

ENERGY MANAGEMENT

MBA



Winter Semester 2018/2019

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THIS PUBLICATION REFLECTS THE STATE OF PLANNING AT THE TIME OF PRINTING.
CHANGES MAY OCCUR.

TUBS GmbH
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Deutschland

Dear students,

Management decisions in the energy sector require a profound understanding of the sector's technical, economic, legal, and entrepreneurial peculiarities. Climate and economic changes, controversial opinions, technological progress as well as regulation shape and limit the entrepreneurial room, but also offer chances and opportunities. The industry, therefore, requires broadly skilled individuals who are experts in the field.

We are delighted to welcome you to this exciting TU program, where faculty and industry experts convey the latest scientific and practical insights the field, discuss today's challenges, and prepare students for leading roles in shaping the industry, and society, for the future ahead.

Prof. Dr.-Ing. Joachim MÜLLER-KIRCHENBAUER
Academic Director

Sarah DREWNING
Academic Coordinator

Lennart EHRL
Academic Coordinator

Sandra LUBAHN
Manager

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Overview

The Energy Management Team

Prof. Dr.-Ing. Joachim MÜLLER-KIRCHENBAUER

Academic Director MBA Energy Management
Professor for Management of Energy and Resources,
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Faculty for Economics and Management of
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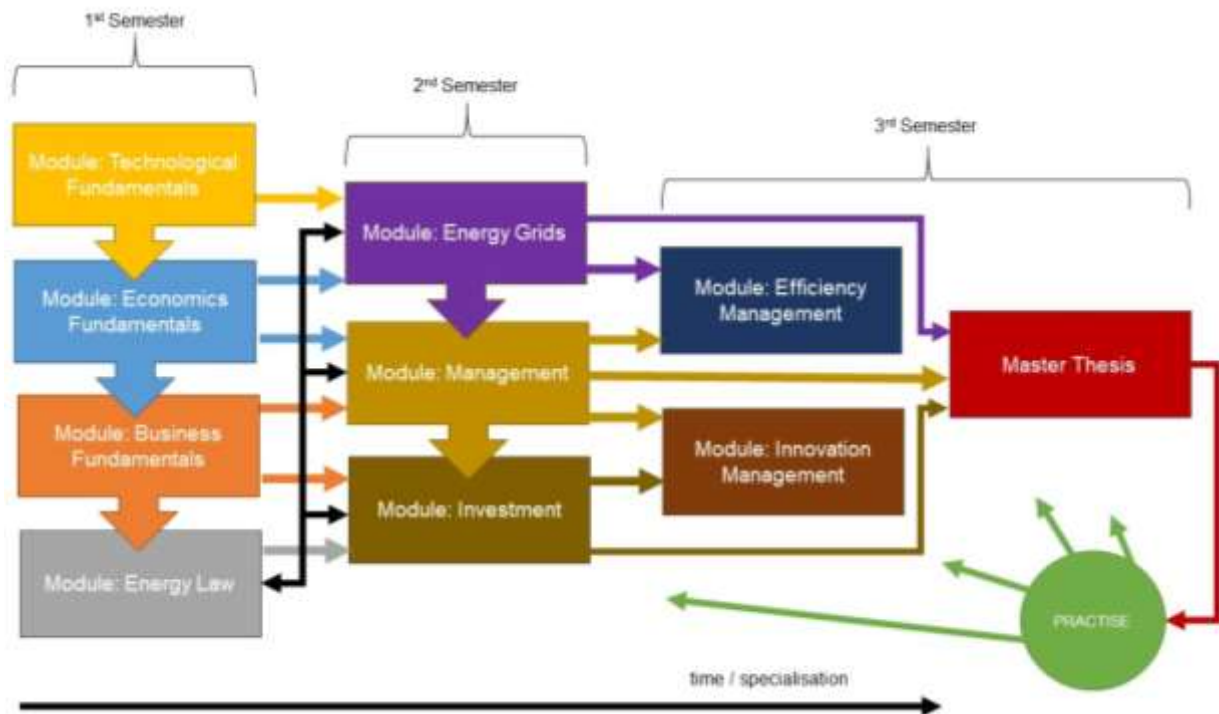


