



# MBA Sustainable Mobility Management

Three-Semester Master's Degree Course  
Taught in English  
Berlin, Germany



# Welcome to Technische Universität Berlin

Dear Students,

Welcome to the internationally renowned Technische Universität Berlin located in Germany's capital city at the heart of Europe. I am most delighted that you have chosen our institution for your master's degree.

With over 30.000 students, TU Berlin is one of the largest universities of technology in Germany. One of our most important tasks is to prepare our students for the challenges they will face in the future.

The program will provide you with basic knowledge and skills connecting theory, research and practice. For these educational objectives, the EUREF Campus of TU Berlin offers an inspiring atmosphere and a great number of outstanding scientific events.

With this brochure, we would like to help you in getting started at TU Berlin. You will find an introduction to the Master program as well as helpful links and contact details. For further information, please do not hesitate to contact our team of the Academic Advisory and Examination Office. They are here to assist you with all the necessary formalities.

I wish you a motivating and successful time at our university.

**Prof. Dr. Christian Thomsen**  
President



# Introduction

Dear Students,

The MBA in Sustainable Mobility Management is thought for transport engineers, transport and mobility experts, planners, architects, and sustainability project managers who want to gain in-depth, special knowledge in the field of sustainable mobility management.

Authorities, businesses and other agencies engaged in transport and mobility must rethink their current strategies. Each urban area faces its own specific set of challenges: congestion, emissions, safety, accessibility and economic implications are only some factors that account for the mobility situation that inhabitants experience. This implies an increased need for broadly educated, skilled managers, capable to frame those issues with social shifts, new technologies and innovative business models.

TU Berlin's master program in "Sustainable Mobility Management" closes the educational gap in this field and prepares students for leadership positions by training people who can deliver cutting-edge and sustainable mobility solutions. The master program is intended for an international and diverse audience: Learning and studying in small groups of up to 30 students means excellent and tailored learning conditions.

We invite you to an excellent research university in the capital of the world leading country of transport technologies to gain management competencies for the necessary sustainable transition of transport and mobility.

We are looking forward to meeting you!

**Prof. Dr. Hans-Liudger Dienel** and **Prof. Dr. Andreas Knie**  
Academic Directors

**Dr. Massimo Moraglio**  
Academic Coordinator



# Studying Sustainable Mobility Management with the Experts

The growing environmental impact of transport systems, as well as their energy voracity, require new approaches and new concepts. This MBA offers an integrative design across disciplines, addressing a range of different perspectives. The theory and practice-driven approach gives students both a conceptual understanding and the skills needed to tackle practical problems, covering the needs of strategy development, analysis and implementation, complex decision-making and project management.

Students who are the future mobility experts learn in a close cooperation with leading enterprises and institutions located on the EUREF-Campus to become acquainted also with practical projects in the field of energy, infrastructure and mobility.

The program's interdisciplinary content, which covers the social, economic, technical and governance aspects of tomorrow's sustainable mobility, gives students and future employees a distinctive profile and qualifies them for a leading position in the mobility sector.

The students completing this MBA will have career possibilities within transport supplier and equipment industries, national or international organizations, as well as with national, regional or municipal public authorities.

Graduates will be able to plan and manage complex projects in the transport and mobility fields. The program provides the knowledge and skills for assessing projects from social, sustainability and economic perspectives and for creatively, in teams or independently, finding solutions that consider the varying stakeholders' interests. Graduates will either be able to enter the labor market (private and public sector) or continue with postgraduate studies.

Potential employment sectors include, but are not limited to, vehicle and sustainable mobility service design; infrastructure or transport service, operations and administration; transport network planning, development, marketing or regulation; auditing or management of sustainable development policy in a company or public and private institutions.

# The Course Program and Structure

The Master program is taught over a period of three semesters. The first two semesters include lectures, tutorials, seminars and excursions. The program will be completed in the 3rd semester by writing and defending a master thesis.

