



Cairo University, Egypt | Alexandria University, Egypt | Brandenburg University of Technology, Germany



**b-tu**

Brandenburg  
University of Technology  
Cottbus - Senftenberg

# Master Programme URBAN DESIGN

## Revitalization of Historic City Districts

### Programme Overview



**DAAD**

Deutscher Akademischer Austausch Dienst  
German Academic Exchange Service  
(funded by)

# Overview



## Aim

The aim of the master programme is to communicate urban rehabilitation and revitalization strategies and concepts for the different situations and challenges of historic city districts, especially of the cities and regions of the involved universities.

## Professional Perspectives

The alumni of the programme are qualified for a professional career in all institutions involved in design and management processes for historic cities. These are private architecture and urban planning offices, administrations and international agencies and institutions.

## Degree

With successful completion of the double Master Programme the participants are awarded with two degrees: "Master of Science" (M.Sc.) at BTU and "Master of Science" (M.Sc.) at either Cairo University or Alexandria University. This is equivalent to the "Master of Science in Architectural Engineering" at Egyptian universities. Thus, all graduates are eligible to apply for Ph.D. programmes at any Egyptian, German or other universities.

## Program Structure

The Master Programme is offered in cooperation between Brandenburg

University of Technology in Cottbus, Germany, Cairo University, Egypt and Alexandria University, Egypt.

Participants pass one semester at each of the partner universities. The fourth semester is reserved for the master thesis for which students can choose two of the three universities.

## Key facts

Starts: every Fall/Winter semester

Duration: 2 years / 4 semesters

## Admission Requirements

Admission requirements are:

- A Bachelor degree in Architecture, Urban Design, Urban Planning, Regional Planning, Landscape Planning or Landscape Architecture;
- Experience in identifying relevant urban development problems, defining tasks, methods and strategies to solve problems and the ability to design qualified concepts in a traceable way and qualified experiences in defining problems;
- Excellent language skills in English.

Programme enrolment is only possible in the winter term / fall semester. The application deadline is:

- 1 June for applicants with a degree from a foreign university,
- 31 August for applicants with a degree from a German university.

## Fees

Tuition fees of 1.500 € per term have to be charged. Additionally, regular registration fees at each university apply (varying from 50 to 320 € per semester).

## Programme Highlights

- The focus is revitalization of historic city districts with an integrated and applied approach to urban design.
- The interdisciplinary goal of sustainability is a basic aspect of all modules. Social and economic structures and networks and environmental aspects are integrated in the design-orientated programme.
- Intensive practical experience and applied approaches are crucial parts of the study programme. International development institutions are integrated as permanent partners to complement academic investigation with further practical experience.
- The curriculum structure builds on the strength of each partner university.
- The Master Programme includes mandatory studies abroad, with the goal of a double degree.
- An Advisory Board assists in monitoring and evaluation of the programme and supports the partner universities in strengthening the cooperation with further institutions in the field.

# Initiative & Aim



## Initiative & Aim

Based on the successful cooperation between the partner universities since 2005 with the focus on “urban design for the renewal, revitalization and rehabilitation of historic city districts” the Master Programme “Urban Design – Revitalization of Historic City Districts” was first offered in the fall term 2014.

The master programme is the result of a long-term cooperation of a university network consisting of the three partner universities, as well as the Universities of Aleppo, Damascus, Syria and Baghdad in Iraq and the American University of Beirut in Lebanon.

The development of historic cities in Europe and in the MENA region is until today one of the most important challenges for sustainable urban development. A vivid inner city with a historic core shapes the image and the identity of the city and initializes developments in the whole town. Since the renewal of historic city districts is always an interdisciplinary task, it is a very good training experience for all kinds of urban development challenges. The benefit of renewal and revitalization of inner city areas is never reduced to just the inhabitants and stakeholders of the quarter concerned, but spreads to the society of the whole town. Accordingly, the initiators of the Master Programme are

convinced that in urban development nothing is more sustainable than a vital inner city. This thesis is correct both for cities in Germany and for metropolitan areas in the MENA region where the segregation of the society increased during the last decades and where historical districts serve as a central platform for public identity throughout all classes of the urban society.

