Summer 2017

GG502: Climate Change and Green Business

Syllabus

1. **Instructor:** Jun-Ki Choi, Ph.D, email: jchoi1@udatyon.edu

2. **Course Days/Time/Periods:** Tuesday & Thursday / 8:30am-12:20pm / from 6/27 to 8/3.

3. **Course Description**

   With growing public concern over the economic, environmental, and social consequences of climate change, it is crucial for business practitioners to identify strategic green business opportunities with systematic views. The aim of this course is to learn practical methodologies for achieving green business goals while enhancing the community, regional, and national economy. Three different level of achieving green business will be discussed. First level view the factory as a whole, looking to redesign investment strategies to drastically reduce energy use, waste, and resource with life cycle thinking (micro-scale). Second level employs infrastructure level planning. Employing a strategic recycling planning of industrial wastes is a good example (meso-scale). Third level seeks to evaluating cascading economic, environmental, and societal impacts of green business practices to the communities, state, and nation (macro-scale). In addition, business personnel need to understand the potential impacts of energy and environmental policies to the business in order to make strategic corporate sustainable decisions.

4. **Course Objectives**

   Students will be able to;

   - Understand the diverse array of sustainable and green business strategies.
   - Integrate life cycle thinking, industrial ecology, and circular economy concepts for planning green business
   - Practice methodologies to implementing energy/ material efficiency, and end-of-life management options
   - Prioritize sustainable investment options in regional and national levels
   - Identify opportunities to eco-product by learning Design for Environment principles

5. Course Materials

- Following learning materials will be sent out by email to the registered students: Lecture notes/slides, reading materials, homework, projects, software access
- Reference:
  1. Industrial Ecology, 2nd Edition, Thomas Graedel and Braden Allenby, Prentice Hall.
  2. McDonough, W., Braungart, M., 2010. Cradle to cradle: Remaking the way we make things. MacMillan.

6. Grading

30% Homework + Conspectus

25% project 1 + presentation

25% project 2+ presentation

20% Attendance + Class participation

7. Tentative Schedule

		Focus Area	Topic
27-Jun	Tu		Climate Change and Green Business
29-Jun	Th	Corporate Level Green Business (micro-level)	Product and Process Realization
4-Jul	Tu		Design for Environment
6-Jul	Th		End-of-Life Management
11-Jul	Tu		Life Cycle Assessment/ Carbon footprinting
13-Jul	Th		Energy/ Material Efficiency Planning
18-Jul	Tu	Sustainable Infrastructure Planning (meso-level)	Industrial Ecology/Reverse Logistics Planning
20-Jul	Th		Green City Planning
25-Jul	Tu		Renewable Energy Planning
27-Jul	Th	Sustainable Policy Decision (macro-level)	Macroeconomic modeling
1-Aug	Tu		Sustainable Investment Strategy
3-Aug	Th		Economic/Environmental/Social Impacts of green policy

*This schedule is subject to change. Changes, if necessary, will be announced in advance

8. The Honor Pledge

I understand that as a student of KAIST, I am a member of our academic and social community. I recognize the importance of my education and the value of experiencing life in such an integrated community. I believe that the value of my education and degree is critically dependent upon the academic integrity of the university community, and so in order to maintain our academic integrity, I pledge to:

• Complete all assignments and projects by the guidelines given to me by my instructors;

• Avoid plagiarism and any other form of misrepresenting someone else's work as my own;

• Adhere to the Standards of Conduct as outlined in the Academic Honor Code.

In doing this, I hold myself and my community to a higher standard of excellence, and set an example for my peers to follow.