The first semester is dedicated to the fundamentals of mobility and sustainability, considering these issues from different perspectives such as economic factors, social and managerial elements, and naturally including technological drivers.

In the second semester, trends and the future of transport as well as the transition toward sustainable mobility will be the main focuses, which encompass also the issue of governance and management of complex structures. A lecture series will provide world-based case studies.

The third semester is mainly devoted to specialization and Master Thesis.

Elective courses for specialization are offered.

| Technology                             | Economics   | Social Sciences               | Process Management                         |
|--|---|-------------------------------|--|
| Technological Foundations in Transport | Macro-Economics and Business Models of Sustainable Mobility | Mobility Actors and Practices | Project Management in Mobility             |
| Managing ICT                           | Mobility and Development                                    | Mobility Trends and Futures   | Managing Transition, Governance and Skills |
| Managing Smart and Green Mobilities    |   |                               |  |
| Innovation and Technology Management   |   |                               |  |
| Lecture Series                         |   |                               |  |

# Module Course Plan

| First Semester (WiSe 2018-19)  | Second Semester (SoSe 2019)                                  | Third Semester (WiSe 2019-20)                              |
|--|--|--|
| M01: Project Management<br>(in Mobility)<br>9 ECTS                               | M05: Mobility Trends and<br>Futures<br>9 ECTS                | M08: Managing Smart and<br>Green Mobility<br>6 ECTS        |
| M02: Mobility Actors and<br>Practices<br>6 ECTS                                  | M06: Managing Transition:<br>Governance and Skills<br>9 ECTS | Thesis<br>18 ECTS  |
| M03: Technological<br>Foundations in transport<br>9 ECTS                         | M07: Lecture Series<br>6 ECTS                                |  |
| M04: Macro-Economics<br>and Business Models of<br>Sustainable Mobility<br>6 ECTS | Compulsory electives:  |  |
|  | M09A: Innovation and<br>Technology Management I<br>6 ECTS    | M09B: Innovation and<br>Technology Management II<br>6 ECTS |
|  | M10: Managing ICT and<br>Mobility<br>6 ECTS                  | M11: Mobility and<br>Development<br>6 ECTS                 |
| 30 ECTS  | 30 ECTS  | 30 ECTS  |

# Module Description

First Semester (WiSe 2018-19)

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## **Module 01 - Project Management (in Mobility) (9 ECTS)**

At the end of this module, students will recognize the basics of strategic management and management methods concerning today's challenges in transport and mobility. Students will be able to develop managerial solutions, tackle issues related to a transition toward sustainable mobility and to implement appropriate solutions.

## **Module 02 - Mobility Actors and Practices (6 ECTS)**

At the end of this module, students will comprehend the fundamentals of mobility concepts and approaches, transport systems, and theories in sustainable mobility. The focus is to recognize mobility as a socio-technical system.

Students will deal with and manage the social/economic/technological tensions and critical points emerging in the implementation of the transition toward sustainable mobility.

## **Module 03 - Technological Foundations in Transport (9 ECTS)**

At the end of this module, students will diagnose several elements relevant to transport engineering and operations, including but not limited to analysis of the energy source, propulsion, efficiency, as well as multiple, sometime opposing, motivations of transport managements. They will also have an understanding of road design, including main and urban access roads. Students will utilize such knowledge to implement and plan according to technical potentials and limitations, as well as evaluate its relevance in addressing sustainability.

The module is made up of two courses:

Module 03A - Planning and Operation of Road infrastructure

Module 03B - Fundamentals of Transport Systems

## **Module 04 - Macro-Economics and Business Models of Sustainable Mobility (6 ECTS)**

At the end of this module, students will understand and classify the fundamentals of financial tools and business practice to achieve sustainable mobility. Students will develop and plan current and innovative economic and financial issues surrounding transport investment and evaluate traditional and innovative business models.

