



STAATLICH
ANERKANNT
HOCHSCHULE



EDUCATION AND TRAINING

FINAL PRESENTATION

Final question?

- > Who is going to do this things?

- > Conclusion:
 - > We need well educated and trained people!

CONSEQUENCES TRAINING

Basic questions and examples

- > Which instruments are available?
- > Which competences are needed?

THE NATURE AND DEGREE OF UNCERTAINTY

challenge1

- > Uncertainty can also be inherent in the external and internal context of the organization.
- > Available data do not always provide a reliable basis for the prediction of the future.
- > For unique types of risks, historical data may not be available or there may be different interpretations of available data by different stakeholders.

COMPLEXITY

challenge2

- > Risks can be complex in themselves, as, for example, in complex systems which need to have their risks assessed across the system rather than treating each component separately and ignoring interactions.
- > Consequential impacts and risk dependencies need to be understood to ensure that in managing one risk
- > Appropriate methods or techniques for risk assessment needed.

APPLICATION OF LIFE CYCLE PHASES APPROACH

challenge3

- > Many activities, projects and products can be considered to have a life cycle starting from initial concept and definition through realization to a final completion which might include decommissioning and disposal of hardware.
- > Many times with different levels to assist in the decisions.
- > Life cycle phases have different needs and require different techniques.

FACTORS TO BE CONSIDERED

How to assess a risk?

- > 31 Methods are described in the ISO 31010
- > Complexity of the problem and methods needed to be understood
 - > degree of uncertainty of the risk
 - > assessment based on the amount of Information available and
 - > what is required to satisfy objectives
- > The extent of resources required in terms of time and level of expertise, data needs or cost

CONTENT OF STUDIES

Open to further discussion!

- > Risks in Industry, Products and Services
- > Asset/Plant Oriented Risk Management
- > HSSE (Health, Safety, Security and Environment)
- > Risk Governance (Social aspects)

CONTENT OF STUDIES

Open to further discussion

- > Business sustainability
- > Risk management implementation
- > Main topics of health oriented risk analysis with different aspects of risks and terminology used in the field.
- > Quantitative and qualitative Risk Assessment
- > *And your input - please!!*

THE COURSES

- > The courses are designed to allow students to quickly absorb working knowledge.
- > Learning methods include lectures, review of literature, interactive problem-solving, individual and group exercises.
- > Lecturers are leading experts in their corresponding fields always open for questions and discussions.

INTERNATIONAL BUSINESS AND ENGINEERING (MASTER)

- > **Duration of study**
- > Graduates of economic/business sciences: 4 semesters (including preliminary course in technical studies)
- > Graduates of engineering sciences: 4 semesters (including preliminary course in business studies)
- > Graduates of industrial engineering and management: 3 semester

INTERNATIONAL BUSINESS AND ENGINEERING (MASTER)

International Business & Engineering with pre-courses (120 CP)

1. Semester	Course	Module 1 Environmental Engineering	Module 2 Strategic Management	Module 3 Risk Management	Module 4 Energy I	
	Credits	8	8	8	8	32
2. Semester	Course	Module 5 Product Life Cycle Management	Module 6 Energy II	Module 7 Electives	Module 8 International Markets	
	Credits	8	8	8	8	32
3. Semester		Masterthesis				
		26				26
						90

EUROPEAN MASTER PROGRAM IN RISK ENGINEERING AND MANAGEMENT

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- > Master program in the field of Advanced Risk Technologies, with the specialization of Risk Engineering and Management.
- > The program is organized by the Steinbeis Transfer Institute Advanced Risk Technologies (STI), embedded in Steinbeis University Berlin (SHB).

STUDY CONCEPT

Overview of the study concept

- > The 2-year long program includes five thematic modules in the first year with compulsory, optional compulsory and elective courses worth 60 Credit Points (CPs).
- > These courses are combined with a sixth major module including a project work (42 CPs) and Master Thesis (18 CPs), to be performed in the second year.

THE PROGRAM

- > The program, receive a personalized study schedule. It defines the optional and elective courses, and the project and thesis work in alignment with the student's company supervisor.
- > In general, most of the courses in the curriculum last five-days.
- > The exams are scheduled on the fifth day or on an additional day, and cover all specific topics of risks which were reviewed throughout the course.

LESSONS LEARNED

- Risk assessment tools are like piano keys.
- The more keys you can play the better the music sounds.\$



CONSEQUENCES FOR THE DEVELOPMENT OF SUITABLE PROGRAMS

- > Curricular sharpen
- > Development of technical and personal competence
- > Learning consultation
- > Instruments and formats to diagnostics and extraction (technical learning, personal competence) as a solid basis make
Effectiveness of the measures

COURSES SCHEDULE

- > Courses are scheduled during the whole year and are open not only for students enrolled in the Master program, but for other participants wishing to extend their knowledge and skills.
- > This mixture creates a specific atmosphere and enables students to profit also from the international surroundings and open discussions.

THE CORE PRINCIPLE



Competence
Oriented
Research and
Education

SUMMARY

Final answer!

- > Who is going to do this things?
 - > Students at EU level program
 - > Master – management and engineering oriented



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