Sandra LUBAHN

Administrative Manager
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Modular Structure



The master program is taught over a period of three semesters. The first semester covers the technical, economic, entrepreneurial and legal foundations for management decisions in the energy sector; the second semester deepens this view and looks at business practises, primarily of grid-based utilities, and investment; the third semester broadens the view while simultaneously focusing on practise according to student's individual interests. All semesters include lectures, tutorials, seminars as well as Company Visits, online materials related to practice and extracurricular activities. The master thesis due in the third semester concludes the program.

Outline

Location and Times

Unless otherwise announced, lectures, tutorials, consultancy and peer group meetings take place at House 9, EUREF-Campus, 10829 Berlin, room S5.

Lectures

Lectures are held by professors and academic staff of TU Berlin and other universities, and by professionals of the energy industry. They convey the core teachings. Group work is frequent. Homework may be assigned. Lectures start on time!

Fridays	Saturdays
9.30 am - 1.00 pm	9.30 am - 1.00 pm
2.15 pm - 5.00 pm	2.15 pm - 5.00 pm

Tutorials / Company Visits

Tutorials	Wednesdays	Company Visits
8.00 am - 12.00 am		2 pm – 4 pm or Day Trip

Tutorials are mostly held by research associates and assistants of the respective chairs. Of a generally more interactive nature, they repeat lecture material, supply supportive information, offer additional training, and help prepare for lectures and exams.

Company Visits/Presentations are regularly scheduled on Wednesdays or Thursdays. Company Presentations take place on EUREF Campus, House 9, Room S5, whereas Company Visits give the opportunity to go and see the company on-site and see course-content more lively presented. Registration before attendance may be required.

German for Beginners Class

Level A1.1: Mondays 4:00pm – 7:30pm, Tuesdays 9:00am – 12:30pm (EUREF Campus)

Level B1.1: Saturdays 9:30am – 1:15pm (Main Campus of TUB)

Language classes incur a small additional fee. Advanced language classes are available, for which the taking of a test is mandatory.

E-Learning Platform 'Moodle' and WirelessLAN

Information System for Instructors and Students (ISIS)/Moodle is a software for online learning platforms for announcements, distribution of material, registration to events, etc. An introduction will be given in the first week. Please log on frequently, even in lecture free times. The TU Berlin offers [WirelessLAN](#) (WLAN) with full coverage across its campus. Students have the possibility to access the internet from any point on the campus.

Exams

A written (e-) exam, paper, presentation, or portfolio concludes each module. Everything that was taught in the lectures, tutorials, and compulsory Company Visits within the module may be subject to examination. Exams start on time! A failed examination may be repeated twice. For further details, please refer to the official Study and Examination Regulation.

First Semester

2018-19

EUREF Master Programs Orientation Week

October 1st – October 5th 2018 ([details](#))
Main Campus Charlottenburg, EUREF Campus

Campus Tour, Berlin Tour, Library Insights,
Get Togethers, Administrative Duties

Opening, 5th October, 4pm – 6pm
Lichthof / Atrium TU Berlin, Str. des 17. Juni 135, 10623 Berlin

Welcome Addresses Academic Directors
Music, Refreshments

Preparatory Week

October 08th – 12th 2018 ([details](#))

Preparatory content for
Quantitative Methods
Business Administration
Economics

MBA Program First Lecture

October 13th 2018, 9.30am–5pm

Module 01 Technology

Prof. Dr.-Ing. Joachim MÜLLER-KIRCHENBAUER

Academic Director

Institute Technologie und Management (ITM)

Faculty Wirtschaft und Management

sec. FH 5-3, Room FH 503

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Aims and Scope

This module revisits and broadens students' knowledge of energy technologies and systems in the context of today's changing world, preparing the ground for the coming modules. Students are taught to apply this knowledge independently to selected cases. Module 2, Economics, runs in parallel.

