



Project “Skill Energy BSR”, WP 4 - Presentation:

Dual Bachelor Study Course “Engineering & Management of Renewable Energy and Energy Efficiency”

Prof. Dr. Joachim von Kiedrowski
Prof. Dipl.-Ing. Ernst-Peter Schradieck



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 - Facts & Information
- The dual bachelor study course „Engineering & Management of Renewable Energy and Energy Efficiency (TMEE)“
 - Main focus and objectives
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Facts & Information



- Foundation midyear 2005
(following decree HmbBAG of 29 June 2005)

- Associates:
 - Chamber of Trade Hamburg (main associate)
 - Chambers of Trade Braunschweig-Lüneburg-Stade and Schwerin
 - Guilds of Hamburg

- Dual Bachelor Study Course “Business Administration for SME”
 - First course started in Oct. 2006
 - Accreditation as a “Bologna compliant” Study course in 2007 by “Foundation for International Business Administration Accreditation (FIBAA)”
 - Successful renewal of the accreditation in 2012

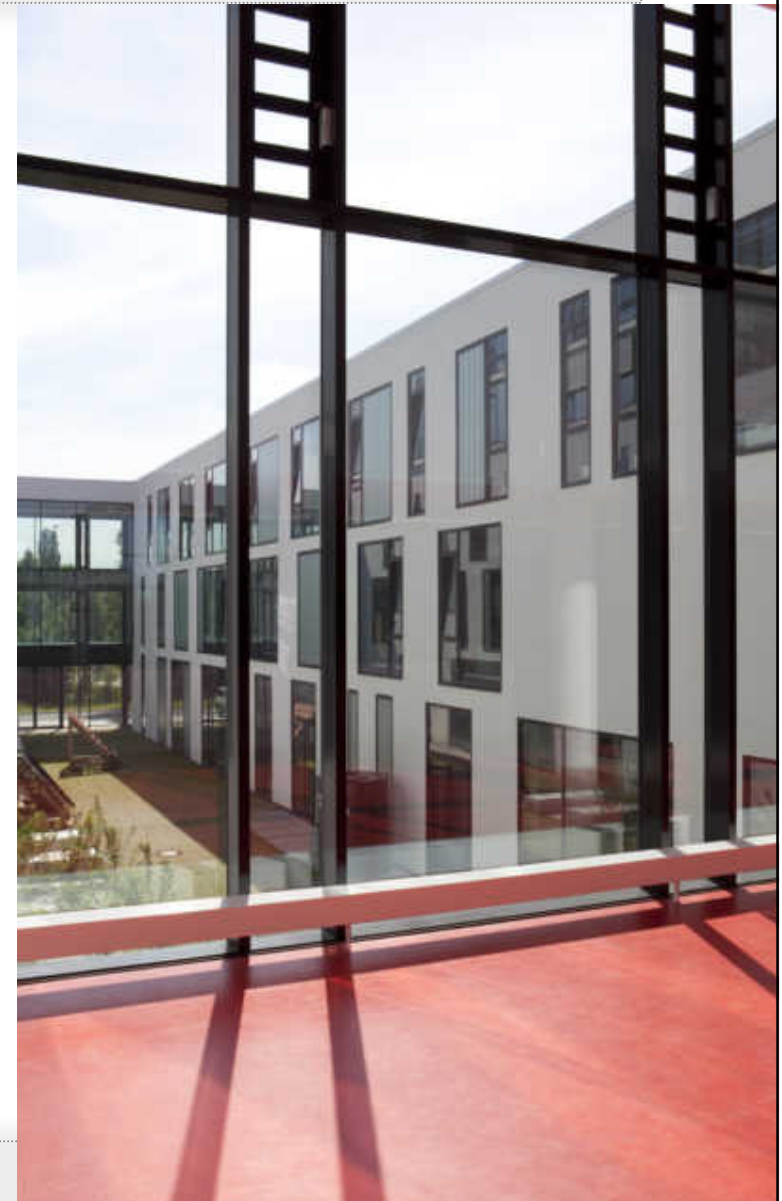
- Dual Bachelor Study Course „Engineering & Management of Renewable Energy and Energy Efficiency (TMEE)“
 - Development of the curriculum in Cooperation with the Hamburg University of Technology (TUHH)
 - First course started in Oct. 2011
 - Accreditation in 2011 by FIBAA

Professions in Combination with TMEE



- Electrician
- Plumber and Heating Fitter
- Roofer
- Carpenter
- Chimney Sweep

- and other vocational trainings or qualifications in the field of installing or optimizing „energy“ in buildings

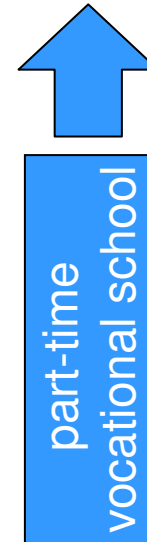
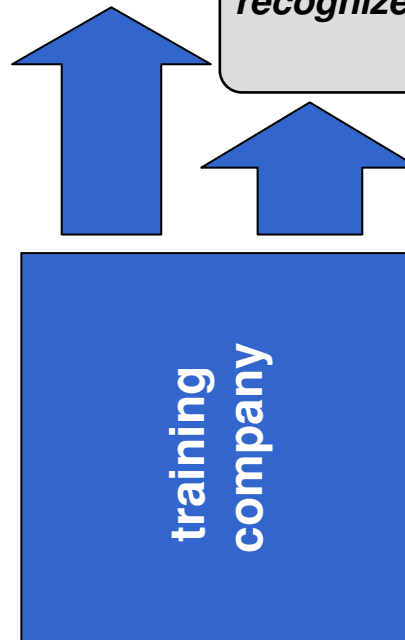


