

Course Logistics

UCC501 Sustainable Energy, Fall 2014

Instructor: Dr. Alejandro Rios G.



Lecture 1 – Monday, September 1, 2014

Contents

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Why are we here?

- We are all here to learn
- Sustainable Energy is a complex undertaking:
 - Energy resources
 - Energy uses
 - Energy regulation
 - Climate change and pollution
- To become rounded energy practitioners
- Errors and omissions will be made – at any time please raise your concern

Masdar Institute's Goal: Educating Energy Practitioners

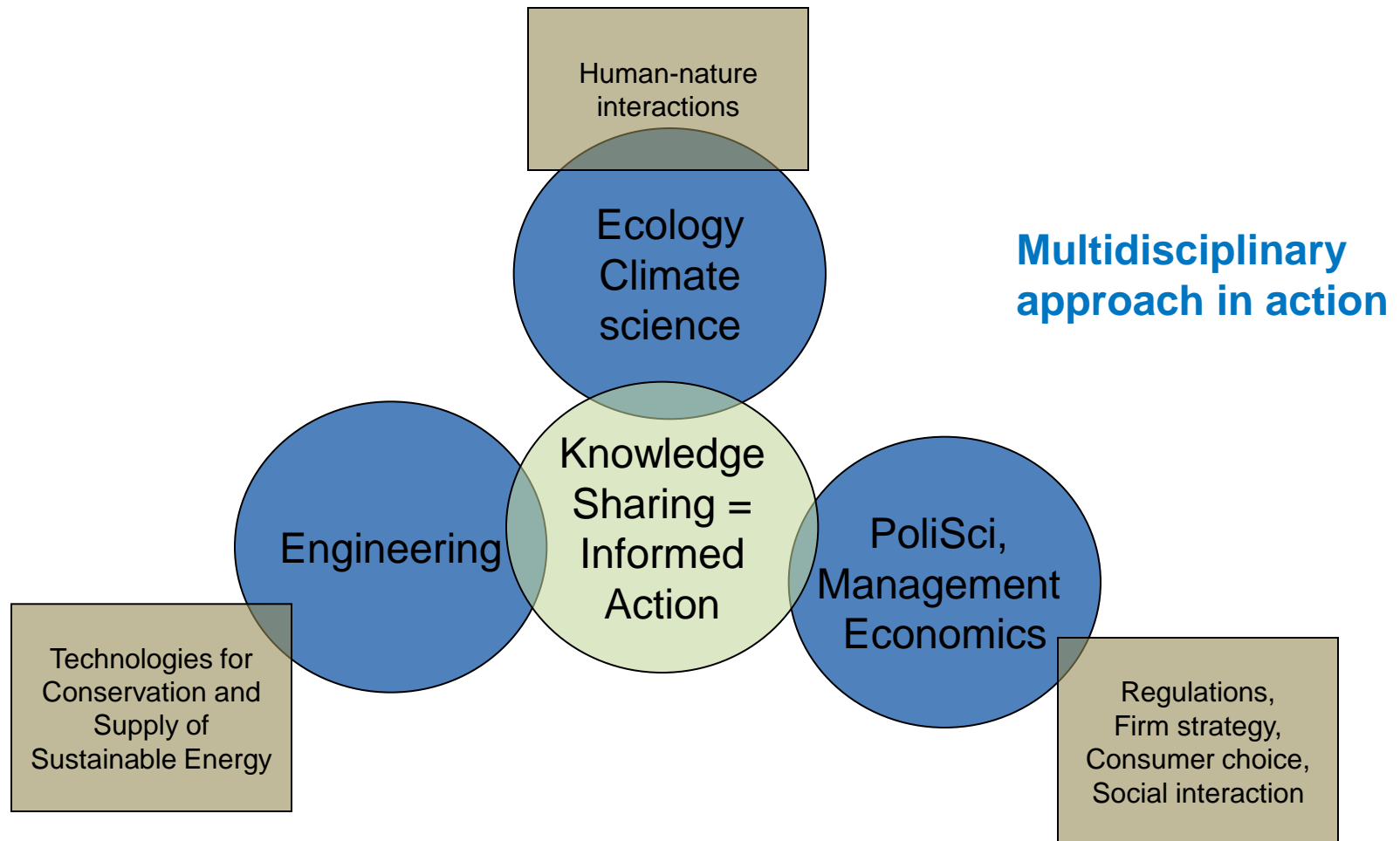


Figure inspired from the MIT Energy Education Committee

Course Objectives

To learn to speak a common energy language

- Learn and use sustainability concepts as they pertain to energy
- Develop a broad knowledge of the currently available and potential energy sources with a focus on renewable energy
- Learn to assess real-world energy-related problems from a variety of angles including their scientific merit, sustainability, scaling, regulatory requirements, etc.
- Develop a functional understanding of the fundamentals of energy conversions

Course Syllabus

Instructors	Dr. Alejandro Rios G. plus several invited faculty members
E-mail of Faculty	ariosg@masdar.ac.ae
Course Timing	Mondays and Thursdays, from 4:15 PM to 5:30 PM
Office hours	Tuesdays: 3-5 PM or open door for minor issues
Teaching Assistants	TBA

Class assignments	4 assignments (~ 1 every 2 weeks). 1 in class midterm exam. 1 final project in teams of 2-4 including oral presentation.								
Methods and dates of student evaluation, including relative weight of various assessment methods in determining course grade	<table> <tr> <td>Class participation</td><td>10%</td></tr> <tr> <td>Homework</td><td>30%</td></tr> <tr> <td>Mid-term exam</td><td>20%</td></tr> <tr> <td>Term project</td><td>40%</td></tr> </table> [30% for written paper and 10% for oral presentation]	Class participation	10%	Homework	30%	Mid-term exam	20%	Term project	40%
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Teaching and learning methodologies	Lectures. In-class discussion. Problem solving. Teamwork.								
Main course text	Sustainable Energy – Choosing Among Options. J.W. Tester, E.M. Drake, M.J. Driscoll, M.W. Golay, and W.A. Peters. MIT Press, Cambridge MA, Second Edition, 2012.								

A teaching assistance website is established at: <https://source.masdar.ac.ae/>

Course expectations and logistics

- Participation – readings and coming to class
- Assignments/Midterm
- Final project
 - Written report – Research report format
 - Oral presentation
- › Different backgrounds;
- › Support and collaboration are encouraged for learning but NO COPYING of assignments. Group assignments are explicitly indicated as such
- › All email correspondence with regard to the course should have UCC501 in the subject