Keywords

Energy physics and energy technologies; thermodynamics; mechanics; chemical processes; Carnot engines and cycles; fossil fuels and renewable energy sources; conversion technologies; recent global and local developments; storage and transport technologies; electrical engineering; grids; transitions and trends.

Schedule

Sat. 13/10/18	Lecture: Introduction – Energy and Energy Markets Prof. Dr.-Ing. Joachim MÜLLER-KIRCHENBAUER
Wed. 17/10/18	Tutorial: Thermodynamics M.Sc. Benjamin GROSSE <i>Company Visit:</i> VATTENFALL Power Plant Berlin Mitte
Fri. 19/10/18	Lecture: Renewable Energy Sources Prof. Dr.-Ing. Joachim MÜLLER-KIRCHENBAUER
Mon. 22/10/18	Course of Instruction: Central Library (<i>Zentralbibliothek</i>) Training with focus on research databases (BUSINESS SOURCE COMPLETE) and introduction to the knowledge portal PRIMOS
Fri. 26/10/18	Lecture: Fossil Fuels, Petroleum Engineering I Prof. Dr.-Ing. Gioia FALCONE
Sat. 27/10/18	Lecture: Fossil Fuels, Petroleum Engineering II Prof. Dr.-Ing. Gioia FALCONE
Wed. 31/10/18	Tutorial: Renewables M.Sc. Benjamin GROSSE <i>Company Visit (Module 2):</i> NERA Economic Consulting
Sat. 10/11/18	Lecture: Power Grids and Dynamic Grid Control Prof. Dr.-Ing. Kai STRUNZ

Wed. 14/11/18 Tutorial: Power Grids
Dr.-Ing. Maren KUSCHKE
Company Visit: SENSE Lab, TU Berlin

Thu. 22/11/19 **Exam, 8:00 am, written, 90 minutes, graded**
Prof. Dr.-Ing. Joachim MÜLLER-KIRCHENBAUER

Literature

- [1] GEA. Global Energy Assessment - Toward a Sustainable Future. Cambridge, UK and New York, NY, USA and the International Institute for Applied System Analysis, Laxenburg, Austria, <http://www.globalenergyassessment.org/>, 2012.
- [2] Robert L. Jaffe and Washington Taylor. The Physics of Energy. Cambridge University Press, 2018.
- [3] T.J. Overbye J.D. Glover, M.S. Sarna. Power System Analysis and Design. Cengage Learning, 2011.
- [4] Volker Quaschnig. Understanding Renewable Energy Systems. Earthscan, 2005.
- [5] W Shepherd and D W Shepherd. Energy Studies. Imperial College Press, 2008.

Module 02 Economics

Prof. Dr. rer.pol. Georg ERDMANN

Head of Department

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 Department of Energy Systems
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Aims and Scope

This module provides students with core knowledge of economics in the field of energy and provides a grounding in the economics behind the coming modules. Students are taught to apply this knowledge independently to selected cases. It runs in parallel to Module 1, Technology.

Keywords

Welfare analysis; prices and markets; markets forms; production and pricing decisions; natural resource economics; merit order effects; external effects; trading in allowances; fundamentals of investment decisions; market failures and regulation; sustainability; global commons; security of supply.

Schedule

Sat. 20/10/18	Lecture: Economics I Prof. Dr. rer.pol. Georg ERDMANN
Wed. 24/10/18	Tutorial Dipl.-Wirtsch.-Ing. Lars DITTMAR <i>Company Presentation (Module 1): EUREF AG</i>
Wed. 7/11/18	Tutorial Dipl.-Wirtsch.-Ing. Lars DITTMAR <i>Company Presentation: FORSCHUNGSCAMPUS</i>
Fri. 9/11/18	Lecture: Regulation and Incentives Prof. Dr. Klaus HEINE
Mon. 12/11/18	Lecture: Economics II Prof. Dr. Aaron PRAKTIKNJO
Tue. 13/11/18	Lecture: Economics III Prof. Dr. Aaron PRAKTIKNJO
Fri. 16/11/18	Exam, 8:00 am, written, 90 minutes, graded Prof. Dr. rer. pol. Georg ERDMANN

Literature

[1] Subhes C Bhattacharyya. Energy Economics: Concepts, Issues, Markets and Governance. Springer, 2011.

