



Modulhandbuch

Zertifikatskurse

Wintersemester 2017/2018

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1 Business Analytics Drives Innovation (English)

Token / Number:	BADI
English title:	Business Analytics Drives Innovation
Credits:	6 ECTS
Semester hours:	
Language:	Englisch
Turn / Duration:	every Winter Term / 1 Semester
Module authority:	Prof. Dr. Leo Brecht
Training staff:	Prof. Dr. Leo Brecht
Integration of module into courses of studies:	Innovation and Science Management, M.Sc., Compulsory Elective Module; Business Analytics, M.Sc., Compulsory Elective Module
Requirements (contentual):	Basics knowledge in applied statistics and in mathematical logic is an asset.
Learning objectives:	The participants of the module „Business Analytics Drives Innovation“ are taught the basic techniques of Business Analytics in order to being able to derive innovations in the area of products, services, business models and processes. Contrary to other modules in the area of Business Analytics, which usually aim at developing Industry 4.0 applications (e.g. for Predictive Maintenance), in this module we apply Data Analytics techniques to generate innovations. These areas of applications are relatively new, but are becoming increasingly popular in industry as well as in the public sector. The learning goals target professionals responsible for technology foresight, business development as well as costumer and product management. In addition to explaining and discussing analytic techniques, the participants will be enabled to purposefully apply selected systems and tools and to understand and correctly select the underlying data bases. The module „Business Analytics Drives Innovation“ is subdivided in three topics: Innovation by Technology Push, Innovation by Market Pull, and Innovation by Digital Models.

- Content:
- **Innovation by Technology Push:**
 - Which Technology and Innovation Fields are relevant?
 - How can you anticipate Trends and foresight Technology?
 - Individual cases concerning Technology and Innovation Management (TIM)
 - Applications with NETCULATOR (interactive working session).
 - **Innovation by Market Pull:**
 - How to position your products right?
 - Do you know the costumer?
 - Individual cases concerning Product and Portfolio Management (ProMM)
 - Optimizing product portfolios using customer analytics with KNIME
 - **Innovation by Digital Models:**
 - Agile Strategy Design for Digital Transformation
 - Initiation und Digital Reality Sprint, Digital Ambition Sprint
 - Option Generation and Option Evaluation, Implementation

Literature:	<ul style="list-style-type: none"> - Buttle F., Maklan S. (2015), Customer Relationship Management. Concepts and technologies. Third edition. Routledge Aingdon (UK)/ New York (USA). ISBN: 978-1138789838. - Georghiou L., Harper J. C., Keenan M., Miles I., Popper R. (2008), The Handbook of Technology Foresight. Concepts and Practice. Edward Elgar Publishing Limited, Cheltenham (UK)/Massachusetts (USA). ISBN: 978-1-84542-586-9. - Reger G. (2001), Technology foresight in companies: From an indicator to a network and process perspective. In: Technology Analysis & Strategic Management. Volume 13, Issue 4, Pages: 533-553. - Stein A., Smith M., Lancioni R. (2013), The development and diffusion of customer relationship management (CRM) intelligence in business-to-business environments. In: Industrial Marketing Management. Volume 42, Issue 6, Pages 855-861 (Elsevier). - Stelzer B., Meyer-Brötz F., Schiebel E., Brecht L. (2015), Combining the scenario technique with bibliometrics for technology foresight: The case of personalized medicine. In: Technological Forecasting & Social change 98, Pages 137-156 (Elsevier).
Modes of learning and teaching:	<p>On-campus meetings:</p> <ul style="list-style-type: none"> - deepening exercises/case studies: 32 h (4 days) - exam: 0,5-2 h (depending on type of exam) <p>Online-Learning:</p> <ul style="list-style-type: none"> - Online seminar for exam preparation: 4 h - Self-study based on videos: 12 h - Self-study based on scripts: 40 h - Self-study based on literature: 20 h - Self-study for exam preparation: 70 h
Estimation of effort:	<p>Studying of learning matters: 142 h</p> <p>deepening exercises/case studies: 32 h</p> <p>Online seminar for exam preparation: 4 h</p> <p>exam: 0,5-2 h (depending on type of exam)</p> <p>Sum: 180 h</p>
Course assessment and exams:	<p>For admission to the exam (written or oral) the following requirements have to be met:</p> <ul style="list-style-type: none"> - Participation in at least 2 on-campus days - Work on compulsory online material <p>In case of hardship the candidate can write a formless request to the coordinator in order to be given admission to the exam. In case of sickness a doctor's certificate has to be submitted to the coordinator.</p> <p>The type of exam will be announced at the beginning of the module.</p>
Requirements (formal):	no compulsory prerequisites
Grading:	The grade of the module will be the grade of the exam.

