36	During the semester														
Written exam	Tbd	60	During the exam week														
Recommended Literature	<ul style="list-style-type: none"> <li>• The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies   by E. Brynjolfsson and A. McAfee</li> <li>• Platform Revolution: How Networked Markets are Transforming the Economy - and How to Make Them Work for You   G. Parker, M.W. van Alstyne, and S.P. Choudary</li> <li>• Blitzscaling: The Lightning-Fast Path to Building Massively Valuable</li> </ul>																
Module Structure																	
Usability in other Modules/Programmes	-																
Last Approval Date	2021/10/15																

**Resource Allocation [MGT71783]**

Module Coordinator		Klingebiel, Ronald			
Programme(s)		Master in Management			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Foundational strategy knowledge			
Content		The course examines performance consequences of strategic decisions under uncertainty and showcases firms' heuristics for managing their probability of making strategic mistakes. The course explores unique configurations of strategy that permit equifinal success in competitive markets. The strategy configurations address trade-offs made by early and late movers, specialists and generalists, and pure players and integrators make, for example. The course also covers fundamental laws of probability and behaviour that underpin resource-allocation strategy.			
Intended Learning Outcomes		Upon completion, students ought to be able to <ul style="list-style-type: none"> <li>• Negotiate the trade-offs involved in allocating resources to strategic initiatives</li> <li>• Manage the uncertainty inherent in strategic decision making</li> <li>• Apply strategic foresight to anticipate competitive market dynamics</li> </ul>			
Forms of teaching, methods and support		The format includes lecturing as well as interactive exercises and case work.			

Type of Assessment(s) and performance	Type of Assessment	Duration	Performance Points	Due Date
	Assignment	TBD	70	23 Dec 2022
	Presentation	TBD	25	29 Nov 2022 (last date of class)
	Participation	ongoing	25	every class
All grading components test all learning goals.				
Recommended Literature	Each session comes with a list of references. Since this course is at the frontier of knowledge, no single text yet contains all relevant elements. For a foundational overview of strategy, see Grant, R.M. (2016) <i>Contemporary Strategy Analysis</i> , 9th ed For background on resource-allocation challenges, see Bower, J.L., Gilbert, C.G. (2005) <i>From Resource Allocation to Strategy</i> , OUP			
Module Structure	Sessions are organized around specific trade-offs and challenges in resource allocation strategy.			
Usability in other Modules/Programmes	Master's Thesis, Strategic Management Control			
Last Approval Date	2022/06/28			

**Strategy Execution [MGT71481]**

Module Coordinator		Grüning, Michael			
Programme(s)		Master in Management			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		None			
Content		<p>Every successful business needs to develop a strategy and manage its performance. Strategy defines the potential sources for future corporate success and performance management helps companies to successfully implement strategy and to monitor its success. To be able to make the right decisions, managers need to understand the drivers of their strategic advantage, revenues, costs, and the profitability of different services, products, and customers. To achieve this goal, this course provides you with the latest insights, tools and recent examples from corporate practice on strategic decisions, monitoring strategy execution and managing performance. This course covers all important steps of managing the performance within the companies. Starting with strategic investment decisions, followed by implementing and communicating the strategy, measuring the achieved performance and closing the learning loop by adjusting future investment decisions based on prior performance.</p> <p>Throughout the course, we will aim for both, understanding business concepts (“How do executives think?”) as well as analysing business data (“How can data analytics help the organization to be successful?“).</p>			



**Intended Learning Outcomes**
**Knowledge:**

Having taken the course, students can:

- Illustrate how a company develops and sustains competitive advantage,
- Specify how structure supports strategy implementation,
- Recognize how leadership contributes strategy implementation,
- Improve decision making by conducting suitable analyses of financial and non-financial data for a variety of business decisions
- Utilize various methods that help to analyze the successes of strategy implementation.

**Skills:**

With successful completion of the course managerial accounting, you will be able to

- Analyze the strategic positioning of a company,
- Select performance indicators which support the achievement of short and long-term objectives,
- Use statistical methods to understand performance drivers within an organization improve decision making by conducting suitable analyses of financial and non-financial data for a variety of business decisions
- Design and implement an adequate performance management system to implement the company's strategy
- Judge in real business cases how managerial decision making is shaped by using performance measures for decision-making and control.
- Discuss with top executives, people in the finance function as well as other employees information, ideas, problems, and solutions according to their respective area using appropriate terms and economic language.