[2] H L Varian. Intermediate Microeconomics: A Modern Approach. Norton, 2014.

[3] Peter Zweifel, Aaron Praktiknjo, and Georg Erdmann. Energy Economics: Theory and Practice. Springer, 2017.

[4] N. Gregory Mankiw. Principles of economics: 6. ed., internat. ed. Australia [u.a.] : South-Western, Cengage Learning, 2012

Module 03 Business

Prof. Dr. Dodo zu Knyphausen-Aufseß
Chairman Strategic Leadership and Global Management

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Aims and Scope

In this module, students learn the fundamentals of strategic management and the basic tools and applications used in the energy sector. Students are taught to apply this knowledge independently to selected cases.

Keywords

Fundamentals of management and business administration; management and leadership; shareholder and stakeholder value approach; the concept of strategy; Porter's Five Forces; SWOT-Analysis; etc.; strategic business units; industry analysis; generic strategies; vertical integration; portfolio analysis; diversification; strategy process; case studies.

Schedule

Sat. 17/11/18	Lecture: Business I Prof. Dr. Dodo ZU KNYPHAUSEN-AUFSESS
Wed. 21/11/18	<i>Recruitment Training Day</i> Schneider Electric GmbH
Fri. 23/11/18	Lecture: Business II Prof. Dr. Dodo ZU KNYPHAUSEN-AUFSESS
Sat. 24/11/18	Lecture: Business III Dr. Nadja BERSECK
Wed. 28/11/18	Lecture Business IV Prof. Dr. Dodo ZU KNYPHAUSEN-AUFSESS <i>Company Presentation: ÖKOTEC Energiemanagement GmbH</i>
Fri. 30/11/18	Lecture: Business V Prof. Dr. Dodo ZU KNYPHAUSEN-AUFSESS <i>Topic Assignment Presentations</i>
Sat. 1/12/18	Lecture: Management in the Energy Sector Market Roles, Functions & Participants in Liberalised Energy Markets Prof. Dr.-Ing. Joachim MÜLLER-KIRCHENBAUER

- Wed. 5/12/18** Tutorial: Sustainability and Quality Management + Questions
Online Quiz (10 am- 12 am)
Sarah DREWNING
Company Presentation (2 pm - 4 pm): e.venture consulting GmbH
- Fri. 7/12/18** **Lecture: Accounting and Finance I**
Dr. Maximilian WACHTER
- Sat. 8/12/18** **Lecture: Accounting and Finance II**
Dr. Maximilian WACHTER
- Wed. 12/12/18** **Quiz, online, 75 minutes**
- Fri. 14/12/18** **Tutorial: Presentation Techniques (10am – 12am)**
Lennart EHRL
Company Presentation (1 pm – 2 pm): 50 Hertz
Meet the Alumni: Ulrike Hintz (Intake 2016)
- Sat. 15/12/18** Supervised Learning: Company Presentation (9.30am – 1pm)
Sarah DREWNING
Self Study (2pm – 5pm)
- Fri. 21/12/18** **Exam: Presentations, 8 hours, pass / fail**
Prof. Dr. Dodo ZU KNYPHAUSEN-AUFSESS
Prof. Dr.-Ing. Joachim MÜLLER-KIRCHENBAUER

Literature

- [1] Matt Carter. Designing Science Presentations: A Visual Guide to Figures, Papers, Slides, Posters, and More. Academic Press, 2013.
- [2] Robert Grant. Contemporary Strategy Analysis. Wiley, 2016.
- [3] Susan McHugh William G. Nickels, James McHugh. Understanding Business. McGraw-Hill, 2013.

Christmas Dinner and Celebration

Dec. 21st 2018, 6pm
Hotel Abion Berlin

Module 04 Energy Law

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Aims and Scope

This module presents the legal framework of today's global, EU and German energy markets. Students learn to independently evaluate cases and summarize legal situations.

