

Winter semester 2024/25

Project Lab Renewable and Sustainable Energy Systems for Master Management & Technology – Specialization: Sustainable Energies

Notes on registration

If you are interested in participating in this project internship (PI), please proceed as follows:

1. Choose the topic for the PP that is relevant to you in the topics listed below. The topics are **reserved exclusively** for the *Master's degree program Management & Technology – Specialization: Sustainable Energies*.
2. For more information on the topics and the process, an **online meeting** will take place. You can find the date and the corresponding link in the respective topic description.
3. If you would like to apply for one or more topics, please register for the corresponding groups in TUMonline by Wednesday, October 16, 2024, at the latest and please make it clear how you prioritize the topics.
4. By Tuesday, October 22, 2024, at the latest, we will let you know whether and, if so, with which topic you can work on the project internship.

If you have any questions of an organizational nature, please contact Dr. Kuhn (propens.ens@ed.tum.de).

If you have any questions about the content of the various topics, please contact the supervisor directly.

Organizational:

Weekly attendance times are planned for the project internship (see table).

Topics

No.	Topic	Students	Brief description	Supervisor (email)	Time slots for meetings
1	Ghana – PV education hub	Max. 10	<p>The KNUST-TUM PV Education hub project is one of the first steps from the TUM ENS chair as a long-term vision for strategic and sustainable partnership with KNUST, Ghana. In the shorter-term, we are attempting to cultivate an entrepreneurial mindset among students and enhancing renewable energy skills through block-course format, short education camps.</p> <p>More details – see proposal</p> <p>The online meeting will take place Sep 30, 10am or Oct 11, 10am.</p>	Mohapatra, A. Erhart, M.	tbd

No.	Topic	Students	Brief description	Supervisor (email)	Time slots for meetings
2	Energy for Africa	Max. 15	<p>The project internship will examine a number of countries in southern Africa and compare them, especially at the end. Each student will first work on one country. The work will consist of the following steps:</p> <ul style="list-style-type: none"> • Analysis of the existing energy system based on the official energy balance of an international organization such as the IEA and the relevant ministries in the countries • Analysis of the country's demographic and economic development including documentation of expected future developments on the basis of a) simple estimates and b) published studies • Easily estimate expected energy and electricity demand in the coming years • Analysis of the renewable and fossil potentials in the country • Simple estimation of the possible contributions from renewable energies for the years 2030, 2040 and 2050 • The regulatory framework in the country to promote renewable energies • Creating a simple final energy scenario for the future <p>All results are summarized in a linked Excel spreadsheet (or a Python program if desired). The table must a) be clear, b) be easily expandable and c) easily allow the creation of different scenarios.</p> <p>In addition to the Excel spreadsheet, the organization of the spreadsheet and the results are described in a written document.</p> <p>We look at all countries in Africa except Egypt, Libya, Tunisia, Algeria, Morocco and South Africa.</p> <p>The online meeting will take place on October 11, 2024, at 17:00.</p>	Hamacher, T.	Tuesday 09:30 – 12:00