### FREIBURG »GREEN CITY«

Freiburg has gained its name and reputation as "Green City" thanks to its high environmental standards, innovative research and development, and general attitude toward



the environment. With extensive use of solar energy and other renewable sources, the city attracts researchers and environmental organizations from around the world. And Frei-

burg is not only green in its policies and politics: no other city of comparable size (220,000 inhabitants) has such diversity of landscapes, ranging from the mountains of the Black Forest to the Mediterranean vegetation of the Rhine valley. One of Germany's most beautiful cities, Freiburg is a traditional, yet also youthful and dynamic University town. Its location next to the French and Swiss border makes it a great base for exploring Europe.

#### FACULTY



Resources and the Faculty of Engineering, as well as internationally experienced representatives from across many different departments of the University of Freiburg and from external research institutes and partner Universities.



Transportation of energy by underground pipes

#### FACTS AND FIGURES

Duration:4 semesters, 120 ECTS creditsCourse start:OctoberLanguage of instruction:EnglishApplication deadline:15 MayLanguage prerequisites:TOEFL ibt 100, IELTS Band 7Accredited by:ACQUIN

The programme's high and growing appeal to students worldwide (we receive over 450 applications from dozens of countries every year) can be taken as proof of the relevance of its underlying educational principles. Each year, a group of around 55 students is selected in a highly competitive procedure based on criteria of excellence and geographical representation.

## соптаст

Albert-Ludwig University Faculty of Environment and Natural Resources **Stefan Adler** Tennenbacherstraße 4 79106 Freiburg Tel.: +49 (0) 761 203 8598 **stefan.adler@zee.uni-freiburg.de** www.rem.uni-freiburg.de

# n.sc. programme





ALBERT-LUDWIG UNIVERSITY OF FREIBURG FACULTY OF ENVIRONMENT AND NATURAL RESOURCES

# SUSTAINABLE energy systems environment natural resources Solar energy BIO & WIND energy Smart Solutions

#### m.sc. Renewable energy engineering and management (Rem)

Renewable energy sources will no doubt be one of the greatest issues our society will have to face in the future. With this Master programme, our aim is to provide international students with a context-sensitive, first-class training in the field of "Renewable Energy Engineering and Management". The M.Sc. REM programme is designed to bridge the current gap between technical aspects of renewable energy and its sustainable implementation at a societal level. To establish this connection, a **trans-disciplinary approach** is paramount. As an inter-faculty study programme hosted by both the Faculty of Environment and Natural Resources and the Faculty of Engineering, the REM programme stands out for its trans-disciplinary endeavor. Furthermore, its close collaboration with the renowned Fraunhofer Institute ensures a strong **connection between research and industry**.



# **CURRICULUM**

The REM programme is designed as a two-year (4-semester) full-time programme (120 ECTS). Teaching is mostly organized in three-week block modules, comprising core and elective modules as well as the option to specialize in three different fields: energy systems technology; energy conversion; environmental planning and management. On the one hand, students acquire skills and knowledge **to plan** projects and facilities for the utilization of renewable energy, and on the other hand, they learn how **to implement** them while taking into account economic, political and societal concerns.

#### **TARGET GROUP**



#### 1<sup>st</sup> SEMESTER

 > Energy & Sustainable Development
> Scientific Framework for REM
> Natural Resources and Conversion Technologies
> Climate & Energy Policy The programme is addressed to candidates with BSc in: engineering (electrical engineering, energy management, process engineering, microsystems technology, mechanical engineering or environmental engineering), natural sciences or applied life sciences (forest or environmental sciences). Applicants must have well-aboveaverage grades in order to be elegible.

#### **2<sup>nd</sup> SEMESTER**

> Generation and Distribution of Energy
> Management I
> Research Skills
> Society and Economy
> Wind Energy
> Bioenergy I



Excursion to a hotel using renewable energies (PV, solar thermal and wind energy)

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Upon completion, graduates will be well prepared for careers and future employment in a variety of fields: renewable energy companies, power supply companies, investment companies specializing in financing environmental projects, as well as investment and development banks, planning and engineering bureaus, consultancies, public relations and information services (energy agencies, technology transfer institutions) and project management.

#### 4<sup>th</sup> SEMESTER

> MASTER THESIS

Efficiency; Energy Informatics) > Energy Conversion (Photovoltaics 1 and 2; Low and High Temperature Solar Thermal Energy)

**3rd SEMESTER** 

> Energy Systems Technology

(Energy Systems Hardware and Control: Smart Grids: Energy

Environmental Planning and Management (Energy communities; Management 2; Landscape, Nature protection, Landuse conflicts; Bioenergy 2)

ternship

= Core Modules = Elective Modules = Elective Tracks