**Competence:**

On successful completion you become qualified to:

- Moderate strategic processes
- Develop solutions in challenging strategic situations
- Reposition the strategy of a firm based on the analysis of financial and nonfinancial data

The content of this course will be useful for the following career paths:

- General management (being responsible for strategy development and execution, as well as managing the performance of a business function, a business unit, or a non-profit organization and understanding the pitfalls of using incentives)
- Entrepreneurs and consultants (identifying strategic niches, making investment decisions, analyzing and improving profitability)
- Analysts, investors and board members (understanding financial and non-financial performance measures for monitoring strategy execution by company management)
- Anyone who is interested in understanding how analyzing data from different sources such as accounting, employees and customers can help to run organizations better

Forms of teaching, methods and support	<ul style="list-style-type: none"> <li>• Lecture with integrated Excel exercises</li> <li>• In class discussions</li> <li>• Case studies</li> <li>• Student presentations</li> <li>• Online quizzes</li> <li>• Simulation games</li> </ul>																
Type of Assessment(s) and performance	<table border="1" data-bbox="480 607 1378 972"> <thead> <tr> <th>Type of Assessment</th> <th>Duration</th> <th>Performance Points</th> <th>Due Date oder Date of Exam</th> </tr> </thead> <tbody> <tr> <td>Quizzes, individual simulations</td> <td>105 minutes</td> <td>35</td> <td>During the course</td> </tr> <tr> <td>Group presentation, group simulation</td> <td>75 minutes</td> <td>25</td> <td>During the course</td> </tr> <tr> <td>Final exam</td> <td>70 minutes</td> <td>60</td> <td>During exam week</td> </tr> </tbody> </table>	Type of Assessment	Duration	Performance Points	Due Date oder Date of Exam	Quizzes, individual simulations	105 minutes	35	During the course	Group presentation, group simulation	75 minutes	25	During the course	Final exam	70 minutes	60	During exam week
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Quizzes, individual simulations	105 minutes	35	During the course														
Group presentation, group simulation	75 minutes	25	During the course														
Final exam	70 minutes	60	During exam week														
Recommended Literature	A comprehensive reading list will be provided during the course. All readings will be available online.																
Module Structure	<ol style="list-style-type: none"> <li>1. Competitive Environment and Product Portfolio Decisions</li> <li>2. Strategic Investment Decisions</li> <li>3. Size Related Decisions</li> <li>4. Activity Based Costing (ABC) and Activity Based Management (ABM)</li> <li>5. Strategic Analysis of Operating Income</li> <li>6. Value Based Management</li> <li>7. Strategic Alliances, Network and Platform Businesses</li> <li>8. Balanced Scorecard and Strategy Maps</li> <li>9. Transfer Pricing</li> <li>10. Balanced Scorecard Simulation</li> </ol>																
Usability in other Modules/Programmes	Thesis module. The content will be also helpful for other modules/programmes related to consulting, corporate performance, management accounting, and strategic management.																
Last Approval Date	2022/04/27																

**Diversity Management [MGT72071]**

Module Coordinator		Moshtagh Khorasani, Manouchehr			
Programme(s)		Master in Management			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Fundamental knowledge in Leadership, H&R, Strategic Management and Intercultural Management			

