Syllabus

Course Description

Course Title	Study project
Course Code	47522
Course Title Additional	
Scientific-Disciplinary Sector	NN
Language	English
Degree Course	Master in Industrial Mechanical Engineering
Other Degree Courses (Loaned)	
Lecturers	
Teaching Assistant	
Semester	All semesters
Course Year/s	2
CP	5
Teaching Hours	tbd
Lab Hours	tbd
Individual Study Hours	tbd
Planned Office Hours	
Contents Summary	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.
Course Topics	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.
Keywords	
Recommended Prerequisites	
Propaedeutic Courses	
Teaching Format	Applied research and project work and/or group work in the laboratory or in company.
Mandatory Attendance	Compulsory
Specific Educational Objectives and Learning Outcomes	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
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	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. The language for the report as well as for the project presentation is English
Evaluation Criteria	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.
Required Readings	Necessary readings and documents for the study project will be recommended by the supervisors.
Supplementary Readings	Supplementary readings will be suggested by the supervisors.
Further Information	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).
Sustainable Development Goals (SDGs)	