Course
BAE2342 – Innovation Processes
2 SWS, 2 credits
Language: English, advanced level, 4th semester
Lecture and location: Monday, 11:30-13:00 in alfavie room
https://app.alfaview.com/#/join/alfaview-technik/e3e39c6e-a1f1-4d93-b8c7-9c3bf7561d1c/470a3143-fc60-4bca-aa3b-e6cbe1022f50
Further details to be announced via e-learning (sign in and check regularly)

Instructor
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Requirements
- BAE1021 Cost and performance calculation
- BAE2292 Controlling

Learning outcome
Students have a good knowledge of methods of modern innovation management and know how to apply them in a process-oriented company.

Content
Students learn the basic tools of innovation management that are needed to understand, develop and innovate a business and to ensure the effectiveness, efficiency and sustainability of a company (e.g. product-oriented innovation, process-oriented innovation, business-model-oriented innovation). Short case studies give them an insight into the application of innovation methods.
The management of innovation is part of the implementation of the corporate strategy and can relate, among other things, to products, services, production processes, organizational structures, and management processes. While product innovations generally aim to better satisfy the needs of customers, process innovations are mostly aimed at improving the effectiveness and efficiency of processes. Successful implementation of an idea to a product or business model requires a structured innovation process. This process must be initiated, controlled and monitored in a company.

Course contributions to program goals

	Learning Objective	Contribution
1.1	Students demonstrate key knowledge in Technical Basics.	
1.2	Students demonstrate key knowledge in Mechanical Engineering.	

1.3	Students demonstrate key knowledge in Business Administration.	
1.4	Students demonstrate key knowledge in Economics.	
1.5	Students demonstrate key knowledge in Mathematics.	
1.6	Students demonstrate key knowledge in Quantitative Methods.	
1.7	Students demonstrate key knowledge in Computer Science.	
2.1	Students demonstrate proficiency in using current computer programs to solve business and technical problems.	
2.2	Students demonstrate the ability to use information systems effectively in real world business settings.	
3.	Students are able to apply analytical and critical thinking skills to complex problems.	Students are able to use various activities along the stages of the innovation process on the level of an innovation project.
4.	Students are able to develop business ethics-based strategies and are able to apply them to typical business decision-making problems.	
5.1	Students demonstrate their ability to express complex issues in writing.	
5.2	Students demonstrate their oral communication skills in presentations and lectures.	
6.	Students show that they are able to work successfully in a team by performing practical tasks.	Students are able to employ on evaluation methods for different stages of idea and concept screening and selection within a team.
7.1	Students show that they have relevant knowledge and methodological expertise in international management in engineering.	
7.2	Students have the ability for analytical and critical reflection and for developing solutions for problems in international management in engineering.	Students are able to use methods and instruments of the innovation management for challenges in international management and engineering.
7.3	Students show that they are able to apply their competencies of international management in engineering to practical cases.	Students are able to use various activities along the stages of the innovation process on the level of an innovation project with global context.

Grading

- ‘Very good’ (A grade) signifies that the performance is above and beyond expectations.
- ‘Good’ (B grade) means that the performance is good and above average.
- ‘Satisfactory’ (C grade) means that it is an average performance containing insufficiencies but principally appropriate to the expectations.
- ‘Adequate’ (D grade) describes a below-average performance with obvious deficiencies.
- ‘Inadequate’ (E grade) is an unacceptable performance that is not sufficient to any expectations.

Course materials

- Gaubinger, K. et al (2015): Innovation and Product Management – A Holistic and Practical Approach to Uncertainty Reduction. Springer-Verlag. Berlin

- Eckert, R. (2017): Business Innovation Management. Geschäfts-modellinnovationen und multidimensionale Innovationen im digitalen Hyperwettbewerb. SpringerGabler: Wiesbaden.
- Becker, J. / Kugeler, M. / Rosemann, M. (2008): Prozessmanagement – Ein Leitfaden zur prozessorientierten Organisationsgestaltung. 6th edition, Berlin: Springer.
- Gaitanides, M. (2006): Prozessorganisation. Entwicklung, Ansätze und Programme des Managements von Geschäftsprozessen. 2nd edition, München: Vahlen.
- Horváth & Partners (2005): Prozessmanagement umsetzen. Stuttgart: Schäffer-Poeschel.
- Mayer, R. (1998): Prozeßkostenrechnung – State of the Art; Prozeßkostenmanagement. 2nd edition, Stuttgart: n.p..
- Lunau, S. / Staudter, C. et al. (2013): Design for Six Sigma+Lean Toolset. Mindset for Successful Innovations. Berlin et al.: Springer.

My teaching philosophy

My aim is to ensure that you have a successful learning progress and an understanding of the practical importance of the learning content. When you don't understand a learning step, you should pose a question during the lesson or afterwards. I want to support every student who is committed to take the required knowledge and to pass the exams successfully.

Tentative Schedule (changes tba)

Date	Theme
	1. Process Management
	1.1 Process Leadership
	1.2 Process Governance
	1.3 Technology
	1.4 Process Organization
	1.5 Project Execution
	2. Fundamentals of Innovation and Product Management
	2.1 Corporate Success Through Market Driven Innovation
	2.2 Integrated Innovation/Product Mgt: A Process Oriented Framework
	2.3 The Front End of Innovation
	2.4 Innovation Strategy
	3. Process of Innovation and Product Management
	3.1 Idea Management and Open Innovation
	3.2 Creativity Techniques
	3.3 Product Concept
	3.4 The New Product Development
	3.5 Life Cycle Management
	4. Applied methods of Innovation Management
	4.1 Persona
	4.2 Customer Empathy Map
	4.3 Value Proposition
	4.4 Business Model Canvas

	4.5 Testing Business Ideas
	5 Innovation Project
	5.1 Definition
	5.2 Research
	5.3 Preparation
	5.4 Presentation
	5.5 Discussion

Rules for proper academic work

The lecturer appreciates a substantial exchange between the students, because the fellow students may have valuable contributions to the comprehension of occurring problems or questions.

Following the arguments, collaboration and an autonomous exercise solving or the discussions on upcoming questions within the lectures are fundamental for a clearer understanding of the subject matter.

Large class sizes and foreign languages imply a risk of a high noise level, which has a strong negative influence on the work climate, knowledge acquisition and collaboration. Predominantly, a high noise level is caused by a few group members. These ‘troublemakers’ hinder the other ones from being able to concentrate and therefore won’t be tolerated and will be ejected from the class.