Content	<p>Diversity Management (DiM) is a central topic in modern leadership, especially in the context of diversity, equity and inclusion policies within multi-national companies. This includes various fields such as anti-discrimination policies, inclusion policies of different minorities, creative business responses to demographic changes, the design of work-life balance, work-life blend, work-life harmony, and coordination between individual professional careers, family life and organizational goals. The importance of diversity in the workplace has different dimensions ranging from internal dimensions such as age, ethnicity, gender, and physical ability to secondary dimensions such as education, religion, political beliefs, marital status, sexual orientation and language. The central challenge and question of diversity management is to use and activate the individual performance of each individual member of the organization from diverse groups in such a way that all members identify with the goals of the corporation regardless of their background, beliefs and educational differences. Only this way a company can ensure a long-term success in a diverse global environment and foster innovative approaches. DiM is not only part of CSR (Corporate Social Responsibility), but it is an essential part of modern strategic management ensuring a long-term Human Resources development in the broader social, political and cultural contexts. In this respect, DiM embodies aspects of cross-cultural leadership as well.</p> <p>Companies are facing various dimensions of diversity (gender, age, ethnicity, educational background etc.), and their expressions in different operative areas of management (such as Human Resources, marketing, or public relations and CSR). The tools of DiM can be divided into analytical tools, such as diversity audits, structural design tools, such as organizational development to intervention tools, such as cross-cultural coaching and trainings.</p>
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<b>Intended Learning Outcomes</b>	<p><i>Knowledge:</i>  On successful completion of this module, participants will have acquired knowledge about fundamental theoretical and practical aspects of DiM, i. e. they</p> <ul style="list-style-type: none"> <li>• can explain different types of diversity and their main concepts and their influence on working processes</li> <li>• understand the different approaches to manage this issue in organizations</li> <li>• know instruments to leverage diversity and reduce conflicts</li> </ul> <p><i>Skills:</i>  Participants will be able to apply DiM concepts and tools, i.e. they can</p> <ul style="list-style-type: none"> <li>• analyze the current situation in the context of specific business entities</li> <li>• define diversity goals and strategies</li> <li>• be able to work out diversity programs</li> </ul> <p><i>Competence:</i>  Participants will acquire the competence to apply DiM knowledge and tools to their leadership tools, professional activities, and personal situation. Particularly, they will be able to</p> <ul style="list-style-type: none"> <li>• detect discriminatory behavior and stereotypes</li> <li>• analyze their own perception and reaction</li> <li>• act as change agents within their field of responsibility</li> </ul>												
<b>Forms of teaching, methods and support</b>	Concepts, theoretical foundations, and tools of DiM are taught by interactive lectures that include case studies. The classroom debates contribute to the learning process. Preparation and the delivery of group presentations are also an essential part of the seminar.												
<b>Type of Assessment(s) and performance</b>	<table border="1" data-bbox="480 1249 1378 1570"> <thead> <tr> <th>Type of examination</th> <th>Duration or length</th> <th>Performance Points</th> <th>Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td>Final exam (5 open-end questions)</td> <td>90 minutes</td> <td>80</td> <td>Will be announced</td> </tr> <tr> <td>Group presentations (each group of 3 members)</td> <td>circa 30 slides</td> <td>40</td> <td>During classes</td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance Points	Due date or date of exam	Final exam (5 open-end questions)	90 minutes	80	Will be announced	Group presentations (each group of 3 members)	circa 30 slides	40	During classes
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Recommended Literature	<ul style="list-style-type: none"> <li>• Bourke (2017). Diversity and Inclusion: The Reality Gap. Deloitte Insights.</li> <li>• Brock, N. (2021). Top Challenges of Diversity in the Workplace. Fraser Dove International.</li> <li>• Department for Business, Innovation and Skills (2013): The Business Case for Equality and Diversity - A Survey of the Academic Literature</li> <li>• Devillard, Sandrine et al. (2016): Women Matter 2016. Reinventing the workplace to unlock the potential of gender diversity</li> <li>• Bruchhagen, Verena et al. (2010): Social Inequality, diversity and equal treatment at work: The German Case, in: Klarsfeld, Alan, ed.: International Handbook on Diversity Management at Work: Country Perspectives on Diversity and Equal Treatment, Edward Elgar Publishers, pp. 109-138.</li> <li>• Gallo, A. (2015). How to Speak Up About Ethical Issues at Work. Harvard Business Review.</li> <li>• Jouany, V. and Martic, K. (2021). Diversity and Inclusion: Best Practices to Focus on in 2021. SMARP.</li> </ul>
Module Structure	A lecture on diversity introduces the participants into the theory of DiM and all relevant dimensions from gender to culture. The lecturer presents theoretical background and provides an overview about current challenges in business organizations. Subsequently, detailed information on instruments of diversity management in business is given. Additionally, the students apply this knowledge to their presentations.
Usability in other Modules/Programmes	Other Electives; Master's Thesis
Last Approval Date	2022/03/08

**Change Management [MGT72491]**

Module Coordinator		Mädler, Markus			
Programme(s)		Master in Management			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Successful completion of the MiM modules: Leadership (MiM core curriculum) Managerial Decision-Making and Power, Politics and Social Networks (MiM concentration ?People, Management & Organizations?)			

