Content

- The TU Berlin
- Habitat Unit
- Manufacturing Group
- Water center
- The DAAD-project
History

1770 - 1821
Founding of the antecedent academies: Mining Academy, Building Academy, Vocational Academy

1879
Unification into Royal Technical College of Berlin

1945 - 1946
Closure of the Technische Hochschule Berlin and re-establishment under the new name: Technische Universität Berlin

1950
Establishment of the Faculty for Humanities

2005
Formation of teaching and research into 7 faculties
General Statistics

Students and postgraduates
- 27,890 total student enrollment
- 10,167 female students
- 5,748 international students (20%)
- 431 doctorates
- 32 post doctoral lecture qualification (average per year)

Staff
- 7 faculties
- 329 professors
- 53 professors, financed through external funds
- 1890 scientific staff
- 885 scientific staff, financed through external funds

Budget 2009
- 310 m€ Berlin Government grant
- 120 m€ acquired external funds
Habitat Unit - Research and Teaching with Housing-related focus

Habitat Unit
Chair for Architectural Design and International Urbanism (Prof. Dr.-Ing. Peter Herrle)
Institute of Architecture - Faculty VI
Planning Building Environment
Technische Universität Berlin (Berlin Institute of Technology)
www.habitat.unit.de
From Product to Process
It includes technical, infrastructural, social, and economic aspects.

From Proving to Enabling
New forms of partnerships are needed to solve complex problems.

From Regulation to Participation
Ensures empowerment and ownership of projects.

From local to multi-level
Institutional responses to housing crisis need multi-level approaches.
**Topics**

Understanding underlying processes, strategies and architectural aspects

- Patterns and processes of urbanization in Africa, Asia and Latin-American
- Planning strategies (e.g. strategic planning, action planning); housing improvement strategies (sites-and-services, upgrading, regularization);
- Vernacular and traditional architecture, cultural identity in architecture, climatic and social aspects of building
Global Production Engineering TU Berlin

International Master Studies Program
Production Technology Center (PTZ)

• Production Technology Center Berlin
  – Institute for Machine Tools and Factory Management TU Berlin (IWF)
  – Fraunhofer Institute for Production Plants and Construction Technology (IPK)
• Research and teaching focus on technology and management in industrial factory business
• Over 400 Employees
• Covers an areal of over 15,000 m²
• Test field with over 3,850 m² equipped with the most modern machining technologies
GPE Manufacturing & GPE Solar

Global Production Engineering (GPE)

GPE Manufacturing

International Master Programs

GPE Solar
Global Engineering Teams

[Logos and university emblems]
Example of a 2009 Global Engineering Team: Development of a Solar Heater

Project Partner: Centre for Renewable and Sustainable Energy Studies
Supervisor: Mr. Duncan Palmer (Stellenbosch University)
Projects of 2009

Development of a Low-Cost Solar Water Heater

Enabling Market Entry in Botswana and South Africa for the Product “Energy Container”

Enabling Market Entry in Brazil and India for the Product “Office Printer”

Development of an Autonomous Cleaning Device

pollution sensor device base
Centre for 'Water in Urban Areas'

Methods and Instruments for Sustainable Management

Chairman: Prof. Dr. M. Jekel; Executive manager: Dr. M. Ernst
Aims of the 'Centre for Water in Urban Areas'

- Merging of competences from engineering, planning, natural and economic sciences
- Strengthening of technical core fields by joint focussing
- Interdisciplinary development of main theme topics
- Strengthening of teaching and education by coordinated programmes
- International cooperation
Four Work Areas

Workarea A:
Technology / Cycles / Innovation

Workarea B:
Analytics / Behaviour / hazardous substances

Work Area C:
Economics / Planning / Evaluation

Work Area Z:
Knowledge Transfer and International Cooperation
Master in Water Engineering

- New TUB-campus in El Gouna, Egypt (at Red Sea, near Hurghada)
- Funded by Sawiris Foundation
- Master of 2 years, 30 student per year
- Paid by donations and tuition fees
- Start envisaged for Oct. 2011
- Teaching and pilot plant facilities
Housing - Water - Income for the Urban Poor

Enabling Actors and Capacity Building for Appropriate Technologies
Improving the living conditions of the urban poor

Reduce by two thirds the under-five mortality rate; MDG 4, Target 1

Sustainable access to safe drinking water and basic sanitation; MDG 7, Target 3

Improve the lives of at least 100 million slum dwellers; MDG 7, Target 4

Achieve full and productive employment and decent work for all; MDG 1, Target 2

Integrate principles of sustainable development into country policies and programs; MDG 7, Target 1
Housing – Water – Income for the Urban Poor

Enabling Actors and Capacity Building for Appropriate Technologies

Project Goals

- Curriculum and research development at partner Universities
- Building of networks to scatter existing expertise, knowledge know-how and furthering of South-South networks
- Transfer of expertise and adaptation to local conditions
- Recruiting partners as multipliers in relation to the intercultural understanding
- Raising the level of sensitivity and awareness of the German higher education institutions in view of development relevant issues by planning of future international study program (TU Berlin and international partners).
- Involving Non Governmental Organizations (NGOs), local politicians and industry during the capacity building process.
Housing - Water - Income for the Urban Poor
Enabling Actors and Capacity Building for Appropriate Technologies
**Learning Projects**

As Annual Joint Short Courses Housing, Manufacturing, Water

Achieve interdisciplinary joint venture through:

- Enable local and international actors to create capacities for development & implementation of technologies
- Bundling Competences by overcome mono-disciplinary with cross-sector approach
- South-South cooperation

**Short Course**
1st. / Chile: Comprehensive reconstruction facing catastrophes

TU Berlin, HMW-Group
Housing Manufacturing Water
Activities

Projects

Annual Short Course
• 2010 / Chile: Comprehensive reconstruction facing catastrophes
• 2011 / South Africa: Integration of technologies and cultural frameworks
• 2012 / Bolivia: Development of appropriated know-how
• 2013 / India: Management of extremely demanding social contexts

Capacity-building Instruments
PhD Students
Visiting Scholars
Student Exchange Workshops
Seminars

Dissemination of Topics related to MDGs
Lecture Series
Contribution to Public Policies
Annual Symposia

Cooperation with Networks
Events & Workshops in Berlin
Internet-Communication Platform
Newsletter

Supporting Individual Group activities
Housing, Manufacturing, Water