### **Module 05 - Mobility Trends and Futures (9 ECTS)**

Students will understand mobility trends, in order to ultimately tackle the future complexities of open and interconnected transport. Students will be able to assess societal and technological shifts and changes, gaining knowledge of the forecasting basics in order to develop scenarios and plan long-term concepts in mobility transition.

### **Module 06 - Managing Transition: Governance and Skills (9 ECTS)**

At the end of this module, students will be able to frame the transition to sustainable mobility according to different policy options, thus achieving tools for its management. Students will assess, implement and run solutions towards the sustainable transition. They will be able to manage and develop available governance tools as well as to engage not-political actors.

### **Module 07 - Lecture Series (6 ECTS)**

At the end of this module, students will have an overview of state-of-the-art sustainable mobility trends. National and international experts from industry, academia and research centers involved in the transition toward sustainable mobility will present different opinions, case-studies and perspectives.

### **Module 09A - Innovation and Technology Management I (6 ECTS) (Compulsory elective)**

Innovation management, technology management, IP management, project management, team building; this knowledge will be applied to a real project by developing a prototype in interdisciplinary teams based on a given problem.

Alternatively to Module 09A, students can enroll Module 10, see below.

### **Module 10 - Managing ICT and Mobility (6 ECTS) (Compulsory elective)**

At the end of this module, students will frame and assess the current and future practices of (highly) digitalized transport industry and service. Students will be able to cope with and manage the disruptive consequences of ICT in the mobility field with a focus on future scenarios.

### **Module 08 - Managing Smart and Green Mobility (6 ECTS)**

At the end of this module, students will compare the key concepts emerging from sustainability debates and literature, assessing and managing the tensions and synergies between environmental, social and economic objectives. Students will thus design, plan and deploy sustainable transport regimes, developing the transition towards novel models.

### **Module 09B - Innovation and Technology Management II (6 ECTS) (Compulsory elective)**

(Can only be elected if “Innovation and Technology Management I” was taken in 2nd semester.)

Innovation management, technology management, IP management, project management, team building; this knowledge will be applied to a real project by developing a prototype in interdisciplinary teams based on a given problem.

### **Module 11 - Mobility and Development (6 ECTS) (Compulsory elective)**

(Can only be elected if “Managing ICT and Mobility” was taken in 2nd semester.)

At the end of this module, students will recognize the aspects that distinguish transport sector issues in developing countries versus those from emerging economies of the industrialized world. This will allow participants to plan and implement different analytical techniques in varying institutional and economic contexts, and to generate effective instruments.

### **Master Thesis**

The Master thesis is written individually. You can choose your topic and work on the thesis in a company and / or with academic supervision.

# Lecturers

Lecturers who will teach the program:

|                                      |  |
|--------------------------------------|--|
| <b>Julian Alexandrakis</b>           | Technische Universität Berlin  |
| <b>Dr. Wulf-Holger Arndt</b>         | Technische Universität Berlin  |
| <b>Dr. Maren Borkert</b>             | Technische Universität Berlin  |
| <b>Dr. habil. Weert Canzler</b>      | Berlin Social Science Center   |
| <b>Prof. Dr. Hans-Liudger Dienel</b> | Technische Universität Berlin  |
| <b>Dr. Ulrike Engel-Ziegler</b>      | DB Engineering & Consulting GmbH   |
| <b>Dr. Valentina Fava</b>            | Technische Universität Berlin  |
| <b>Dr. Irene Feige</b>               | Institute for Mobility Research - BMW Group                              |
| <b>Prof. Dr. Dietmar Göhlich</b>     | Technische Universität Berlin  |
| <b>Dr. Christian Hoffmann</b>        | InnoZ, Berlin  |
| <b>Dr. Angela Jain</b>               | Technische Universität Berlin  |
| <b>Prof. Dr. Andreas Knie</b>        | InnoZ, Berlin  |
| <b>Prof. Dr. Jan Kratzer</b>         | Technische Universität Berlin  |
| <b>Prof. Dr. Barbara Lenz</b>        | Institute of Transport Research, Berlin                                  |
| <b>M.Sc. Tu-Anh Fay</b>              | Technische Universität Berlin  |
| <b>Thomas Meissner</b>               | Berlin Partner for Business and Technology                               |
| <b>Dr. Massimo Moraglio</b>          | Technische Universität Berlin  |
| <b>Dr. Roland Nolte</b>              | IZT - Institute for Futures Studies and<br>Technology Assessment, Berlin |
| <b>Prof. Dr.-Ing. Thomas Richter</b> | Technische Universität Berlin  |
| <b>Prof. Dr. Claus Tully</b>         | Freie Universität Bozen<br>(Free University of Bozen/Bolzano)            |