<p>Content</p>	<p>Change is the only constant in life – for individuals, teams, and organizations (as well as societies and the human race). It might be driven by external or internal forces; it might be incremental or radical, gradual or abrupt, forced or voluntary, reactive-adaptive or active-formative, for better or, sadly, sometimes also for worse. But one thing it might never be: easy.</p> <p>This module aspires to build critical competences that students will need if they want to act as effective champions of positive change in a variety of roles in the future. Unlikely to be mandated immediately to lead change from the top, students will nevertheless play an important role as professionals, middle managers, or consultants in translating change intent into change action, change stickiness, change durability and, ultimately, change success.</p> <p>To build those competences, the module draws on insights from classical and contemporary theory as well as cutting-edge practice of individual, team, and organizational change in a variety of settings and from A to Z. This includes, but is not limited to: causes, triggers, and effects of change, the role of vision, purpose, and culture; strategies and implementation; the human sides of change, motivations for and against change; enablers, blockers, and derailers; leadership and followership, and so on.</p> <p>The module also connects change management as a personal and social process of “transformation” to other contemporary “transformations” along multiple dimensions, such as customer transformation, business model transformation, digital transformation, agile transformation, sustainable transformation, or DEI culture transformation.</p>
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<p>Intended Learning Outcomes</p>	<p><b>Knowledge &amp; Comprehension</b>  On successful completion of this module, students will:</p> <ul style="list-style-type: none"> <li>Recognize the importance and features of change mindset and change culture for the sustained success of individuals, teams, and organizations.</li> <li>Distinguish and describe the main academic theories (models, frameworks) and industry practices (methods, tools) of successful contemporary change management through people.</li> </ul> <p><b>Application of Knowledge</b>  On successful completion of this module, students will:</p> <ul style="list-style-type: none"> <li>Critically analyze, synthesize and evaluate change challenges from different perspectives and with a focus on key success factors.</li> <li>Develop concrete proposals to effectively address complex real-world change management challenges through people.</li> </ul> <p><b>Communication &amp; Cooperation</b>  On successful completion of this module, students will:</p> <ul style="list-style-type: none"> <li>Proactively and constructively contribute to interdisciplinary teams in order to achieve common change goals.</li> <li>Convincingly present and/or discuss concrete and coherent change recommendations in spoken and written communication.</li> </ul> <p><b>Professionalism &amp; Self-image</b>  On successful completion of this module, students will:</p> <ul style="list-style-type: none"> <li>Self-assess their potential for becoming successful change agents based on the necessary personal virtues and traits, ethical values, professional standards, managerial competencies, and leadership styles.</li> <li>Champion change along a variety of dimensions and contribute to positive personal, team, organizational and societal change that serves to create shared economic, social and environmental value.</li> </ul>																
<p>Forms of teaching, methods and support</p>	<p>The module employs the following teaching methods and support:</p> <ul style="list-style-type: none"> <li>Lectures</li> <li>Case study discussions</li> <li>Workshops</li> <li>Group work</li> <li>Presentations</li> </ul>																
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<p>Recommended Literature</p>	<p>Textbook:</p> <ul style="list-style-type: none"> <li>• Cameron, Esther and Green, Mike (2020). Making Sense of Change Management, 5th Edition, Kogan Page Ltd.</li> </ul> <p>Readings:</p> <ul style="list-style-type: none"> <li>• Jensen Clayton, Sarah (2021). An Agile Approach to Change Management. HBR.org Digital, January 11, 2021 [H06338-PDF-ENG].</li> <li>• Raffaelli, Ryan (2018). Leading and Managing Change. Harvard Business School [HBS 9-415-040].</li> <li>• Worley, Christopher G., Williams, Thomas, Lawler III, Edward E. (2016). Creating Management Processes Built for Change. MIT Sloan Management Review [SMR569-PDF-ENG].</li> </ul> <p>Case Studies:</p> <ul style="list-style-type: none"> <li>• Unilever’s New Global Strategy: Competing through Sustainability [HBS 9-916-414].</li> <li>• Tony Hsieh at Zappos: Structure, Culture and Radical Change [Insead IN1249-PDF-ENG].</li> </ul>
<p>Module Structure</p>	<p>Session Topic Preparation</p> <p>1 Introducing Change Management Case: Unilever</p> <p>2 Purpose &amp; Goals of Change Textbook: Chapters 9, 10</p> <p>3 Theory &amp; Practice of Change Management Reading: Raffaelli</p> <p>4 The Role of the Individual Textbook: Chapters 1, 5</p> <p>5 The Role of the Team Textbook: Chapter 2</p> <p>Reading: Jensen</p> <p>6 The Role of the Organization Textbook: Chapters 3, 8</p> <p>7 Taking Change Actions Textbook: Chapters 4, 5</p> <p>8 Change across the Globe Case: Zappos</p> <p>9 Change &amp; VUCA Textbook: Chapters 11, 12</p> <p>10 Crafting Successful Change Initiatives Textbook: Chapter 13</p> <p>Reading: Worley et al.</p> <p>11 Change as a Destination Project presentation</p>
<p>Usability in other Modules/Programmes</p>	<p>The module is a prerequisite for the concentration-closing module ? Learning through Action ? Applied Topics in Management? and the Master?s Thesis.</p>
<p>Last Approval Date</p>	<p>2022/05/02</p>