The faculties of the partner universities, each individually and all together in their cooperation network for urban design, share extensive experience in the field of renewal and revitalization of historic city districts. The historic districts, we deal with in this master programme are areas with an originality and urban vitality which stands for decades and not only areas which include listed historic monuments.

As previously stressed, rehabilitation and revitalization of historic city districts is an interdisciplinary task, in which economic and social affairs, archaeology, building rehabilitation and restoration, mobility, public space and landscape planning, urban management, urban development and urban design are involved. Rehabilitation processes need an integrated approach and guidelines that guarantee stability and continuity for all further developments. Accordingly, the Master Programme emphasizes urban design, with three

major components: urban design and rehabilitation, urban development and architecture in historic context. In contrast to other master programmes in the field that focus more narrowly on one specific discipline, the Master Programme “Urban Design – Revitalization of Historic City Districts” will link the rehabilitation of historic areas to the challenges of urban design.

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At the heart of the programme is an understanding of revitalization as an effort to make historic areas attractive and vital for the needs of today and tomorrow by respecting their characteristic structures (i.e. lot sizes, street-, path- and square successions and systems, building typologies, relations of distinguished buildings to public or common spaces, forms of ownership, material, social structures, etc.). This includes the reinterpretation and reproduction of historical structures, analogue to their nature, by using contemporary architectural facilities and integrating current usage requirements. This concludes the conviction that only a lively historic city centre can be preserved for a long-term and that the structures of historic quarters are what qualifies their development, not the image.

## The Partner Universities

The Master Programme is offered as a Double Degree in cooperation between three partner universities. All students are required to pass at least one semester at each of the partner universities.



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Brandenburg  
University of Technology  
Cottbus - Senftenberg

Brandenburg University of Technology  
Cottbus - Senftenberg, Germany

BTU is a young, modern and progressive university with international acclaim in the fields of architecture, engineering and natural sciences. Around 30 per cent of the students have come from more than 100 different countries all over the world in order to study in the Lausitz region. BTU's cross-disciplinary approach to research and its strong international orientation foster innovative and forward thinking study programmes. With more than 70 degree courses at the three locations, the university offers an excellent learning environment, equipping students with academic and professional skills for the evolving international market. The Faculty of Architecture, Civil Engineering and Urban Planning is considered one of the best in Germany, having received top evaluations in the national CHE (Centre for Higher Education Development) university ranking.

Cairo University, Egypt

The Faculty of Engineering at Cairo University is one of the leading educational and research institutions in the higher education sector in the Arab world. Its mission is to achieve academic excellence and to educate students to become academically, professionally and ethically competitive engineers who are capable of continuous learning,

in line with international innovations. The faculty also aims to contribute to sustainable development in Egypt. Its main strategic goals include:

- Develop renowned and competitive graduates;
- Provide an attractive work environment suitable for the continuous improvement of faculty members and assistants;
- Strengthen the relationship between the faculty of engineering and alumni, industrial enterprises, educational institutes and society;
- Realize means for continuous improvement of scientific research and graduate studies.

Alexandria University, Egypt

The Faculty of Fine Arts at Alexandria University was established in 1957 by Prof. Dr. Ahmed Osman. It has since developed into a pioneer for Egyptian, Arab and international art movements and brings together five departments: Architecture, Decoration, Printmaking, Photography and Sculpture. It aims to contribute to the dissemination of arts, culture and awareness in the community, thereby contributing to the improvement of community relations and relations of the community with the environment. The faculty applies quality systems in order to ensure that graduates achieve excellence in the areas of research and artistic and plastic creativity.

# Perspectives



The alumni of Urban Design – Revitalization of Historic City Districts are qualified for a professional career in all institutions which are involved in design and management processes for historic cities. These are private architecture and urban planning offices, administrations and international agencies and institutions that conduct concerned programmes.