Construction of the dual study (integrated degree program) - TMEE



TMEE (final degree: Bachelor of Arts)

recognized vocational qualification:
(skilled worker)



2 - 3,5 years

4 years

high school graduate or
comparable permission to go to university of applied sciences

Organisation and operation: Scheduling of Education amongst the Training Institutions



- Studies at the BA-H in part-time form (12 hrs. p.w., Fri + Sat)
- Outside the block periods the students work at their training company up to 4 days per week
- Minor overlapping with study blocks at vocational school are possible
- Study blocks will be scheduled in accordance with school holidays
- Practice reflections integrate the course into the training at the company

Advantages for Enterprises



- Recruiting of motivated (technical) high-school graduates for their company
- Recruiting and early vocational adjustment of a new generation of qualified executives
- Practice-oriented academic training with a unique combination of mediation of technical and business administrative know-how
- Development of competence with up-to-date didactic methods (project work, simulations/business games, e-learning)

TMEE: Main Focus and Objectives



- Main Focus:
 - Application of renewable energy technology as well as the efficient use of energy in residential and functional Buildings of private enterprise and the state
 - Interdisciplinary planning, implementing and current use of technical facilities as well as the realization of technical measures to increase energy efficiency

- Objectives:
 - Achievement of a holistic (scientific-based) Understanding of technological, ecological and economical challenges of renewable energy
 - Achievement of the professional competence to plan and to implement technical facilities in a comprehensive and integrative manner
 - Achievement of the professional competence as well as the social and communicative competence, necessary to advice and to convince customers
 - Achievement of the ability to bring competitive products and services offered to the market of renewable energy

TMEE: Curriculum structure

Module Overview (180 Credit Points / ECTS)



Management Core Module 44 CP

- business law
- strategic management
- investment, finance & risk management
- cost and performance accounting
- Marketing

Technical Core Modules
62 CP

Personal Skills 14 CP

- scientific methods and presentation
- negotiation
- projectmanagement

Management Specialisation 5 CP

- total quality management
- Businessplan.
- business simulation game

Technical Specialisation Modules
10 CP

3 Student Project Term Paper (15 CP)

application-oriented management

3 Student Project Term Paper (15 CP)

application-oriented renewable energy

Other examinations

- Bachelor-Thesis (12 CP)
- Kolloquium (3 CP)

Technical Core Modules (62 Credit Points)

- Basics of building systems I: heating, cooling and ventilation requirements
 - principles of thermodynamic
 - heat transfer
 - heat recovery

- Basics of building systems II: electrotechnical requirements, building automation
 - lighting technology
 - electric consumers (e.g. pumps, fans)

- Basics of building systems III: constructional requirements, building physics
 - thermal insulation of the building envelope
 - air tightness (air sealing, measurement of air tightness)

Technical Core Modules

- Renewable energy systems
 - photovoltaic systems
 - solar thermal systems
 - heat pump systems
 - combined heat and power systems
 - Fuel cell
 - ...

Technical Specialisation Modules (10 Credit Points)

- application-oriented student project work (planning, implementation, monitoring and documentation of new energy facilities or energetic optimization of existing facilities)
 - photovoltaic systems
 - solar thermal systems
 - heat pump systems
 - combined heat and power systems
 - Fuel cell
 - conventional energy facilities (condensing heating technology)

Selection of Appropriate Modules for a transfer in the skill energy project



- 2 x Technical Core Modules:
 - energy efficiency and heat insulation in buildings (T 7)
 - Cogeneration (combined heat and power generation), energy conversion, energy distribution and energy use (T 8)

- 1 x Technical Specialisation Modules:
 - heat generation from bio mass (TS 5)

Implementation Plan for selected Modules



- Technical Core Modules:
 - T 7: implementation of a first course is in process
 - T 8: implementation of a first course starts in June 2013
- Technical Specialisation Modules:
 - TS 5: implementation is scheduled to be realized till September 2014
- All modules will be evaluated by the students of the study course

Contact / Information



University of Corporate Education Hamburg

Elbcampus

Zum Handwerkszentrum 1

21079 Hamburg

Tel.: 040 / 35905-560

Fax: 040 / 35905-569

E-Mail:

kiedrowski@ba-hamburg

schradieck@ba-hamburg



www.ba-hamburg.de

Admission Requirements and Costs



■ Admission Requirements

- Higher Education Qualification
 - University Entrance Qualification
 - Technical College Entrance Qualification
- Personal Aptitude
 - Willingness to perform
 - Capacity to study
- Conclusion of Contract
 - Qualification contract for 4 years between University of Corporate Education, the Company and the student
 - Vocational training contract following Handwerksordnung (HWO) or Berufsbildungsgesetz (BBIG)

■ Costs

- Vocational training / apprenticeship pay
- Study fees of 350 EUR per month - absorption of charges in parts by the company (agreement between company and trainee) where appropriate