Lehrstuhl für Erneuerbare und Nachhaltige Energiesysteme
TUM School of Engineering and Design
Technische Universität München

Winter semester 2025/26

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 **info meeting / video introduction** will take place.
   The date and the corresponding link can be found 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 08, 2025, at the latest and please make it clear how you prioritize the topics.
4. By Monday, October 20, 2025, 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. Philipp 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	**"Africa"**	max. 25	Africa's population is growing at a rapid pace, while the economy is still lacking behind in most parts of the continent. Agriculture still plays a significant role and supplies a broad fraction of the population the only income. Each student should analyze the agricultural structure of one of the African countries. The analysis is expected to be done in various steps: 1. Short description of the country including a few historical and political facts 2. Short description of the population development, distribution between urban and rural population 3. Main agricultural products of the country 4. Structure of agriculture, size of farms, mix of products 5. Food markets 6. Food collection and transportation systems 7. Im- and export of food. 8. Food industry 9. Main nutrition basis for most people 10. Cooking technologies Based on the analysis an extrapolation into future developments is made. Which fraction of the country will be used for agricultural in future?	**Prof. Dr. Thomas Hamacher** (thomas.hamacher@tum.de)	**weekly** October 15, 2025 - February 04, 2026 1:30 pm. – 05:00 pm. seminar room: 0003@5414 (ZEI Building, Lichtenbergstr. 4a, 85748 Garching)

No.	Topic	Students	Brief description	Supervisor (email)	Time slots for meetings
			Which fraction of the country requires new irrigation and water supply techniques? What will be the structure of farming? What would an industrialization of agriculture mean? A special emphasis is on employment and what would happen if jobs in agriculture were replaced by machines and automation? The report is composed of a written report, an excel workbook including the central data about the agriculture in the country and in ideally a case study which demonstrates in a specific region how a land reform could change the nature of agricultural and rural life in coming years. **Video:** https://tum-conf.zoom-x.de/rec/share/asX1syU2LnDrcAJ_TMtyHl7FhAhVU2VqVGP-vUcrKWm4cL_9eLtjB0yZrHkl46lc.cSvFDpcrrNqvj68o Kenncode: 1=bb8YX7		
2	**EduGrid - "PV in Anwendung"**	max. 10	Das EduGrid-Projekt ist Teil einer langfristigen Initiative zur offenen und frei zugänglichen Vermittlung von Lehrinhalten im Bereich erneuerbarer Energien. Im Fokus stehen 3D-druckbare Experimentier-Kits und offene Unterrichtsmaterialien, die weltweit von Schulen und Universitäten eingesetzt werden können.	**Michael Erhart** **Maximilian Hock** (michael.erhart@tum.de)	**weekly** October 16, 2025 - February 05, 2026 10:00 am. – 12:00 am. seminar room: 0003@5414 (ZEI Building, Lichtenbergstr. 4a, 85748 Garching)

No.	Topic	Students	Brief description	Supervisor (email)	Time slots for meetings
			In dieses Projekt entwickeln Studierende Unterrichtsmaterial zum Thema „PV in Anwendung“ und “Wind- und Wasserkraft” auf dem Niveau der 11. Jahrgangsstufe. Ziel ist es, theoretische Grundlagen mit praktischen Experimenten zu verbinden und den Schülerinnen und Schülern die Bedeutung der Photovoltaik für die Energiewende näherzubringen. Dazu werden Unterlagen erstellt die theoretischen Grundlagen begleitet von Gruppenexperimenten begleitet werden. Es existieren bereits Materialen für beide Themengebiete, die zu einem fertigen Produkt ausgearbeitet werden sollen Weitere Details finden Sie in der ausführlichen Projektbeschreibung. **Infomeeting:** https://tum-conf.zoom-x.de/j/64578981291?pwd=bdPHuN8GBOB29AC5eTTd8QOyHUknAd.1 Meeting ID: 645 7898 1291 Passcode: 854641		