

DESIRE – Development of higher Education teaching modules on the Socio-economic Impacts of the Renewable Energy implementation

Call for applications

Renewable Energy Training Courses in Germany and Italy in July

“Introduction to socio-economic aspects of RE&EE and Economics of Renewables”

Co-Funded by the Erasmus+ Programme

Application deadline: Thursday, April 27

DESIRE, is an ERASMUS+ PROGRAMME funded by the European Commission. The main objective of the project is to provide a high quality education for MENA students in the key aspects of Renewable Energy and Energy Efficiency (REEE) technology with the emphasis on the socio-economic aspects of these technologies, therefore enabling them to take responsible, creative, challenging and stimulating posts in policymaking, industry or research in this targeted field.

Within the DESIRE programme three training sessions at different partner institutes are offered for GJU students in the month of July:

Location	Date	Content
Wuppertal Institute, Germany	03. – 14.07.2017	Introduction to socio-economic aspects of RE&EE
Sapienza University Rome, Italy	10. – 21.07.2017	Project and design of a small renewable plant, Experimental analysis
Technical University Dresden, Germany	17. – 28.07.2017	Introduction to socio-economic aspects of RE&EE

GJU students will participate in the training sessions and are expected to transfer knowledge to their home institutions by participating and supporting at dedicated workshops. The course syllabuses can be found in the attachment. We are targeting students from both undergraduate and graduate level.

The DESIRE project will cover the following costs:

- **55 Euros per day for accommodation in single or shared rooms, and meals**
- **A travel allowance according to the Distance calculator of the European Union will be provided**

The selection criteria are:

- **Applicants must be involved in research and/or have studied renewable energy courses**
- **GPA of at least 70%**

- **Applicants must send a meaningful application letter explaining why he/she is interested in the training session at the specific location, how it is related to their studies and what they hope to learn**
- **In case of numerous qualified applications interviews might be conducted**

Interested applicants should submit their documents (application form, motivation letter, CV, transcript of records) to the International Office until April 27, 2017:

jutta.schmid@gnu.edu.jo or eva.garcke@gnu.edu.jo.

For more information relating to the the content of the trainings, contact Dr. Louy Qoaidar, Project Coordinator of DESIRE programme at SATS, louy.qoaidar@gnu.edu.jo.

We are looking forward to receiving your applications!



Personal Information

Name of applicant	
Address	
Date of Birth	
Nationality	
GJU Student ID	
Email Address	
Phone number	
Major	
Level of studies (Bachelor / Master)	
Number of semesters studied at GJU	
Current GPA	
English proficiency (A1-C2)	

Choice of training course

Preferred Course	<input type="checkbox"/> Wuppertal Institute, Germany, 03. – 14.07.2017 <input type="checkbox"/> Sapienza University Rome, Italy, 10. – 21.07.2017 <input type="checkbox"/> Technical University Dresden, Germany, 17. – 28.07.2017
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Attachments:

- CV
- Letter of Motivation
- Transcript of records from Registration Department

Please send the completed application containing all required documents via email to the following contact persons at GJU International Office until April 27, 2017.

Main Campus

Jutta Schmid

Advisor for International Exchange
Building B, Office 117
Email: jutta.schmid@gju.edu.jo

Eva Garcke

Scholarship Coordination
Building B, Office B118
E mail: eva.garcke@gju.edu.jo

For more information relating to the the content of the trainings, contact Dr. Louy Qoaidar, Project Coordinator of DESIRE programme , louy.qoaidar@gju.edu.jo.

STUDENTS' INTERNSHIP

Sapienza's proposal is to provide to DESIRE students n. 3 different opportunities of training:

1. Project and design of a small renewable plant, starting from the analysis of real conditions and final users needs. For this proposal, the software for the design of renewable plants will be introduced. Students, divided in groups, will carry out a Project Work. The results will be shown during the last day of the first week ;
2. Experimental analysis of the performance of renewable energy prototypes.
3. Technical visits to energy plant and research centre.

FIRST WEEK

Day	Description of the activities/visit
FIRST	Welcome session Tour at the Faculty of Engineering "Design of a photovoltaic plan for residential building" Introduction to PVSYSY software for the design of small PV scale plants or "Simulation of a wind turbine with FAST" Introduction to FAST software for the analysis of wing turbines or "Design of CSP and thermal storage" Introduction to TrnSys software for the project of solar plants
SECOND	Project Work (1) Elaboration of the final project of a PV plant Students work in groups (3 students each)
THIRD	Project Work (2) Elaboration of the final technical report and public presentations in ppt Students work in groups (3 students each) The presentation should include: <ul style="list-style-type: none">– Technical barrier and problem– Decision taken– Final project– Economic sustainability
FOURTH	Project Work (2) Elaboration of the final technical report and public presentations in ppt Students work in groups (3 students each) Presentations of Project Works' results
FIFTH	Technical Visit - ENEA

SECOND WEEK

Day	Description of the activities/visit
FIRST	Laboratory and research experiences. Groups divided in four areas: <ul style="list-style-type: none">– Wind Energy (wind gallery)– Fuel cell and batteries– Biofuels use in Engine– Biomass/Gasification
SECOND	Laboratory and research experiences: elaboration of data
THIRD	Presentations of Laboratory experience
FOURTH	Technical Visit - Civitavecchia
FIFTH	Free

TRAINING of TRAINEERS

Prof Andrea Micangeli: Energy Access, Poverty alleviation

Prof Francesca Giofre: Health and well-being, Environmental quality

Prof Elio Trusiani: Urban planning

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Syllabus for training courses at TUD and Wuppertal Institute (WI)

WP 4.2 Trainings session for teaching staff and
WP 4.3 Trainings session for researchers and students