**Machine Learning for Big Data [FIN72032]**

Module Coordinator		Roßbach, Peter			
Programme(s)		Master in Management			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		-			
Content		<p>Machine Learning as part of Data Science is an emerging field in industry and academics. It covers methodologies and algorithms to tackle the challenges in times of big data, where we are confronted with large amounts of high-dimensional data of different types. While the classical statistical methods have some weaknesses in this area, new types of methods and algorithms have been developed. Today, they are widely used in science and practice benefitting from calculation power of modern computer technologies. These methods are a mixture of statistics, machine learning, data visualization, and computer science.</p> <p>This course provides an introduction into the field of machine learning, covering computational techniques and algorithms for finding and analyzing patterns even in large-scale datasets. Topics to be covered include data collection, integration, analysis, visualization, segmentation, classification, prediction and decision making. Students will implement and apply the methods using the software R.</p>			

<p>Intended Learning Outcomes</p>	<p><i>Knowledge:</i>  Students will acquire a comprehensive understanding of the challenges of data analysis in times of big data and learn how to apply modern methods of data analytics to different application areas, i.e. they can:  Explain the specifics of data analysis in the case of big data  Explain the differences between statistics and machine learning  apply modern methods of machine learning to different application areas</p> <p><i>Skills:</i>  Students learn to analyse data, choose the appropriate modeling techniques and to construct models for decision support. They also learn how to implement the data analytics processes using modern analytical languages like R. They are able to:  Choose the appropriate methods according to the problem to solve  Develop the analytics processes via different data analytics tools  Train and tune the models to achieve the optimal results  Analyse the resulting models to find the best solution</p> <p><i>Competencies:</i>  Students are qualified to find and analyse patterns in data and to transform the gained knowledge into managerial decisions. They acquire a fundamental background to fulfill the demands of a modern data scientist. They are able to:  Understand the underlying business problems  Identify the problem relevant data  Build quantitative models to solve the problem choosing from a variety of methods  Transform the models results into managerial decisions</p>												
<p>Forms of teaching, methods and support</p>	<p>Lecture with in-class and home exercises, practical group work using Excel and R.</p>												
<p>Type of Assessment(s) and performance</p>	<table border="1"> <thead> <tr> <th data-bbox="480 1283 700 1361">Type of examination</th> <th data-bbox="700 1283 935 1361">Duration or length</th> <th data-bbox="935 1283 1155 1361">Performance Points</th> <th data-bbox="1155 1283 1375 1361">Due date or date of exam</th> </tr> </thead> <tbody> <tr> <td data-bbox="480 1361 700 1496">Group project oral presentation</td> <td data-bbox="700 1361 935 1496">ongoing</td> <td data-bbox="935 1361 1155 1496">60</td> <td data-bbox="1155 1361 1375 1496">During the module</td> </tr> <tr> <td data-bbox="480 1496 700 1630">Group project text document</td> <td data-bbox="700 1496 935 1630">ongoing</td> <td data-bbox="935 1496 1155 1630">60</td> <td data-bbox="1155 1496 1375 1630">At the end of the module</td> </tr> </tbody> </table>	Type of examination	Duration or length	Performance Points	Due date or date of exam	Group project oral presentation	ongoing	60	During the module	Group project text document	ongoing	60	At the end of the module
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Group project oral presentation	ongoing	60	During the module										
Group project text document	ongoing	60	At the end of the module										

