
ONLINE COURSE

INTRODUCTION TO DESALINATION USING RENEWABLE ENERGIES

Description:

This training action is the first distance course focused on the topic of "desalination using renewable energies". It is an introductory course offering a summary the most relevant aspects of the main desalination technologies (including both membrane and thermal distillation processes) and the application of renewable energy technologies for their autonomous operation. Its application is intended for, above all, rural and isolated areas of developing countries, where there is water scarceness and electricity grid is weak or non-existent. Based on Moodle, this distance learning platform is interactive, flexible and thought to be easy-to-use. Students are the main actors of their own training process. The DES-RES online platform is highly adaptable and ready to offer tailor-made courses.

Goals:

A 4-week teletraining course with the objective to teach the main aspects of desalination, renewable energies and their combination for autonomous desalination operation.

Contents:

The main content of the course, developed entirely by the ITC, are structured in nine thematic areas, such as:

EDICIÓN EN INGLÉS
1. Basic concepts of Desalination and Renewable Energies. 2. Desalination I. Membrane desalination processes (EDR, RO). 2a. Energy Recovery in Reverse Osmosis Desalination. 2b. Last generation RO membranes. 3. Desalination II. Distillation processes (MED, MSF, H/D, MD). 4. Solar thermal energy and MED. 5. Solar thermal energy and H/D or MD (small capacity systems). 6. Solar photovoltaic energy powered RO systems. 7. Wind energy powered RO systems. 8. Other technologies. 9. Non technical aspects.