# Cooperation with Experts

Experts invited for the lecture series:

**Prof. Dr. Kay Axhausen**

**Prof. Dr. Felix Creutzig**

**Dr. Philippe Crist**

**Alessandro Damiani**

**Prof. Dr. Colin Dival**

**Dr. Gabriele Grea**

**Prof. Dr. Hans Jeekel**

**Dr. Felix Laube**

**Prof. Dr. Glenn Lyons**

**Maria Cristina Marolda**

**Dr. Angelo Martino**

**Prof. Dr. David Metz**

**Prof. Dr. Corinne Mulley**

**Prof. Dr. Graham Parkhurst**

**Nuno Ribeiro**

**Dr. Carolin Schröder**

**Dr. Bert Toussaint**

**Prof. Dr. David Tyfield**

**Johannes Ziegler**

Swiss Federal Institute of Technology in Zurich

TU Berlin / Intergovernmental Panel on  
Climate Change

OECD - International Transport Forum

EU Directorate General Research

Independent scholar, UK government consultant

Univ. Bocconi/private consultant, Italy

Eindhoven University of Technology,  
the Netherlands

Emch und Berger, Switzerland

University of West England, UK

EU Directorate General Move

TRT, Italy

University College London, UK

University of Sydney, Australia

University of West England, UK

VTM, Portugal

TU Berlin

Ministry of Infrastructure and the Environment,  
the Netherlands

Lancaster University, UK

Alceda, Germany



# Application for the Master Program

The application deadline is May 31st of each year for a start in October of the same year.

The following documents are required:

- University degree recognized by German universities (at least 210 ECTS),
- Proof of working experience of at least one year after completion of studies, preferably in the relevant areas of transport and planning,
- Tabular CV, with information including educational and professional background,
- Motivation letter in English (max. 1 page A4) educational and professional background,
- Proof of English language proficiency at Level B2 (or higher) of the Common European Framework of Reference for Languages (CEFR) (not required for high school graduation in English),
- Further documents, such as references may be submitted.

You can find more information about the application procedure online on our website:

**[www.master-in-mobility.com](http://www.master-in-mobility.com)**

The number of students is limited to 30 per year. An admission committee will decide about selection based on results of former studies, the study profile, and further relevant qualifications that were attained outside university.