## Alumni Perspectives



“The double master degree programme Urban Design – Revitalization of Historic City Districts was more than just a journey of knowledge to me. The idea of traveling, seeing new places, dealing with new cultures, being independent, and making new friends from countries from all over the world, all this meant a lot to me and helped shape my personality. The programme allowed us to visit interesting sites and meet many public figures that are popular in the field of urban design.

Being a graduate of architectural engineering, the programme changed my approach to architectural concepts: I now understand a building as part of an urban structure and not a stand-alone element. The programme taught us that we plan, design, and build

for the people and therefore social research is a necessity. While planning for new settlements or urban developments, I am fully aware now that every line I draw must have a reason, every tile added is going to stay there for years and therefore it must be added very carefully.

- Batool Awad -



The master programme is a cut from a new cloth that interestingly traces the old to develop the new. It integrates both academic & professional qualities in a special experimental journey. During two years of studies, this tailored programme provided me a unique journey to blend, explore and realize.

Academically, I explored the complete picture of a city and its impact on societies. My architectural background tackled the approach of users and their needs, but after adding urban design layer, it explained the harmony of different structures and diversified users that create a cohesive tissue and fabric, which hardly decompose. In addition, understanding interdependency of all city shapers enlightened me to contribute in building future cities.

Professionally, realizing the power of strategic planning and stakeholders coordination by

proposing a clear framework exposed me to different system that leverage my networks. Moreover, developing an action plan with a special philosophy and conceptual design skills to meet the needs increased my learning agility.

Finally, joining this programme was a generous opportunity to enrich my qualifications and skills through the interdisciplinary way of thinking that we have been exploring throughout the programme.

- Nourhan Ayman -



“The cooperation between three different universities in three diverse cities added significantly to the programme. I enjoyed the specialization of each university in a theme related to Urban Design to revitalize the historic old cores. Exploring Berlin and studying Urban Design in Brandenburg University of Technology Germany was definitely a valuable experience. In Cairo University, the semester delved into interesting topics related to urban development in the old districts of Cairo. Finally coming from an urban planning background, I enjoyed learning more about architecture and particularly architecture in historic context in the city of Alexandria.”

- Asmaa Kamaly -

# Tasks & Challenges



## Urban Design

= collaborative, multi-disciplinary and multi-dimensional process of shaping the physical setting for life in cities, towns and villages; the art of making places; design in an urban context. Urban design involves the design of buildings, groups of buildings, spaces and landscapes, and the establishment of frameworks and processes that facilitate successful development.

Traditionally, urban design is seen as the interface between the two major disciplines involved in the urban realm: urban planning and architecture, focusing on the urban space created through the effects of planning and realized through the physicality of architectural buildings. Beyond that and in a current understanding, urban design plays a mediative role between all relevant specialties that deal with the human and the human environment.

Landscape architecture, communication and transport engineering, but also 'soft' disciplines, like sociology, socio-economy, group and individual psychology and behavioral studies, even art and the humanities are just some of the disciplines that together shape the urban environment and that play an equally crucial role in the study and creation of cities.

## Urban Renewal

= deliberate change of the urban environment and injection of new vitality through planned adjustment of existing areas to respond to present and future requirements for urban living and working.

The fundamental objective of urban renewal is the application of several principles resulting in the revitalization of any or all portions of the urban structure, which are not fulfilling the functions for which they were designed.

Urban renewal generally applies to inner-city areas, centrally located in historical districts including non-residential as well as residential land uses.

