The needs of academic collaboration between industries and universities in the field of energy management

Prof. Dr. Kerstin Hooss
Contents

1. Energy Management at Darmstadt Business School
2. Internship and accompanying seminar
1. Energy Management at Darmstadt Business School
1. Energy Management at Darmstadt Business School

General Survey

- 1800 students
- 30 Professors
- Program of study:
  - Energy Management (B.Sc.)
  - Energy Management (M.Sc.)
  - Business Administration (B.Sc.)
  - Business Administration (M.Sc.)
  - Logistic Management (B.Sc.)
  - Public Management (B.Sc.)
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Study Program: Energy Management

<table>
<thead>
<tr>
<th></th>
<th>B.Sc.</th>
<th>M.Sc.</th>
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</thead>
<tbody>
<tr>
<td>Study duration</td>
<td>7 semesters</td>
<td>3 or 4 semesters</td>
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<tr>
<td>Pre-study industrial work placement</td>
<td>not required</td>
<td>reduces the duration of study</td>
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<tr>
<td>uniqueness</td>
<td>internship</td>
<td>preparation for leadership</td>
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<tr>
<td>numerus clausus</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>students</td>
<td>412</td>
<td>83</td>
</tr>
</tbody>
</table>
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Characteristics

- Small classes
- Multidisciplinarity
  - Natural science
  - Engineering science
  - Information technology
  - Law
  - Economics
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Program contents

- Energy market and liberalization
- Information technology
- Power generation and power distribution
- Renewables and new technology
- Grid stability
- Energy policy and law
- Energy management
- Energy efficiency
- Financing
- Project management
- Energy trade
- Electric mobility
- ...
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Career opportunities

- Consulting
- Energy purchase / trading
- Energy efficiency
- Project management
- IT Management
- Research
- ...

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2. Internship and accompanying seminar
2. Internship and accompanying seminar

- Practice
- Theory

- German model of “dual study programmes"
- Higher education degree
- Vocational training
2. Internship and accompanying seminar

How do we link theory and practice at university?

- Joint research and development projects with the industry
- Theses can be written within a company
- Professors with industrial / professional background
- Guest lecturers from industry / senior experts
- Planning games
- Excursions to companies and government institutions
- Visit trade fairs
- Internship and accompanying seminar
- ...

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2. Internship and accompanying seminar

Structure of the study

- Option: Energy Management M.Sc.
- Semester 5-7
  - Internship
  - Seminar accompanying the internship
  - Thesis
- Semester 1-4
  - Core Curriculum
  - general higher education entrance qualification
  - subject-specific higher education entrance qualification
  - advanced technical college certificate
2. Internship and accompanying seminar

Structure of the study

- general higher education entrance qualification
- subject-specific higher education entrance qualification
- advanced technical college certificate

Admission

Semester 1-4
- Core Curriculum

Energy Management B.Sc.

Semester 5-7
- Internship
- Seminar accompanying the internship
- Thesis

Option: Energy Management M.Sc.
2. Internship and accompanying seminar

- Required internship:
  - 8-24 weeks
  - At home or abroad
  - Support: professor and an experienced practitioner

- Accompanying seminar:
  - In preparation for the internship
  - Postprocessing
  - Reflecting the experiences made during the internship
  - Project report
2. Internship and accompanying seminar

Goals of the internship

- Linking theory and practice
- Deeper knowledge of economical and technical connections
- Build awareness for future career opportunities
- Facilitate entry into the working world
- Build awareness for practical / industrial issues

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2. Internship and accompanying seminar

Goals of the accompanying seminar

• Self-reflection on the experiences made during the internship
• Professional support
• Conflict mediation (if necessary)
• Project report
2. Internship and accompanying seminar

Experiences concerning the students

- Develop ideas for their thesis
- Exclude subject areas / find new subject areas
- Higher motivation (intrinsic motivation)
- Goal orientated
- Beeing back at university:
  - Students dress properly (!)
  - Write polite emails, they even address formally (!)
  - Reactivate good manners
2. Internship and accompanying seminar

Experiences concerning the industry

- Interested in our students / recruiting
- Facilitates cooperations
- Feedback on our structure of study
Thank you very much!