Freie Universität Bozen
Libera Università di Bolzano
Università Liedia de Bulsan

Syllabus
Course description

Course title	Study Project
Course code	47522
Scientific sector	
Degree	Master in Industrial Mechanical Engineering
Semester	3
Year	*II - mandatory*
Academic year	2019/20
Credits	5
Modular	*no*

Total lecturing hours	
Total lab hours	
Total exercise hours	
Attendance	Compulsory
Prerequisites	None
Course page	https://www.unibz.it/en/faculties/sciencetechnology/master-industrial-mechanical-engineering/

Specific educational objectives	In a study project, a complex task with special consideration of theoretical foundations is dealt within a practical example. The results are presented in a project report and an oral presentation. It has to 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 (and should be defined according to the complexity of the study).

Lecturer/Supervisor	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 have to be approved by the Study Council).
Scientific sector of the lecturer/supervisor	
Teaching language	English
Office hours	By appointment with supervisors

Teaching assistant *(if any)*	/
Office hours	/
List of topics – content of the study project	A list of topics are 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. At the beginning of the 3rd semester (deadline 15. October) every student/group has to submit his/their application for the study project to the Study Council for approval using the related template. Projects from the provided list of topics will be approved by default. At the end of the study project, the students have to 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 2 weeks 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 15-20 min with an additional 10 min discussion in English.
Teaching format	Applied research and project work and/or group work in the laboratory or in company.

Learning outcomes	**1 - Knowledge and understanding** • Review of some topics of the courses of the Master Degree (depending on the topics of the study project) **2 - Applying knowledge and understanding** • Ability to apply the competences acquired during the Master 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

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 a 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.*
Assessment language	The language for the report as well as for the project presentation is English
Evaluation criteria and criteria for awarding marks	Criteria for the evaluation of the project report (70%): scientific structure, methodology, novelty and relevance of the results, completeness, language and practical relevance, creativity in structuring the problem and the

	quality of practical application in the lab. Criteria for the evaluation of the project presentation (30%): structure, presentation style, language and communication skills.

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.