Syllabus:

HSE Management

(3 ECTS-Credits)

Module: Occupational Safety On- and Offshore (3 ECTS-Credits)

Online M.Sc. Wind Energy Systems // WS 2017/18

Instructor

BEng Severin Michael Mucha

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Curriculum Vitae Sarah Severin Michael Mucha

Severin Michael Mucha, based in Nuremberg, Germany, is a HSE consultant with a BEng in Rescue-Engineering from Cologne University of Applied Science as well as Occupational Safety Specialist (Fachkraft für Arbeitssicherheit) from Beuth University of Applied Science Berlin, Explosion Protection Specialist from TÜV Saarland according to German legislation and Fire Prevention Officer from VdS Schadenverhütung Cologne.

He has round about nine years’ experience in fire protection engineering for conventional and nuclear power plants as well as on- and offshore HVDC converter stations. Furthermore, HSE experience for on- and offshore HVDC converter stations from planning to commissioning phase as well as HSE relevant service and maintenance experience for Offshore Windfarms.

His mission is to get people and organisations an integrated understanding in Health, Safety and Environment and how to implement in daily work flow and management systems. He achieves this through integrated support and mentoring as well as early sensitize with different risk assessment methods.

Course goals

The goal of this HSE course is to become familiar with regulatory requirements, best practice as well as to be able to assess risks and derive adequate measurements which need to be taken into consideration in the development of wind energy projects. Furthermore, the student should get an integrated understanding to implement HSE in management systems.

Pre-requisites
None

Seminar structure, seminar location and times

This course consists of six live seminar units of length 90 minutes as well as one written exam of length 60 minutes and a homework with a case study.

The units will be held on Fridays at 15:00 h and 16:30 h CET (Central European Time) on the dates shown in the chapter course content below.

The live seminars will be held using the conference tool Adobe Connect.

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

Participation requirements

There will be six live seminar units as well as one written exam, which students are required to attend. It is recommended that the exercise contained within the units are carried out.

Texts, reading and other materials

All the available materials will be posted on Moodle. All seminar presentations as well as recorded live sessions will be made available.

Hardware and software requirements

Each student needs a headset, a computer and an internet connection for the online sessions. Additionally, access to the usual Microsoft Office programmes (Excel, Word, PowerPoint) is required.

Examination

Written examination (60 minutes). The final grade is composed of the examination mark.
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, 1,3</td>
<td>Excellent performance</td>
</tr>
<tr>
<td>Good</td>
<td>1,7, 2,0, 2,3</td>
<td>Performance significantly above average</td>
</tr>
<tr>
<td>Satisfactory</td>
<td>2,7, 3,0, 3,3</td>
<td>Average performance</td>
</tr>
<tr>
<td>Sufficient</td>
<td>3,7, 4,0</td>
<td>Performance which, despite some shortcomings, meets the minimum standards of the course</td>
</tr>
<tr>
<td>Fail</td>
<td>5,0</td>
<td>Does not meet minimum course requirements</td>
</tr>
</tbody>
</table>
## Course content

### Unit 1
**Online Session:**
- **Management of HSE**

**Content**
- Foundations in HSE
- HSE Management - Policy
- HSE Management - Organising

**Homework**
- Complete the exercises from the class

### Unit 2
**Online Session:**
- **Management of HSE**

**Content**
- HSE Management - Planning
- HSE Management - Measuring, Audit, Review

**Homework**
- Complete the exercises from the class

### Unit 3
**Online Session:**
- **Workplace Hazard and Risk Control**

**Content**
- Workplace Hazards and Risk Control
- Transport Hazard and Risk Control

**Homework**
- Complete the exercises from the class

### Unit 4
**Online Session:**
- **Workplace Hazard and Risk Control**
Content

• Work Equipment Hazard and Risk Control
• Electrical Safety

Homework

Complete the exercises from the class

Unit 5
December 7
15.00-16.30 h

Online Session:
Workplace Hazard and Risk Control

Content

• Fire Safety
• Chemical and Biological Hazards and Risk Control

Homework

Complete the exercises from the class

Unit 6
December 21
15.00-16.30 h

Online Session:
Workplace Hazard and Risk Control

Content

• Musculoskeletal Hazards and Risk Control
• Physical and Psychological Hazards and Risk Control
• Introduction to the homework case study

Homework

Complete the exercises from the class
Complete the homework case study

Final Exam
January 25
15.00-16.00 h

Written Exam: 60 minutes

Description

• All topics covered in the course
• Multiple Choice Questions
• Case study