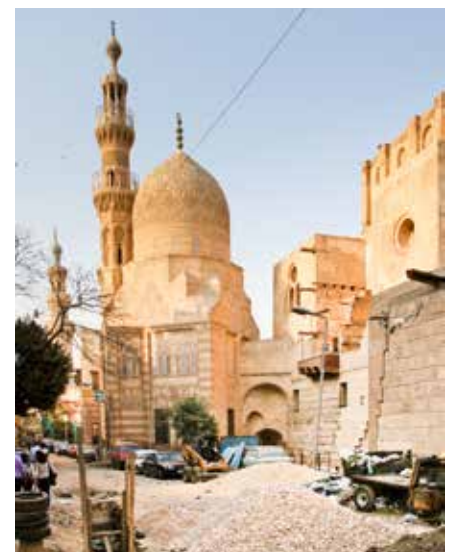
Urban renewal is a multifaceted process that affects the urban environment at many levels. Thus, the preservation of the city's identity, community, local culture and natural and built environments must be given special attention.



## Urban Development

= planned change and upgrading of deteriorating urban areas as a process of synergetic integration and co-evolution among the great subsystems making up a city: economic, social, physical and environmental.

Urban development strategies aim to guarantee the local population a non-decreasing level of wellbeing in the long term, without compromising the development opportunities of surrounding areas and thus contributing to the harmful effects of development on the biosphere.





## Urban Revitalization

= rebuilding of thriving, economically, environmentally and socially sustainable urban areas and populations that have been in decline by reactivating their existing potentials.

Urban revitalization strives for the modernization of inner-city areas focusing on neighbourhood improvement initiatives, adaptive re-use of buildings and quarters. The demolition of existing structures, as it is part of redevelopment strategies, is commonly avoided.

## Urban Rehabilitation

= based on preserving, repairing and restoring the natural and man-made environments of existing neighbourhoods. Rehabilitation, often termed “conservation” or “preservation” and herein subsuming them, is applicable to areas where buildings are generally in structurally sound condition but have deteriorated because of neglect.

Urban rehabilitation takes advantage of the existing housing stock as a valuable resource and adapts old houses to daily life and acceptable standards by providing modern facilities.

## Historic City Districts

= coherent and inter-related parts of a city including old buildings, monuments, neighbourhoods together with their natural and man-made environments and urban communities, whether they have developed gradually over time or have been created deliberately, as an expression of the diversity of societies throughout history.

Beyond their role as historical documents, these areas embody the values of traditional urban cultures. The historic character of a city district, and thus its authenticity, relates to a unique interaction of material and spiritual elements, especially:

- The urban patterns as defined by lots and streets;
- The relationships between buildings and green and open spaces;
- The formal appearance, interior and exterior, of buildings as defined by scale and size, style, construction, materials, colour and decoration;
- The relationship between the urban area and its surrounding setting, both natural and man-made; and
- The various functions that the urban area has acquired over time.



# Structure



## Curriculum

The curriculum is project based and has three main scientific components:

1. Urban Design and Rehabilitation – offered in the fall semester at BTU,
2. Urban Development – offered in the spring semester at Cairo University,
3. Architecture in Historic Context – offered in the fall semester at Alexandria University.

An introduction to scientific methods and standards of scientific research is integrated in the mandatory research module in the first term.

The fourth semester is reserved for the master thesis. Students can choose which university to stay at during the fourth semester based on the topic they choose for their thesis and on the supervisors they choose. The master thesis will be supervised by two professors from two of the partner universities. The registration is at the end of the third semester, including the submission of a draft thesis structure to the supervising professors.

All modules are taught in English.

BTU Term 1   Fall semester	CU Term 2   Spring semester	AU Term 3   Fall semester	BTU / CU / AU Term 4   Spring semester
Urban Design and Rehabilitation	Urban Development	Architecture in Historic Context	MASTER THESIS
Town and House 6 C	Urban Regeneration 6 C	New Architecture in Historic Context 6 C	
Landscape Planning and Public Space Design 6 C	Urban Heritage Management 6 C	Adaptive Re-Use of Old Buildings 6 C	
Experimental Urban Design 6 C	History of Urban Morphology 6 C	History and Theories of Historic Building Conservation 6 C	
Conservation/Building in Existing Fabric 6 C	Participation in Urban Development 6 C	New Technologies for Sustainable Building Rehabilitation 6 C	
Urban Planning (Live, Work and Recreate) 6 C	Mobility Planning and Management for Historic Cities 6 C	Evaluation, Interpretation and Documentation of Historic Buildings 6 C	
PROJECT URBAN DESIGN AND REHABILITATION 12 C	PROJECT URBAN DEVELOPMENT 12 C	PROJECT ARCHITECTURE IN HISTORIC CONTEXT 12 C	
Total credits 30 C	30 C	30 C	30 C