Recommended Literature	<p><b>General Introduction:</b></p> <ul style="list-style-type: none"> <li>• Alpaydin, E. (2016): Machine Learning: The New AI, MIT Press Essential Knowledge</li> <li>• Schutt, R.; O’Neil, C. (2013): Doing Data Science, O’Reilly Media</li> <li>• Schmarzo, B. (2016): Big Data MBA, Wiley</li> </ul> <p><b>Methods and Algorithms:</b></p> <ul style="list-style-type: none"> <li>• Alpaydin, E. (2016): Introduction to Machine Learning, Third Edition, MIT Press</li> <li>• Hastie, T.; Tibshirani, R.; Friedman, J. (2009): The Elements of Statistical Learning, Second Edition, Springer</li> <li>• James, G.; Witten, D.; Hastie, T.; Tibshirani, R. (2013): An Introduction to Statistical Learning with Applications in R, Springer</li> </ul>
Module Structure	<p><b>1. Big Data</b></p> <p><b>2. Fundamentals of Machine Learning</b></p> <p>2.1 What is Data Science?</p> <p>2.2 Statistics and Machine Learning</p> <p>2.3 Data Preparation</p> <p>2.4 Exploratory Data Analysis</p> <p><b>3. Methods, Algorithms, and Applications</b></p> <p>3.1 Classification</p> <p>3.2 Regression</p> <p>3.3 Segmentation</p> <p>3.4 Association Analysis</p>
Usability in other Modules/Programmes	-
Last Approval Date	2021/09/27

**Data Visualization & Storytelling [MGT71587]**

Module Coordinator		Chirila, Cezar			
Programme(s)		Master in Management			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One acadmic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Basic understanding of the tools used in the course is beneficial, but not strictly required: PowerPoint, Tableau, R. Basic understanding of data analytics is beneficial, but not strictly required. Laptop with Microsoft Office and R Studio installed, for take-home assignments.			
Content		<p>Storytelling is one of the key skills required for assuring the cooperation of people towards a common goal. A persuasive delivery of your messages is the basis for a successful career, independent of the industry or the organization for which you will choose to work.</p> <p>You will learn how to build clear arguments based on data, how to design credible visualizations that present data in an objective way and how to create content that the audience is interested in. The most established tools for data visualizations will be presented, in order to understand their strengths and limitations. You will start from the basic tools for presentation such as slides and charts and continue with the more advanced interactive data visualization tools currently used in the market. For a more comprehensive and flexible approach, you will review and understand the available open source tools for dashboard development. In this module you will learn how to present in a clear and persuasive manner complex data science models. We will use examples from the banking industry regarding the implementation of regulatory models in the business decision process. We will simulate a real-life working context where you will play the role of the employee responsible for presenting regulatory models to a diverse audience.</p>			

Intended Learning Outcomes	<p>At the end of the learning process the student is able to:</p> <ol style="list-style-type: none"> <li>1. <i>Present clearly data analytics for diverse type of audiences</i></li> <li>2. <i>Understand the audience and create content aligned with the interests of the audience</i></li> <li>3. <i>Build clear arguments for the actionable insights of the presentation</i></li> <li>4. <i>Plan and anticipate questions from the audience and respond appropriately</i></li> <li>5. <i>Design objective graphical representations of the data</i></li> <li>6. <i>Utilize appropriate visualizations for the content and the complexity of the topic</i></li> <li>7. <i>Create interactive data visualizations using large data samples</i></li> <li>8. <i>Understand and update open source dashboards based on existing code base</i></li> </ol>												
Forms of teaching, methods and support	<p><i>Lecture with interactive case studies and related discussions. The technical sessions involving data visualizations tools (Microsoft Office, Tableau, R) will be accompanied by preparation in classroom.</i></p>												
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Individual case study presentation	approx. 1 week	30	middle of course period										
Recommended Literature	<ul style="list-style-type: none"> <li>• <i>Wayne C. Booth, Gregory G Colomb, Joseph M. Williams, The Craft of Research</i></li> <li>• <i>Cole Nussbaumer Knaflic, Storytelling with data</i></li> <li>• <i>Shiny R package presentation <a href="https://shiny.rstudio.com/">https://shiny.rstudio.com/</a></i></li> <li>• <i>Tableau learning content <a href="https://www.tableau.com/learn">https://www.tableau.com/learn</a></i></li> </ul> <p><i>Further required references will be given in the course</i></p>												
Module Structure	<p>Module outline (tentative):</p> <ol style="list-style-type: none"> <li>1. Introduction</li> <li>2. Storytelling</li> <li>3. Data Visualizations</li> <li>4. Understanding Credit Risk</li> <li>5. The Classical Tools</li> <li>6. Interactive Data Visualizations</li> <li>7. Open Source Data Analytics</li> <li>8. Case Study</li> </ol>												
Usability in other Modules/Programmes	Electives and Master?s Thesis												
Last Approval Date	2022/05/02												

