Honor committee

- 1. Mr. Ahmadau Souilem. Ambassador of Morocco in Spain.
- Mr. Jose Manuel Roldán Nogueras. Rector of University of Cordoba, Spain.
- Mr. Abderrahman Tenkoul. President of University Ibn Tofail, Kenitra, Morocco.

Professors

- 1. Arturo Chica Perez (University of Cordoba Spain)
- 2. Hassam El Bari (Ibn Tofail University Morocco)
- 3. Antonio Martin Martin (University of Cordoba Spain)
- Maria Angeles Martin Santos (University of Cordoba Spain)
- Rafael Borja Padilla (Superior Council of Scientific Research – Spain)
- Elamin Afilal (University of Mohamed Premier Oujda, Morocco)
- Hassan Chouaouta (Président de l'Association des Experts en Gestion des Déchets Municipaux au Maroc, ADEME)
- 8. Nabil Baamrani (Commune de Kénitra Morocco)
- El Houssine Bartali (Directeur de Formation en Génie Rurale, Institut Agronomique et Vétérinaire Hassan II, Rabat – Morocco)
- 10. Elizabeth Duarte (University of Lisboa Portugal)
- 11. Jose Luis García Morales (University of Cadiz Spain)
- 12. Raul Moral (Universidad Miguel Hernández Spain)
- 13. Joaquín Moreno (Universidad de Almería Spain)
- Fabrizio Passarini and Luca Ciacci (University of Boulogne
 Italy)

Places limited to 35 students

Attenders

20 Moroccan Ph.D.-Students and technical staff 15 No-Moroccan Ph.D.-Students An activity of international cooperation project Fortalecimiento del "Laboratoire de biotechnologie,
environnement et qualité, LABEQ "-, between the University
of Cordoba and the University of Kenitra adressed to all
students and technical staff.

During four days the lecturers will carry out a review on the major issues of solid and liquid organic wastes management in the Mediterranean region. The solid waste management in Europe, the recovery of biogas, composting treatment of municipal and animal waste, the exploitation of gas in landfills and farms will be among the topics to be presented. The conferences will take place from 9:00 to 15:00, in the afternoon will be technical visits. Additional information, as provisional program, may be found at

www. uco.es/pci-uco-kenitra

Funding Entity

Spanish agency for International development cooperation





Organizers





Collaborate







An activity of international cooperation project Fortalecimiento del "Laboratoire de biotechnologie,
environnement et qualité, LABEQ"-, between the
University of Cordoba (Spain) and the University of
Kenitra (Morocco)

CURSO HISPANOMARROQUÍ DE
POSTGRADO SOBRE
VALORIZACIÓN DE
RESIDUOS ORGÁNICOS

POSTGRADUATE
SPANISH-MOROCCAN
COURSE ON
ORGANIC WASTE RECOVERY

13th Nov—16th December, 2011 University of Cordoba, Spain.

www. uco.es /pci-uco-kenitra









POSTGRADUATE SPANISH-MOROCCAN COURSE ON ORGANIC WASTE RECOVERY

In many Mediterranean countries, the organic waste fraction always corresponds to more than fifty per cent of total of municipal waste generated. The disposal on landfill is not a sustainable method of dealing with this fraction. In fact, the biodegradable waste becomes an important source of greenhouse gas emissions when deposited in landfill without previous stabilization.

Composting and anaerobic digestion (AD) are among the best practices of dealing with organic waste. These processes are known to be the controlled biological decomposition of organic solid waste under aerobic or anaerobic conditions, respectively. Anaerobic digestion is set to become increasingly important as it is considered as an energy positive process since it produces more energy that it requires.

As a result, the renewable energy from biogas sector will play an increasingly central role in global energy management. Many Mediterranean governments provide generous support for waste-to-energy technologies such as, the anaerobic digestion.

This course with 30 hours, is the second teaching activity with the collaboration of Ibn tofail University - Kenitra (Morocco). The financial support is supplied by the Spanish Agency for International Development Cooperation.



Objetives

The aim of this postgraduate course is to provide an insight into the fundamentals of composting and anaerobic digestion technologies, focusing on the Mediterranean region. Furthermore, the participants will have the opportunity to know how energy recovery from organic waste could contribute to resource and environmental safety.

Topics

Composting of organic waste.

Anaerobic digestion of different kind of biomass feedstock.

Appropriate and adapted technologies for different substrates in the Mediterranean region.

Life cycle and Environmental impact assessments of different recovery methods.

Using the collected gas as a source of renewable energy.

Monitoring and control of the AD process.

Modelling of the AD process.

Reactor design for anaerobic treatment of solid waste and wastewater.

Types of anaerobic digestion systems.

R&D projects and Pilot plants.



Participation

This activity is a one-week course for graduate students, researchers, technicians and professionals Moroccan or Spanish working in foreign universities, agencies, research centres or private companies.

Pre-registration form (until 25th, November)

Registration for:	Price	
Moroccan students	Free	
No-Moroccan students	Free	
Technical staff	Free	
Name:		
Surname:		
University/School or Company:		
Graduate:		
E-mail:		
Phone:		
Signature:		

Assistants have include coffee breaks, lunch and accommodation in residence or hotel documentation, and visits. In the last day the participant will passed a test about the workshop topics and they will received a certificate about their test result and participation.

For **Pre-registration** it is necessary to submit this form to the Workshop secretary to the following e-mail address: <u>ucokenitra@gmail.com.</u> A brief description of their careers or Curriculum Vitae (5-10 lines) should be included.

For **registration**, the chosen assistants will be notified and invited to formalize his inscription in the following website: http://www.uco.es/estudios/sep/orion

Secretary of Workshop:

Dpt. Chemical Engineering, Faculty of Sciences
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