Theory, Research and Reflection

mandatory modules

optional modules - 1<sup>st</sup> - 3<sup>rd</sup> term: each term 3 modules

Project

mandatory modules

BTU · University of Technology Cottbus

CU · Cairo University

AU · Alexandria University





The Master in “Urban Design – Revitalization of Historic City Districts” is a postgraduate program for graduates who are interested in the urgent need in Urban Design for the Revitalization of Historic City Districts.

## Admission Requirements

Admission requirements are:

- A Bachelor degree in Architecture, Urban Design, Urban Planning, Regional Planning, Landscape Planning or Landscape Architecture;
- Experience in identifying relevant urban development problems, defining tasks, methods and strategies to solve problems and the ability to design qualified concepts in a traceable way and qualified experiences in defining problems.

Applicants must also provide one of the following proofs of English language proficiency:

- TOEFL (at least 79 points (iBT)),
- IELTS (minimum of 6.0 points),
- Cambridge Certificate in Advanced English (CAE) (minimum B) or
- Certificate of Proficiency in English (CPE) (minimum C).

## Documents

Please include the following documents in your application:

- Online application form
- Motivation letter (in English)
- Curriculum Vitae (in English)
- Bachelor Certificate\*
- Transcript of Records Bachelor Degree\*
- Secondary school leaving certificate\*
- Project Portfolio
- Proof of English language proficiency
- Copy of valid passport

\* For documents that are in a language other than English or German, certified translations have to be provided. Original hard copies for the Birth Certificate and Bachelor Certificate have to be submitted in Cairo University upon registration.

## Application Process

Programme enrollment is only possible in the fall semester. The application deadline is:

- 1 June for applicants with a degree from a foreign university,
- 31 August for applicants with a degree from a German university.

Please note that only applications that are complete and have been received by the application deadline will be considered.

Students with a first academic degree from Germany apply via the BTU application portal. International applicants apply via Uni Assist, an external organization that checks all applications for completeness and conducts the formal evaluation of the candidates' academic qualifications.

## Application:

Please consult the application site at <http://www.b-tu.de/urbandesign-ms> for further information.

# Advisory Board



## Advisory Board

Main tasks of the advisory board are to advise the partner universities of the programme, to monitor and evaluate the program and to support the partner universities in strengthening the cooperation with further scientific and professional institutions in the field.

### Members of the Advisory Board

Cairo University:

Dean of the Faculty of Engineering,  
Vice Dean for Post Graduate Studies and Research, Faculty of Engineering,  
Chairman of the Architecture Department.

Alexandria University:

Dean of the Faculty of Fine Arts  
Vice Dean for Post Graduate Studies and Research, Faculty of Fine Arts  
Chairman of the Architecture Department, Faculty of Fine Arts.

BTU Cottbus - Senftenberg:

Dean of the Faculty of Architecture, Civil Engineering and Urban Planning  
Vice Dean of the Faculty of Architecture, Civil Engineering and Urban Planning.

The Chairman of the National Organization for Urban Harmony, NOUH, the Egyptian Ministry of Culture.

The Chairman of the General Organization for Physical Planning, the Egyptian Ministry of Housing, Infrastructure and New Communities.

The Chairman of the Supreme Council of Antiquities, the Egyptian Ministry of Antiquities.

The Director of the German Academic Exchange Services (DAAD), Office Cairo.