**Business Simulation & Algorithms  
[QUM71124]**

Module Coordinator		Strohhecker, Jürgen			
Programme(s)		Master in Management			
Term		Semester 3 Q1			
Module Duration		1 Semester			
Compulsory/Elective Module		Concentration Module			
Credits:		6			
Frequency		Annually			
Language		English			
Total Workload	150 h	Academic Teaching Hours:	44	Remaining Workload:	Self-study
		One academic teaching hour corresponds to 40 minutes.			
		Self-study includes lesson preparation and follow-up activities, reading assignments, assessment preparation, take-home assignments, etc.			
Prerequisites		Students need a Windows (!) computer with discrete event simulation software installed. Installation instructions will be made available via Canvas.			
Content		<p>In this module, students will learn to conduct business simulation studies using the discrete event simulation method (DES) to address a broad range of management challenges, specifically in operations. These challenges are drawn from various areas including process improvement, waiting systems, inventory management, supply chain management, scheduling, supply and demand planning.</p> <p>Students will learn how to develop stochastic models, analyse and provide empirical data, simulate their models, conduct Monte Carlo and “what if” simulations, analyse and interpret the stochastic results and communicate their findings to a management audience. Both general software packages (for example Microsoft Excel) and specific discrete event simulation software are used.</p> <p>By successfully passing this module participants will have the knowledge and tools at hand to conduct consulting projects using the discrete event simulation method.</p>			



<p>Intended Learning Outcomes</p>	<p><b>Knowledge:</b>  On successful completion of the module, the participants will have knowledge of the discrete event simulation technique as an important tool for supporting managerial decision making. They can</p> <ul style="list-style-type: none"> <li>describe this technique</li> <li>explain and operate it</li> <li>evaluate it and discuss strength and weaknesses</li> </ul> <p><b>Skills:</b>  On successful completion of the module, students will have the proven ability to apply DES to practice-oriented challenges, i.e. they can</p> <ul style="list-style-type: none"> <li>analyse, structure and classify a range of management challenges in practice and theory</li> <li>develop an adequate DES model and test it</li> <li>analyse the model to solve a management challenge</li> <li>use general software packages and specific simulation software to support quantitative modelling</li> </ul> <p><b>Competencies:</b>  Successful module participants develop the competence to provide responsible contributions addressing management challenges. Specifically, they can</p> <ul style="list-style-type: none"> <li>present management challenges and models to a management audience</li> <li>present model-based results and scenarios to a management audience</li> <li>argue competently about adequate problem solution strategies</li> </ul>												
<p>Forms of teaching, methods and support</p>	<p>Teaching format consists of interactive lectures, workshop-style lectures, self-study elements, exercises, modelling challenges and a small-scale practice project. Participants will often work in small groups with close interaction with the lecturer. Teaching builds on the idea that discrete event modelling is best acquired through learning by doing, i.e. through applying it to various hands-on challenges.</p>												
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Recommended Literature	Kelton, W. David; Sadowski, Randall P.; Zupick, Nancy B.: Simulations with Arena, 6th ed: McGraw-Hill, 2014 Kelton, W. David; Smith, Jeffrey S.; Sturrock, David T.: Simio & Simulations, Modeling, Analysis, Applications, 2nd ed., McGraw-Hill, 2011
Module Structure	Session    Topic 1    Introduction to Simulation & Simulating 1-Step Processes 2    Simulating Multistep Processes 3    How to Conduct a Simulation Study 4    Analysing Data and Model Input 5    Introduction to the Practice Case Study 6    Simulating Process Setups 7    Simulating Maintenance and Breakdowns 8    Simulating Processes with Multiple Flow Units 9    Conducting Simulation Experiments 10   Analysing Model Output and Presenting Results 11   Practice Case Study Presentations
Usability in other Modules/Programmes	Thesis, Electives
Last Approval Date	2022/04/29