Syllabus

Kursbeschreibung

Titel der Lehrveranstaltung	Study project
Code der Lehrveranstaltung	47522
Zusätzlicher Titel der Lehrveranstaltung	
Wissenschaftlich-disziplinärer Bereich	NN
Sprache	Englisch
Studiengang	Master in Industrie- und Maschineningenieurwesen
Andere Studiengänge (gem. Lehrveranstaltung)	
Dozenten/Dozentinnen	
Wissensch. Mitarbeiter/Mitarbeiterin	
Semester	Alle Semester
Studienjahr/e	2
KP	5
Vorlesungsstunden	tbd
Laboratoriumsstunden	tbd
Stunden für individuelles Studium	tbd
Vorgesehene Sprechzeiten	15
Inhaltsangabe	In a study project, a complex task with special consideration of theoretical foundations is dealt with a practical example. The results are presented in a project report and an oral presentation. It must be supervised by at least two lecturers from the academic staff of the Master course or an interdisciplinary teaching team, whose members can act as coach and mentor. The students have the possibility, in consultation with their supervisor, to work together with an external partner from industry on a company project.

	Study projects can be individual or team projects. Team projects are limited to a maximum number of 6 students; the number of participating students is based on the complexity of the study and the workload needed to complete the study project tasks. Evidence of the need for a group to complete a task should be given by the main supervisor of the study project.
Themen der Lehrveranstaltung	A list of topics is offered by the teaching staff also together with industrial partners before the beginning of the 3rd semester. Students can also choose topics themselves and propose them to possible supervisors or to the study council. The topic of the study project should fit into the master program and enable to apply theoretical knowledge in practice. Every student/group must submit his/their application for the study project to the administration upon agreement with the supervisor. Projects from the provided list of topics will be approved by default, while others will be examined and approved by the Study Council. At the end of the study project, students must write a project report. The project report should follow a scientific structure and consists basically of the following parts: - Objective of the work - State of the art and research - Theoretical foundations and methods - Conceptual part of the work - Practical implementation (in the lab or in the company) - Validation - Summary and Outlook The length of the report should be about 30-40 A4 pages (about 9000-12000 words). The due date for the final version of the report is at least 1 week before the official presentation. At the end of the project, all students present their projects results. The presentation is public and mainly addressed to the master's teaching staff, students and project partners from industry. The duration of the presentation is, for individual projects, 15min with an additional 10 min discussion in English. For group work the presentation time is increased of 10min for each additional student, while the duration of the discussion is decided by the commission.

Stichwörter	
Empfohlene Voraussetzungen	
Propädeutische Lehrveranstaltungen	
Unterrichtsform	Applied research and project work and/or group work in the laboratory or in company.
Anwesenheitspflicht	Compulsory
Spezifische Bildungsziele und erwartete Lernergebnisse	1 - Knowledge and understanding • Review of some topics of the courses of the master's degree (depending on the topics of the study project) 2 - Applying knowledge and understanding • Ability to apply the competences acquired during the master's degree to technical and/or management problems • Ability to integrate competences and to interact with specialists in different fields/areas (e.g., production, automation, design, logistics) 3 - Making judgements • Ability in data research, acquisition and interpretation • Ability to set and solve, possibly in innovative ways, complex problems that may require an interdisciplinary approach 4 - Communication skills • Advanced writing skills (including technical language) • Reporting skills • Oral communication skills • Ability to work in teams 5 - Learning skills • Independent study (taking responsibility for own study/learning/communications) • Autonomous project planning and implementing • Time management
Spezifisches Bildungsziel und erwartete Lernergebnisse (zusätzliche	

Informationen)	
Art der Prüfung	The evaluation of the project work is carried out by the supervisors responsible. Formative assessment In laboratory or in company activities (2,3,4,5) Summative assessment The assessment of the course is: • Written report and oral presentation. Written report to test the ability to use and transfer the acquired knowledge as well as to make judgement and use proper technical language (1,2,3,4). Oral presentation on the project activities (1-5). Project report and project presentation of 15-20 minutes (+10 minutes discussion) (learning outcome criteria 1-5) In the case of a team assessment, the grade is a group result. Evaluation Criteria The language for the report as well as for the project presentation is English.
Bewertungskriterien	Criteria for the evaluation of the project report (70%): scientific structure, methodology, complexity and extent of the work, quality of the written report, quality of the results and autonomous work. Criteria for the evaluation of the project presentation (30%): structure of the presentation, language and communication skills, ability to reply to questions.
Pflichtliteratur	Necessary readings and documents for the study project will be recommended by the supervisors.
Weiterführende Literatur	Supplementary readings will be suggested by the supervisors.
Weitere Informationen	Minimal number of supervisors: 2 supervisors from different courses (or course modules) of the Master program or one

	supervisor from the Master program and one supervisor from an industrial company (exceptions must be approved by the Study Council).
Ziele für nachhaltige Entwicklung (SDGs)	