

Syllabus  
**BAE5191 Capstone Seminar**  
Prof. Dr. Raphael Volz, Prof. Dr. Moritz Peter

<b>Level</b>	Master	
<b>Credits</b>	4	
<b>Student Contact Hours</b>	4	
<b>Workload</b>	120 hours	
<b>Prerequisites</b>	Successful completion of all Courses in the Master curriculum	
<b>Time</b>	s. LSF	
<b>Room</b>	s. LSF	
<b>Start Date</b>	s. LSF	
<b>Lecturer(s)</b>	<b>Name</b>	Raphael Volz Prof. Dr. Moritz Peter
	<b>Office</b>	See Homepage
	<b>Office Hours</b>	See Homepage
	<b>Phone</b>	See Homepage
	<b>Email</b>	See Homepage

## **Summary**

The Capstone Project is the final project in the Master's programme in Industrial Engineering & Management:

- Students should work on a complex and company-related task in project form,
- They consider a variety of perspectives within the framework of the project;
- A variety of different methods, theories and tools - which have already been taught in courses in the Bachelor's and Master's degree programmes - can and should be used here and
- produce concrete results in an interdisciplinary problem-solving approach.
- The design of the work is determined very independently by the students in consultation with the company and the supervising professors.
- The project is concluded with a final presentation (including discussion) at the company.

## **Prerequisites:**

Successful completion of all Courses in the Master curriculum

## **Course Topics:**

Still to be defined with industry partner; alternative case studies

## **Contribution to program goals:**

The module contributes to program goals in various fields:

- Students will apply management principles and foster their leadership skills
- Students are able to analyse complex in-company and inter-company problems and challenges from different perspectives and/or within an international context.
- Students will improve their ability to use scientific research methods during the course of the project. Students are proficient in the methods of project management and are successfully able to organize, conduct and manage projects
- Students will apply interdisciplinary knowledge from engineering and management in order to develop creative solutions to complex in-company and inter-company problems and present their achieved results/problem solution within the framework of the final presentation

## **Tentative Schedule**

Still to be defined with industry partner or Co-lecturer (Volz)

## Teaching and Learning Approach

The instructors are available to assist at any time during the course and will be supporting the students with helpful advice. Preferred communication mode is the face-to-face communication or via email.

## Regulations for graded performance:

Attendance in every session is required in order to receive the credits.  
Active participation in groupwork and presentation is evaluated as listed:

Active participation in team work /quality of contribution	60 %
Intermediate and Final Presentation	40 %

Grading:

- 'Sehr gut' represents exceptional work, far above average.
- 'Gut' represents good work, above average.
- 'Befriedigend' represents average work.
- 'Ausreichend' represents below average work with considerable shortcomings.
- And 'mangelhaft' is just exceptional work in the wrong direction or with unacceptable shortcomings.

## Course Material: *depending on chosen project*

### My teaching philosophy:

We want to contribute to your successful learning progress and thus you will gain inside knowledge about the interrelation of globalization, sustainability and international management. By using different teaching methods (lecture, usage of new media, presentations, interaction with students, simulations etc.) we would like to design the course interesting and diversified. Your comments are welcome and they will be helpful to the learning progress of the entire class. It is our intention that you successfully complete the course; however, the essential part of commitment depends on you.

### Code of conduct for students:

Please:

- Read the syllabus
- Be prepared for every lesson
- Be fair and show respect to your fellow students
- Actively contribute to the workshops of your fellow students
- Come to the course on time and do not leave early
- Respect different cultural-influenced thinking and working of Austrian counterparts - adapt to a new working atmosphere
- Be professional in co-operation with an international enterprise
- Be flexible, because working in a multinational environment is an organizational and personal challenge for all members

## Course Intended Learning Outcomes and their Contribution to Program Intended Learning Outcomes / Program Goals

Program Intended Learning Outcomes	Course Intended Learning Outcomes
After completion of the program the students will be able...	After completion of the course the students will be able...
<b>1 Responsible leadership in organizational contexts</b>	
1.2 ...to apply management principles within an organizational context.	...to apply leadership principles in the proposals being developed.
1.4 ... to understand and deal with the challenges of ethics and sustainability for responsible business operations and are able to deal with them.	...to reflect on developed proposals on the basis of responsible action.
<b>2 Creative problem solving skills in a complex business environment</b>	
2.1 ...to recognize and define problems as well as assess their importance.	... to quickly familiarise themselves with complex entrepreneurial tasks.
2.2 ...to analyse complex in-company and inter-company problems and challenges from different perspectives and/or within an international context.	... to produce factually correct and rapid analyses of the real problem situation.
2.3 ...to independently develop creative solutions to complex in-company and inter-company problems and challenges.	...to build up suitable alternative solutions.
2.4 ...to clarify successfully complex problems and solutions to both experts and laymen.	... to present the recommendations for action to professional and management audiences.
<b>3 Creative problem solving skills in a complex business environment</b>	
3.1 ...to demonstrate their knowledge of research methods relevant to engineering and management as well as their advantages and disadvantages.	... to apply appropriate business or technical methods.
3.3 ...to implement relevant research methods in such a way as to deliver reliable and innovative results.	... to apply methods to find innovative approaches.
<b>4 Interdisciplinary and integrative work</b>	
4.1 ...to apply their expert knowledge in the engineering and business field and to provide integrated solutions to complex tasks.	... to apply expert knowledge to develop the proposals.
4.2 ...to apply the methods of project management and to successfully organize, conduct and manage projects.	... to take control of a group project.
4.3 ...to develop and assess alternative solutions taking diverse disciplines into account and apply them to integrated comprehensive solutions.	... to build and develop suitable alternative solutions for complex, entrepreneurial tasks.

### Teaching and Learning Approach

The instructors are available to assist at any time during the course and will be supporting the students with helpful advice. Preferred communication mode is the face-to-face communication or via email.

### Literature and Course Materials

depending on chosen project

### Assessment

Attendance in every session is required in order to receive the credits.

Active participation in groupwork and presentation is evaluated as listed:

Active participation in team work /quality of contribution 60 %

Intermediate and Final Presentation 40 %

Grading:

- 'Sehr gut' represents exceptional work, far above average.
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## Schedule

Tba; after kick-off meeting with industry partner or case

## Code of Conduct for Students

Please:

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[Link to the Code of Conduct for online Teaching](#)

## Teaching Philosophy

Your learning progress is important to us, therefore we want to support you. In case you have any questions or concerns regarding the course, please feel free to contact us in person or send us an email. We will respond soon and we can arrange an appointment if necessary.

We want to contribute to your successful learning progress and thus you will gain inside knowledge about the interrelation of globalization, sustainability and international management. By using different teaching methods (lecture, usage of new media, presentations, interaction with students, simulations etc.) we would like to design the course interesting and diversified. Your comments are welcome and they will be helpful to the learning progress of the entire class. It is our intention that you successfully complete the course; however, the essential part of commitment depends on you.

## Additional Information

**Language:** English & German (depending on project)

**Contribution to program goals:**

The module contributes to program goals in various fields:

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- Students will improve their ability to use scientific research methods during the course of the project. Students are proficient in the methods of project management and are successfully able to organize, conduct and manage projects
- Students will apply interdisciplinary knowledge from engineering and management in order to develop creative solutions to complex in-company and inter-company problems and present their achieved results/problem solution within the framework of the final presentation