## Contact

Cairo University  
Faculty of Engineering,  
Department of Architecture  
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Faculty of Fine Arts,  
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BTU Cottbus - Senftenberg  
Faculty of Architecture, Civil Engineering and Urban Planning  
Course director:  
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# Financial Overview



## Estimated Study Costs

The following table contains rough estimates of the costs associated with completing the Double Degree Master programme Urban Design – Revitalization of Historic City Districts. Please note that actual costs may vary depending on several variables (exchange rates, price fluctuation, personal lifestyle, etc.).

<sup>1</sup> The BTU semester fee includes a semester ticket for public transportation; for all public transport and regional trains in the state of Brandenburg and within the capital city of Berlin, as well as regional trains to the city of Dresden.

<sup>2</sup> The fourth semester fee is due to the university from which the student will receive the double degree – either Cairo University or Alexandria University.

<sup>3</sup> All students have to be covered by a German health insurance for the entire duration of their studies. This includes the semesters during which students will be studying and living in Egypt. (Travel insurances are not recognized as valid health insurance.)

<sup>4</sup> Students may want to factor in personal travel as well (e.g. family visits).

## Scholarships

Students are encouraged to find external funding, e.g. through scholarship programmes in their home country. Additional scholarship opportunities may be available through the partner universities and will be published on the programme's website.

	1. semester BTU Cottbus	2. semester Cairo CU	3. semester Alexandria AU	4. semester BTU / CU / AU
Tuition fee	1.500 €	1.500 €	1.500 €	1.500 €
Semester fee BTU Cottbus <sup>1</sup>	about 320 €			about 320 €
Registration Cairo or Alexandria University		about 275 €	about 50 €	about 160 € / 50 €
Health insurance Germany <sup>3</sup>	about 100 € per month for 6 months = 600 €	about 600 €	about 600 €	about 600 €
Living costs	about 700 € per month for 5 months = 3.500 €	about 500 € per month for 7 months = 3.500 €	about 500 € per month for 6 months = 3.000 €	about 700 € per month for 6 months = 4.200 €
Travel costs <sup>4</sup>	about 400 €	about 400 €		about 800 €

# Module Overview



## Module Descriptions

Main scientific component

Project module

Urban Design and Rehabilitation

Urban design and rehabilitation project

(BTU)

Urban Development

Urban development project

(CU)

Architecture in Historic Context

Architecture in Historic Context Project

(AU)

All components

Theoretical modules

Town and house

Landscape Planning and Public Space Design

Experimental Urban Design

Conservation / Building in Existing Fabric

Urban Planning (Live, Work and Recreate)

Urban Regeneration

Urban Management

History of Urban Morphology

Participation in Urban Development

Mobility Planning and Management for Historic Cities

New Architecture in Historic Context

Adaptive Re-Use of Old Buildings

History and Theories of Historic Buildings Conservation

New Technologies for Sustainable Building Rehabilitation

Evaluation, Interpretation and Documentation of Historic Buildings

Master Thesis

Main Content

- Relation of mass and space,
- Elements of the city; building typologies (common typologies and specific buildings; identity creating structures),
- Reflection of history;
- Different approaches to historic references in urban design,
- Design of public space,
- Relationship of rules and options / settings and options,
- Atmosphere and character,
- Accessibility, barrier free standards,
- Functional urban requirements (in relation to the whole town),
- Social needs,
- Visual and perceptual aspects.

- Urban development as an integrated and interdisciplinary process,
- History of urban development, morphological structures,
- Strategies for urban management,
- Assessment tools for urban structures,
- Participation tools,
- Integration of traffic and mobility planning
- Sustainability,
- Environmental aspects, climate adaption
- Social-economical aspects.

- Design and composition of new architecture in historic context,
- Research on historic buildings, including construction methods, original functions, conditions and circumstances of original design and construction,
- Assessment tools for historic buildings,
- Re-use of historic building materials,
- Integration of new functions in historic buildings
- Design of additions and new implementations to / in historic buildings,
- Energy efficiency for historic buildings,
- Restoration aspects.

- Scientific approach,
- Conceptual and strategic application.