Syllabus: Project Management


Instructors

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Course goals

Students will be able to build the proper structures for managing a wind park project as a whole and as multiple sub-projects. Students will be able to adapt and change these plans as the needs and circumstances of the project change.

Sub-projects addressed include site selection, development, environmental impact assessment, tendering, construction, operation and maintenance. Student will become familiar with all the tasks contained in these sub-projects and learn strategies to manage each.

Pre-requisites

None (see module handbook)

Seminar structure, seminar location and times

Seminars will be held on Friday at 12:00 am - 1.30 pm (Central European time) on the dates following in this syllabus. All seminars will be held via Adobe Connect in eCampus.

All questions on understanding the material should be directed to your fellow students in the online forums first! At the beginning of each class session, we will have time to answer any questions which could not be answered already by your classmates.

Participation requirements

There will be seven, real-time class seminars, which students are required to attend. Weekly assignment: reading questions

Texts, reading and other materials

Readings will either be scanned and posted on Moodle, or are available on the internet. All seminars will be recorded and made available on Moodle.

Hardware and software requirements

All students will need a headset and a computer for this course, ideally Windows. Further they should be used to Microsoft office programs (Word, Excel, PowerPoint).
Examination

Written homework (15 pages) with online presentation of the homework (20 min) and online oral examination (10 min). The examinations are going to 50% (written homework) of the shares and 20% (presentation) and 30% (oral examination) in the final grade of the module.

Grading policy

The grading scale used in this course is the same as for all WES courses. For all single assignments, the following scale is used:

<table>
<thead>
<tr>
<th>Category</th>
<th>Grade range</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very good</td>
<td>1,0</td>
<td>Excellent performance</td>
</tr>
<tr>
<td></td>
<td>1,3</td>
<td></td>
</tr>
<tr>
<td>Good</td>
<td>1,7</td>
<td>Performance significantly above average</td>
</tr>
<tr>
<td></td>
<td>2,0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2,3</td>
<td></td>
</tr>
<tr>
<td>Satisfactory</td>
<td>2,7</td>
<td>Average performance</td>
</tr>
<tr>
<td></td>
<td>3,0</td>
<td></td>
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<tr>
<td></td>
<td>3,3</td>
<td></td>
</tr>
<tr>
<td>Sufficient</td>
<td>3,7</td>
<td>Performance which, despite some shortcomings, meets the minimum standards of the course</td>
</tr>
<tr>
<td></td>
<td>4,0</td>
<td></td>
</tr>
<tr>
<td>Fail</td>
<td>5,0</td>
<td>Does not meet minimum course requirements</td>
</tr>
</tbody>
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# Session 1  
**January 6**  

## Fundamentals  

### Content  
In the first session a motivation for use of project management is given. In particular development / history, some good and failed examples and benefits by reference to additional examples of project management are discussed.  
Further, basic terms, including the “Iron Triangle”, of project management are defined.  
In the end of the session there will be a quick view on classification of Project Management systems and challenges of Project Management.  

### Homework  
The students are supposed to find one or more examples of a project in their life including work experience and or common tasks.  

# Session 2  
**January 13**  

## Preparation of a Project  

### Content  
In this seminar students learn which issues should be considered in the first phase of a project.  
This means that topics will be discussed such as:  

a. How to scope a project?  
b. How to manage client expectations?  
c. What is the RBS?  
d. How to deal with requirements to achieve the project goal?  
e. How to initialize a project?  

### Homework:  
Checking all answers provided in this session or answering open questions. Further the students apply new learn content to chosen projects in the first homework.  

# Session 3  
**January 20**  

## Planning I  

### Content  
In this lecture students learn how to plan a project from the very beginning. They understand the basic principles of planning processes and find out which tools can be used for achieving good and reliable results.  
Several planning techniques will be introduced, such as  
a) Work Breakdown Structure (WBS)  
b) Critical Path Method (CPM)  
c) Program Evaluation Review Technique (PERT)
Homework: Applying of presented techniques to given problems in the field of Windenergy:
- The students build a WBS to plan a manufacturing of a wind turbine with given parameters

Session 4
January 27

Planning II

Content
The lecture builds on the previous one and includes concepts for further techniques used in the planning phase such as
a) Design Structure Matrix (DSM)
   b) Gantt Chart

Further the question how the techniques depend on each other will be discussed.

Homework: Considering the previous task a CPM chart must be built based on a given task list. The next step includes the transmission of information flows from CPM to DSM and additional rearrangement of tasks for plan optimization.

Session 5
February 3

Monitor and Control

Content
The lecture includes issues concerning Monitoring and Controlling of a project. Common techniques for monitoring will be introduced. Further important questions will be discussed, such as:
- What is to do when the project progress deviates from the planned schedule?
- Which other problems can occur and why?
- What does a project manager need to know about meetings and reports?

Homework: Several metrics for a project are given. The students recognize and describe the problem. Then they make suggestions for its solution using a chosen method – and explain why.

Session 6
February 10

Risk management and Human aspects

Content
The Session deals with risk management, human aspects and change requests. Risk management techniques for identifying, tracking and mitigating risks are discussed. As a further issue,
human aspects and its importance in project work is presented.

**Homework**

The students apply the learned content for risk management. A practical example is given. The students discuss the presented problem, search for its solution and give an explanation for their chosen approach.

### Session 7
**February 17**

**Project management: traditional, critical chain, agile, extreme and close up**

**Content**

The session begins with a view on the 4 different types of project management. Additionally, Project Management Life Cycles (PMLC) are mentioned and an Overview on all PMLC’s is given. Next topic to mention is “Closing a project” including required steps such as Look-back, Post-Implementation Report and Final Report.

**Homework**

Consultation and preparation for final exam.

### Final Exam

**Oral exams will be held on February/March**