

e-learning course "INTRODUCTION TO RENEWABLE ENERGY DESALINATION"

www.desreslearning.com

INTRODUCTION

Online training activity based on the e-learning course implemented within the PRODES project (co-funded by the Intelligent Energy Europe Programme).



MORE DETAILS

WHAT?: first online course focused on the main aspects of desalination by renewable energies (RE) for autonomous operation.

WHY?: students will know the fundamentals of RE- powered desalination.

By WHO?: researchers with experience in this field since 1996.

WHOM?: addressed to all the people interested in autonomous desalination: professionals, students, major water users, water managers.

WHEN?: September 2013 (4 weeks duration).

MORE INFO?: visit www.desreslearning.com or contact us desreslearning@itccanarias.org



<http://www.itccanarias.org/web/>



In collaboration with:



<http://www.edsoc.com/>

13th Ed. September, 1 to 28, 2014

Course fee: Until July 25: 300 €

Until August 25: 350 €

Special price (50% off) if you attend to the intensive course*

CONTENTS

The course is organized in 10 chapters for evaluation. Quizzes, glossaries, videos, games, links and other items complete the training process.



1. Basic concepts.
2. Desalination I. Membrane processes.
 - 2.a Last advances in RO (video) **New!**
 - 2.b
3. Desalination II. Distillation processes .
4. Solar thermal energy and MED.
5. Solar thermal energy coupled to HD or MD.
6. RO systems powered by PV solar energy.
7. RO systems powered by wind energy.
8. Other technologies.
9. Not technical aspects.
10. Practical case: preliminary design.



(*) discount to be applied when you register for the 3 day intensive course on Wind & Solar PV powered Desalination.

ITC facilities, Gran Canaria Island. 6 - 8 October, 2014.

More details in www.esdoc.com

e-learning course

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PLATFORM

Based on Moodle, this online training platform has an interactive, flexible and friendly use philosophy. The students are the main leader of their own training process.

DES-RES online platform is highly adaptable and ready to offer tailor-made courses.

4. Examples of operating systems (2)

- Location: Pozo Izquierdo, Gran Canaria Island. CASE OF STUDY. DESSOL®
- Average operation: 8 h/d.

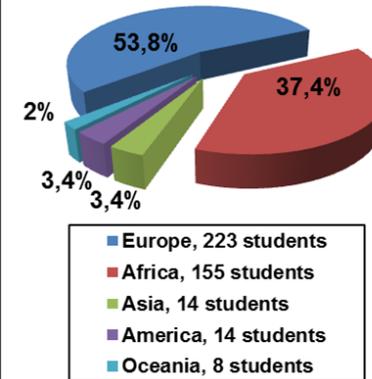
The screenshots show a forum thread with three posts from 'The EDR & RO' user, dated October 20, 2011. The first post asks about RO unit 1.2. The second post asks about environmental impacts. The third post asks about Zero Liquid Discharge (ZLD) systems. The second screenshot shows a quiz titled 'Case 1, SUMMARY & QUESTIONS' with a diagram of a PV-powered desalination system. The diagram includes a Charge controller (48V), an Inverter (48V), and a PV POWER (kW) source. It also shows a table with water production and nominal capacity data.

Parameter	Value
Water production (m ³ /hour)	0,67
Water production (m ³ /day)	4,00
Nominal capacity (m ³ /day)	16,00

Nominal capacity (A/h) 1.962

COURSE STATISTICS

DES-RES course students origin



- 10 editions
- more than 400 students
- 35 different countries



WHAT DO OUR STUDENTS THINK?

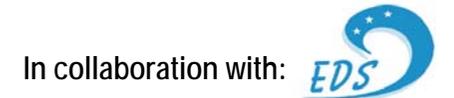
Many thanks for the **high level of pedagogy tools** used in this course: the **clarity** by which the chapters, the quiz and the forums, were **structured** and the **good organization** of team managers were the force points of this course.

It has been a very exciting experience, to get to learn about two interesting issues integrated together: desalination and RES. The **e-learning platform** allowed me to learn in my own pace while still under guidance of an experienced teacher. The interaction with other people and different experiences yet, sharing the same interest, is very beneficial.

For me, the main advantage of the course is that you not only learn what is written on the books but **people from all over the world show you different situations and points of view** which you are not used to. Not often you have the chance to learn so much in such a short time!



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