

Course Syllabus

Class/Department : Department of Business Administration、Graduate Institute of Natural Resource Management 企管系與自然資源管理研究所

Course Title: Energy Business Model Innovation and Practice 能源商業模式創新與實務

Grade(應修系級) : Master students

Type: Required Selective Whole Half

Credits:3

Course Number: Prerequisite Course: N/A

Professors:

Course Description:

The goal of 'Business and Climate Change (BCC)' is to explore whether CEOs and CFOs of shareholder value-maximizing companies should care about climate change and the emerging climate economy, and if so, why, how, and what they can learn from the many forward-thinking companies that are getting in front of this issue.

Course Objective:

The course objectives is as follows :

1. To develop your awareness of the issue of climate change and the opportunities/challenges it presents for shareholder value-maximizing businesses;
2. To understand the emerging climate economy and what it means to your company, its industry, and the global economy;
3. To develop a frameworks to assess the market value/value-at-risk consequences of firms' exposure to climate change risks, their fossil fuel use, carbon footprints and GHG emissions; and the economic analysis tools to assess impacts of likely regulatory responses to climate change;
4. To introduce students to know the theory of business model.
5. To introduce students the status of business model in energy industries.
6. To introduce students on how to capture a new business model in energy industries for responding to climate change.
7. Case study and practice for energy industries business model to respond to climate change.

Course Outline: (including teaching schedule):

The course will cover the following topics:

1. Introduction (one time 3 hours)
2. Business model theory (five times 3 hours each)

3. Business model in energy industries (four times 3 hours each)
4. Supply chain carbon management (two times 3 hours each)
5. Climate adaptation and new business model in energy industries (two times 3 hours each)
6. Group discussing and practice (three times 3 hours each)
7. Field trip (one time 3 hours)

學生核心能力權重：八項加總為 100，不需每項均得填寫，惟至少需填一項

Item	Creative thinking and Problem-solving 創意思考與問題解決	Comprehensive integration 綜合統整	Communication and Coordination 溝通協調	Team cooperation 團隊合作
Weight	20%	10%	10%	10%
Item	Integrity and Upright 誠信正直	Respect and Reflection 尊重自省	Diverse care 多元關懷	Cross-border cooperation 跨界合作
Weight	5%	15%	20%	10%

Career Development:

本課程將奠立學生如何建立商業模式的能力，特別是針對氣候變遷的減緩與調適活動，所衍生的新興商業模式。本課程將邀請有實務經驗的業界專家，導入實際商業模式，爰此，透過本課程，將有助學生開創能源新興商業模式。

This course will introduce to students on how to realize the business model both theory and practice. In particular, this course will focus on new business model, which expand from climate change issues. In addition, this course will invite experts who come from industries and show their experience for business model building. Hence, through this course, it will increase the ability on students for creating an innovation business model.

Career Development:

Coursework will be weighted as follows:

1. Homework: 30%
2. Tests: 20%
3. Final report (presentation): 40%
4. Attendance: 10%

Reference texts:

Carbon Disclosure Project, '*CDP Global 500 and S&P 500 Reports Highlights 2010*,'
(<https://www.cdproject.net/CDPResults/2010-G500-SP500-report-highlights.pdf>)

Carbon Disclosure Project, '*CDP S&P 500 Report 2010*,'
(<https://www.cdproject.net/CDPResults/CDP-2010-SP500.pdf>)

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Carbon Disclosure Project, '*CDP Global 500 Report 2010*,'
(<https://www.cdproject.net/CDPResults/CDP-2010-G500.pdf>)

Intergovernmental Panel on Climate Change, '*Climate Change 2007: Synthesis Report*,'
(http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf)

Intergovernmental Panel on Climate Change, '*Fourth Assessment Report – Summary for Policy Makers*,' 2007 (http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr_spm.pdf)

McKinsey & Co, '*Carbon Productivity Challenge*,' 2008
(http://www.fypower.org/pdf/MGI_Carbon_Productivity.pdf)

Pew Center on Global Climate Change, '*Climate Change 101: Understanding and Responding to Global Climate Change – Full Report*,' 2011
(http://www.pewclimate.org/docUploads/climate101-fullbook_0.pdf)

UN Foundation, '*Confronting Climate Change: Avoiding the Unmanageable and Managing the Unavoidable*,' 2007 (<http://www.sigmaxi.org/about/news/UNSEGOonline.pdf>)

University of Copenhagen: '*Climate Change – Global Risks, Challenges, and Decisions: A Synthesis Report*,' 2009 (<http://climatecongress.ku.dk/pdf/synthesisreport>)

World Meteorological Organization: '*2000-2009 – The Warmest Decade*,' 2009
(http://www.wmo.int/pages/mediacentre/press_releases/pr_869_en.html)

World Meteorological Organization, '*2010 Equals Record for World's Warmest Year*,' 2011
(http://www.wmo.int/pages/mediacentre/press_releases/pr_906_en.html)

Thomas Friedman, '*Hot, Flat, and Crowded*,' FSG Press, 2008

William Nordhaus, '*The Challenge of Global Warming: Economic Models and Environmental Policy*,' (http://nordhaus.econ.yale.edu/dice_mss_072407_all.pdf)

Roger Pielke, Jr., '*The Climate Fix*,' Basic Books, 2010.

Laurence Smith, '*The World in 2050: Four Forces Shaping the Civilization's Northern Future*,' Dutton Adult, 2010.

Nicholas Stern, '*The Economics of Climate Change: The Stern Report*,' Cambridge University Press, 2007.