Keywords

Energy law; energy trade and international contracts; UN conventions; WTO; ECT; contract law; EFET contracts; the legal system of the EU and the Third Energy Package; Germany's Energiewende and EEG; EU secondary law v. regional developments; environmental law; state aid.

Schedule

Fri. 11/1/19	Lecture: Introduction to European Union (Energy) Law Prof. Dr. Lydia SCHOLZ
Sat. 12/1/19	Lecture: Energy Policy, European Law and Business Practice Peter HOHAUS
Tue. 15/1/19	<i>Company Presentation:</i> PONTON GmbH
Wed. 16/1/19	Tutorial Eleni-Aristea ALEVIZOU
Fri. 18/1/19	Lecture: The EU Legal Framework for Infrastructure Regulation Dr. Carsten KÖNIG
Sat. 19/1/19	Lecture: EU Energy Law and Policy Dr. Oliver KOCH
Wed. 23/1/19	Tutorial Eleni-Aristea ALEVIZOU
Fri. 25/1/19	Lecture: Energy Law in Practice Dr. Oliver FRANZ
Sat. 26/1/19	Lecture: The EU Legal Framework for Energy Wholesale Trading Dr. Annegret GROEBEL

Mon. 28/1/19 *Company Visit:*
European Energy Exchange Leipzig

Tue. 29/1/18 –
Wed. 6/2/18 **Paper, 10 pages, graded**
Prof. Franz Jürgen SÄCKER

Literature

- [1] Angus Johnston and Guy Block. EU Energy Law. Oxford University Press, 2012.
- [2] Kim Talus. EU Energy Law and Policy. A Critical Account. Oxford University Press, 2013.
- [3] Kate L. Turabian. A Manual for Writers of Research Papers, Theses, and Dissertations. The University of Chicago Press, 2013.

Fair Visit: E-world energy & water
(5-7th February 2019)

Feb. 6th 2019 (details tba)

[Read more](#)

Exam Retakes

April 2019

Start of Summer Term

First Compulsory Lecture:
April 12th 2019

Master Thesis

Supervisors Individual.

Aims and Scope

Students demonstrate with the Master Thesis to be capable to address a problem from their study program independently, based on scientific methods, within a specific deadline. Once registered for the thesis, students have four months to conclude.

Schedule

To start the master thesis, 62 CP must have been gathered; this equals successful completion of all mandatory modules M1-M7. Technically, the earliest starting date is hence six weeks after the last exam. The thesis can be postponed but should be completed in the third term.

Contents Individual.

Form Fifty pages, plus introduction and annex(es). In English. Scientific standards prerequisite. More detailed formal requirements to be announced.

DATE tba Tutorial. Preparation for Master Thesis and Term III
N.N.

Graduation Ceremony MBA Energy Management 2017-19

July 19th 2019 (tbc)

Details to be announced









Alumni Program








With your degree, you become part of the alumni network. Alumni receive invitations to participate in the further extension of the academic program, and to events held on the campus and within the network.

As the program rolls over, you are cordially invited to participate in the curricular and extracurricular events of the following academic year(s).

Faculty


Lecturers & Tutors


<p>Eleni-Aristea ALEVIZOU, MBL Research Assistant Master on European and International Energy Law (MBL) TUBS GmbH – TU Berlin ScienceMarketing eleni-aristea.alevizou@campus.tu-berlin.de</p>	
<p>Julian ALEXANDRAKIS Research Associate, Entrepreneurship Educator Chair for Entrepreneurship and Innovation Management TU Berlin www.entrepreneurship.tu-berlin.de</p>	
<p>Dr. Nadja BERSECK Senior Analystin Sustainability Management and Futurology Deutsche Bahn AG https://www.deutschebahn.com/en/sustainability</p>	
<p>Dr. Maren BORKERT Assistant Professor Technical University Berlin Chair of Entrepreneurship and Innovation Management www.entrepreneurship.tu-berlin.de</p>	
<p>Bettina BROCKMANN, M.A. Lecturer AY-A, Communication Studies San José State University, California, USA http://www.sjsu.edu/</p>	
<p>Dipl.-Wirtsch.-Ing. Lars DITTMAR Research Associate Berlin University of Technology Department of Energy Systems https://www.ensys.tu-berlin.de/</p>	
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<p>Lennart EHRL, M.Sc., M.A. Academic Coordinator MBA Energy Management lennart.ehrl@campus.tu-berlin.de</p>	