2 Strategic Process Management (English)

Token / Number:	SPM_EN
English title:	Strategic Process Management
Credits:	6 ECTS
Semester hours:	
Language:	Englisch
Turn / Duration:	every Winter Term / 1 Semester
Module authority:	Prof. Dr. Leo Brecht
Training staff:	Prof. Dr. Leo Brecht
Integration of module into courses of studies:	Innovation and Science Management, M.Sc., Compulsory Module
Requirements (contentual):	Introduction to business administration/Einführung in die BWL und Controlling (recommended)
Learning objectives:	<p>Participants of the module „strategic process management“ will receive systematic training in developing, designing and controlling business processes. The central goal is to provide students with instructions that ensure a systematic transformation of business processes. This approach solves the increasing complexity of business processes and prepares corporations for the growing demands of an accelerated, digitalized and globalized world economy. The module is central to the Master programme Innovation and Science Management („Innovations- und Wissenschaftsmanagement“), since it provides proven and tested methods for a systematic transformation of digital and operative processes in corporations.</p> <p>The graduates of this module are able to design, develop and enhance new processes and to assess and ensure their sustainability without neither knowing detailed descriptions nor applying modelling languages. The participants learn about corporate strategy and how to operationalize it into a digital process architecture using new technologies. They will recognize that technology does not only fulfill the role of an „enabler“ but also the role of transferring. The students are taught a variety of techniques (structured instructions for action), which make it possible for them to realize process transformations.</p>
Content:	<ul style="list-style-type: none"> - Introduction - Basic definitions and requirements - Existing concepts of process-oriented management - Meta-model of process management in the context of digital transformation - Process design (radical redefining of operative processes) and cases - Process control (leading of operative processes through measurement) and cases - Process development (innovations of processes) and cases - Technology as „enabling“ factor for new solutions - Activities for the realization of process management - Techniques for designing, leading and development - Case examples from industry - Outlook on further topics

Literature:	<ul style="list-style-type: none"> - Breyfogle F.W., III (2014) The Business Process Management Guidebook: An Integrated Enterprise Excellence BPM System. Smarters Solutions, Inc. Citius Publishing, Austin, Texas (USA). ISBN: 9780982923115 - Davenport T. H. (1993) Process Innovation: Reengineering Work through Information Technology. Harvard Business School Press, Boston, Massachusetts (USA). ISBN: 9780875843667. - Von Rosing M., Von Scheel H., Scheer A.W. (2014) The Complete Business Process Handbook: Body of Knowledge from Process Modeling to BPM, Volume 1. Morgan Kaufmann, Burlington, Massachusetts (USA). Elsevier. ISBN: 9780127999593.
Modes of learning and teaching:	<p>On-campus meetings:</p> <ul style="list-style-type: none"> - Introduction: 8 h (1 day) - deepening exercises/case studies: 16 h (2 days) - exam: 0,5-2 h (depending on type of exam) <p>Online-Learning:</p> <ul style="list-style-type: none"> - Online group work: 60 h - Self-Study: 90 h - Online seminar for exam preparation: 4 h
Estimation of effort:	<p>Studying of learning matters: 40 h</p> <p>deepening exercises/case studies: 132 h</p> <p>Other: 6 h</p> <p>exam: 0,5-2 h (depending on type of exam)</p> <p>Sum: 180 h</p>
Course assessment and exams:	<p>For admission to the exam (written or oral) the following requirements have to be met:</p> <ul style="list-style-type: none"> - Participation in at least 2 on-campus days - Work on compulsory online material <p>In case of hardship the candidate can write a formless request to the coordinator in order to be given admission to the exam. In case of sickness a doctor's certificate has to be submitted to the coordinator.</p> <p>The type of exam will be announced at the beginning of the module.</p>
Requirements (formal):	no compulsory prerequisites
Grading:	The grade of the module will be the grade of the exam.