# Courses in English

## Course Description

<table>
<thead>
<tr>
<th>Department</th>
<th>09 Engineering and Management</th>
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<tbody>
<tr>
<td>Course title</td>
<td>Lean Six Sigma Foundation</td>
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<tr>
<td>Hours per week (SWS)</td>
<td>3</td>
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<tr>
<td>Number of ECTS credits</td>
<td>4</td>
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### Course objective
The objective of the course is for students to understand and apply the most effective tools and techniques of the lean and the Six Sigma methodologies.

Specific objectives for this course are to:
- Use lean concepts to improve process speed.
- Use Six Sigma methods to optimize process performance.
- Select the best experimental design for particular industrial setups.
- Understand and apply the different advanced quality control tools.
- Apply the methods and tools in a student project.

### Prerequisites
Introductory Statistics

### Recommended reading
- Montgomery, D.C. “Design and Analysis of Experiments”
- Montgomery, D.C. “Introduction to Statistical Quality Control”

### Teaching methods
Lectures, team project

### Assessment methods
Final exam, team project

### Language of instruction
English

### Name of lecturer
Richard Strunz

### Email
strunz.hm@gmail.com

### Link
[http://www.wi.hm.edu/dozenten/strunz/index.de.html](http://www.wi.hm.edu/dozenten/strunz/index.de.html)

### Course content
- Lean Six Sigma methodology and the DMAIC cycle
- Basic project management principles
- Financial aspects of quality
- SIPOC analysis and lean metrics
- FME(C)A, hybrid probabilistic risk assessment
- Measurement systems analysis
- Design and analysis of experiments
- Advanced quality assurance methods
- Project (applying DMAIC tools)

### Remarks