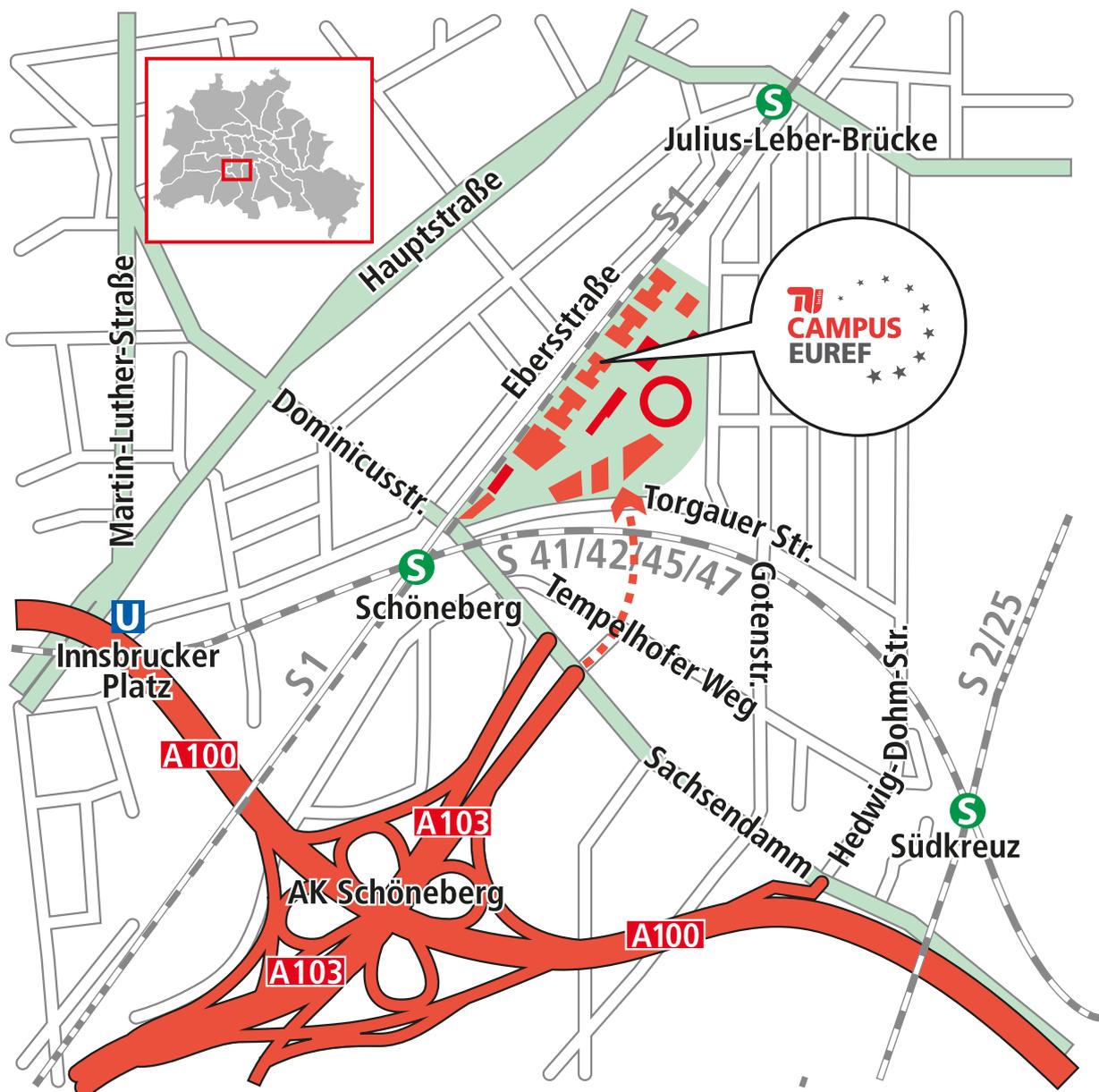
You can send your application via the website, via email, or via postal service.



# The EUREF-Campus

The study location is on the site of the European Energy Forum (EUREF) around the historical Gasometer in Berlin-Schöneberg. The Campus is the setting of an innovative community including applied research, economic and policy consultancies mainly based on the philosophy of sustainability.

Students who are the future mobility experts learn in close cooperation with leading enterprises and institutions located on the EUREF-Campus to become acquainted also with practical projects in the field of energy, infrastructure and mobility.



# Academic Direction and Master Course Team

## Academic directors:

Prof. Dr. Hans-Liudger Dienel

Prof. Dr. Andreas Knie

## Academic coordinator:

Dr. Massimo Moraglio

## Administration:

Laura Lehmann



## **Imprint**

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