Courses DESIRE-02, DESIRE-03, DESIRE-06 and DESIRE-07

Authors: Philipp Hauser, Matthew Schmidt, Thomas Fink
Institute: Technische Universität Dresden, Chair of Energy Economics
Wuppertal Institute

Date: 7th of March 2017

Name of the report and abbreviation of the work package

Review table

Version	Date of Submission	Quality check		Technical check	
		Reviewer	Date	Reviewer	Date
V01	03.03.2017				

DESIRE – Development of higher Education teaching modules on the Socio-economic Impacts of the Renewable Energy implementation

1 Training sessions for students, researcher and teaching staff at TU Dresden and Wuppertal Institute (WI)

Course unit title:	Introduction to socio-economic aspects of RE&EE and Economics of Renewables
Name of lecturer(s) at TUD:	Prof. Dr. Dominik Möst Philipp Hauser, M. Sc. Matthew Schmidt, M. Sc.
Name of lecturer(s) at WI:	Prof. Dr. Manfred Fishedick Dr. Thomas Fink
Learning outcomes of the course unit:	
<p>Upon successful completion of this course participants will be able to:</p> <ul style="list-style-type: none"> • understand the concept of transition theory with regard to sustainable energy system transitions (identification of uncertainties and dynamics) • apply these concepts to different regional contexts to assess individual status of energy system transition in MENA (identification of drivers and barriers) • understand the relevant parameters influencing the economic viability of individual RES technologies as well as applying the methods for performing the respective calculations for profitability analyses • understand the challenges involved in integrating RES in a market-based system from a system perspective • understand socio-economic benefits and challenges of the transition to a RES-based energy system • analyze concepts and strategies to overcome barriers for RES adoption • collaborate and work effectively in group settings • prepare and present the results of specified tasks • critically evaluate and reflect upon their results 	

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Mode of delivery:	Face-to-face
Prerequisites and co-requisites:	Basic understanding of RES technologies and laptop (required software: Excel)
<p>Course Contents:</p> <p>Objectives:</p> <ul style="list-style-type: none"> • introduction to DESIRE base module (socio-economic aspects of RE&EE and sustainable energy system transitions) • content related to the expertise of the EE2 chair / WI, in particular a specialized focus on aspects of the economics of RES integration and issues related to social acceptance of RES adoption • introduction to basic calculation tools and software <p>ORGANIZATION OF THE TRAINING SESSIONS:</p> <ul style="list-style-type: none"> • lecture unit w/ accompanying learning materials and supporting events • independent study / group work and case studies (?) • consultation sessions with experts and preparation of results • final presentation and discussion of results <p>Remark:</p> <p>This course is a parallel course. Course content is similar at TUD and WI.</p>	
Recommended reading:	<p>Kost, C. et al. (2013): Levelized Cost of Electricity Renewable Energy Technologies. Fraunhofer ISE Study; November 2013.</p> <p>Möst & Fichtner (2010) Renewable energy sources in European energy supply and interactions with emission trading, Energy Policy, Vol. 38, No. 6, p.2898-2910</p> <p>Schubert, D., Thuß, S., Möst, D. (2015): Does political and social feasibility matter in energy scenarios?, Energy</p>

DESIRE – Development of higher Education teaching modules on the Socio-economic Impacts of the Renewable Energy implementation

Research and Social Science, Volume 7, May 2015, P. 43-54

Geels, F. W. (2002): Technological transitions as evolutionary reconfiguration process: a multi-level perspective and case study, *Research Policy*, Vol. 31, p. 1257-1274.

Kemp, R.; Loorbach, D.; Rotmans, J. (2007): Transition management as a model for managing processes of co-evolution towards sustainable development, *International Journal of Sustainable Development & World Ecology*, Vol. 14 (1), p. 78-91.

Grin, J.; Rotmans, J.; Schot, J. (2010): Transitions to sustainable development – new directions in the study of long-term transformation change, Routledge, New York.

Vallentin, D.; Viebahn, P. (2010): Economic Opportunities Resulting From a Global Deployment of Concentrated Solar Power (CSP) Technologies—The Example of German Technology Providers. *Energy Policy* 38(8)4467–4478. doi: 10.1016/j.enpol.2010.03.080.

Viebahn, P.; Lechon, Y.; Trieb, F. (2011): The Potential Role of Concentrated Solar Power (CSP) in Africa and Europe: a Dynamic Assessment of Technology Development, Cost Development and Life Cycle Inventories Until 2050. *Energy Policy* 39(8)4420–4430. doi: 10.1016/j.enpol.2010.09.026.

Wuppertal Institute; Germanwatch (2015): Social CSP – Energy and development: exploring the local livelihood dimension of the Noor₁ CSP project in Southern Morocco. Final report to the German Federal Ministry for Economic Cooperation and Development (BMZ). Wuppertal Institute for Climate, Environment and Energy; Wuppertal; Germanwatch: Bonn.
www.wupperinst.org/en/projects/details/wi/p/s/pd/449/

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Planned learning activities and teaching methods:	Teaching	20 Hours	
	Group Work	20 Hours	
	PC Exercises / Excursions	20 Hours	
Language of instruction:	English		
Place of Teaching:	Technische Universität Dresden / Wuppertal Institute		

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<p>Date</p>	<p>Please select only one institution for courses you will take part!</p> <p>TU Dresden</p> <p>Trainings session for teaching staff at TUD 24th – 28th July 2017</p> <p>Trainings session for researchers and students at TUD 17th – 28th July 2017</p> <p>Wuppertal Institute</p> <p>Trainings session for teaching staff at WI 10th – 14th July 2017</p> <p>Trainings session for researchers and students at WI 03rd – 14th July 2017</p>
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