Tecnológico de Monterrey

PLANES DE ESTUDIO

DS1005
Climate Change and Energy Use

Show Analytics
SPANISH

Course with project.
CIP: 141401 Environmental/Environmental Health Engineering.

C-L-U: 3-0-8

Academic department that offers it:
Sustainable Development

Graduate Programs who offer them:
1 IIN12, 1 IID12
Certificates

Requirement:
None.

Equivalence:
DS1001

General aim of the course:
Upon completion of the course, students will be able to understand the role that low concentration of gaseous compounds play on the terrestrial atmosphere in reference to climate change, as well as the potential for acidification of the oceans and destruction of the ozone layer; explain in basic terms the function of carbon dioxide and other greenhouse gases and their potential in reinforcing atmospheric re-radiation, as well as the potential acidification of oceans due to carbon dioxide and the subsequent degradation of marine ecosystems; understand and explain the basic principles of renewable energy sources, such as solar collectors, photovoltaic systems, tides and waves, wind, and the availability of energy through biomass using agricultural and forest residues, as well as passive elements in construction and linking the basic principles of renewable energy to relevant technology for the student's professional career; understand the impact of climate change and the strategies for mitigation and adaptation.

Teaching and learning tecniques:
Collaborative learning

Bibliography:
TEXT BOOKS:
* Burroughs, William James., Climate change : a multidisciplinary approach, 2nd ed., Cambridge ; New York : Cambridge University Press, 2007, , 0521690331 (pbk.), 0521870151 (hbk.), 9780521690331 (pbk.), 9780521870153 (hbk.)

BOOKS FOR CONSULTATION:
* Mauricio Shoijet, Límites del crecimiento y cambio climático, Siglo veintiuno, 2008, 978-968-23-2739-1
* Boyle, Godfrey, Renewable energy, 2nd ed., Oxford ; New York : Oxford University Press in association with the Open University, c2004, , 0199261784
* Llamas Moya, Bernado, Tecnologías de lucha contra el cambio climático : del carbón al carbono, , Huelva : Universidad de Huelva ; Endesa, 2006, , 8496373843

Professor´s profile:

Master Degree in Environmental/Environmental Health Engineering; Master Degree in Chemical Engineering; Master Degree in Natural Resources/Conservation; Doctoral Degree in Environmental/Environmental Health Engineering; Doctoral Degree in Chemical Engineering; Doctoral Degree in Natural Resources/Conservation

CIP: 141401, 140701, 030101

Language of Instruction:

Spanish

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