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<p>Prof. Dr. Gioia FALCONE Rankine Chair - Professor of Energy Engineering University of Glasgow, Imperial College London https://www.linkedin.com/school/university-of-glasgow/</p>	
<p>Dr. Oliver Helge FRANZ Regulatory Manager, Head of Regulatory Services and Regulatory Strategy RWE Deutschland AG, innogy SE http://rwe.com/</p>	
<p>Dr. Clemens GERBAULET Project Manager Buisness Developement HanseWerk AG https://www.hansewerk.com</p>	
<p>Prof. Dr.-Ing. Dietmar GÖHLICH Head of MPM Methods of Product Desgin and Mechatronics TU Berlin https://www.mpm.tu-berlin.de/</p>	
<p>Markus GRAEBIG Project Manager WindNODE, c/ o 50Herz Transmission GmbH https://windnode.de</p>	
<p>Dr. Annegret GROEBEL Head of Departement International Relations/ Postal Regulations Bundesnetzagentur http://www.bundesnetzagentur.de/</p>	

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<p>Prof. Dr. Klaus HEINE Law and Economics Erasmus School of Law, Rotterdam Jean Monnet Chair of Economic Analysis of European Law http://klausheine.eu/</p>	
<p>Dr. Bodo HERRMANN Head of Unit: Grid Development / Expansion Bundesnetzagentur http://www.bundesnetzagentur.de/</p>	
<p>Prof. Dr. Christian VON HIRSCHHAUSEN Economic Policy and Infrastructure Policy Berlin University of Technology DIW Berlin (German Institute for Economic Research) Massachusetts Institute of Technology https://www.wip.tu-berlin.de/</p>	
<p>Peter HOHAUS Senior Policy Advisor Uniper SE http://uniper.energy</p>	
<p>Prof. Dr. Dodo ZU KNYPHAUSEN-AUFSESS Strategic Leadership and Global Management Berlin University of Technology https://www.strategie.tu-berlin.de/</p>	

<p>Dr. Oliver KOCH Deputy Head of Section DG Energy-European Commission https://ec.europa.eu/energy/</p>	
<p>Dr. Carsten KÖNIG Academic Officer University of Cologne Chair for Civil Law, Competition Law, Regulatory Law, Law of the Digital Economy www.ls-koerber.de</p>	
<p>Dr. Sabine KÖNIG General Project Manager STEAG GmbH http://www.steag.com/</p>	
<p>Dr. Armin KRAFT CEO EEB Enerko http://enerko.de/</p>	
<p>Prof. Dr. Jan KRATZER Entrepreneurship and Innovation Management Berlin University of Technology CfE Center for Entrepreneurship at TU Berlin https://www.entrepreneurship.tu-berlin.de/</p>	
<p>Dr.-Ing. Maren KUSCHKE Research Associate Berlin University of Technology Sustainable Electric Networks and Sources of Energy http://www.sense.tu-berlin.de/</p>	

<p>Dr. Florian LEUTHOLD Vortex Energy Group, COO TU Berlin http://vortex-energy-group.com/</p>	
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<p>Prof. Dr. Dr. Dres. h.c. Franz Jürgen SÄCKER Academic Director Energy Law MBL enreg Institute for Regulatory and Energy Law Berlin http://saecker.enreg.eu/</p>	
<p>Prof. Dr. Lydia SCHOLZ Economic and Business Law Hochschule Bremen http://www.hs-bremen.de/</p>	
<p>Dr. habil. Hans-Günter SCHWARZ Electricity Market Modelling New Business RWE Supply and Trading RWE http://www.rwe.de/</p>	

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