



Pontificia Universidad
JAVERIANA
Bogotá



Peter J. Gallo | **Ph.D in Business Administration**

gallo.peterj@javeriana.edu.co

Creighton
UNIVERSITY

Business Model Innovations for Clean Technology

International Summer

JUNE · 25-29 · COURSE 2019

Cleantech refers to a combination of technology, business model, and environmental analysis that can drive firm performance while achieving sustainability goals. Investment in Cleantech ventures has increased markedly; spurred on mostly by rising energy costs, carbon regulations, and ecological concerns. This course is designed to introduce students to the tools of strategic management and the unique business challenges and opportunities created by cleantech. Students will supplement their current knowledge in cleantech and renewable energy with strategic analysis tools for evaluating new business models.

These analyses will touch on a wide range of technological, environmental, geopolitical, regulatory, economic, and consumer factors that impact the viability of cleantech strategies. By examining real-world examples of firms engaged in cleantech innovation, students will learn to identify where strategic management tools remain relevant and where additional factors require an adaptation of traditional strategic thinking. By properly adapting the tools of strategy to the context-specific challenges of cleantech, students will be armed with the skills to contribute to the innovation and sustainability of their firms.

Class Schedule

June 25 - Julio 28 | 6:00 pm - 09:00 pm

June 29 | 9:00 am - 12:00 pm, 1:00 pm - 4:00 pm

Student Learning Outcomes

As a result of this course students will be able to:

1. Understand the variety of clean technology sources; their origin, evolution, and place in current cleantech business models.
2. Analyze the specific cleantech tactics companies have implemented to add value to their industry.
3. Evaluate the soundness of business claims regarding renewable energy.

Policies and Requirements



Students in this course will be evaluated based on their performance on the following components: Class Participation, Attendance, Team Case Presentation, and Final Paper.

Assignments are due when allocated, regardless of your presence or absence. It is your responsibility to meet this deadline. For a successful experience in this class, please pay careful attention to your planning and accountability regarding assignments.

Class Participation: Assessment of participation is based primarily on your active involvement in discussion of cases and reflects the extent of your contributions to the classroom environment and to the learning of all participants. Positive participation may include contributions such as: providing germane illustrations; motivating the use of a particular tool or technique; helpful recapitulation or summarizing; making observations that link or integrate concepts or discussion; responding effectively to questions; asking perceptive questions; illustrating specific points by appealing to your own experiences; as well as presenting or supporting alternative, or unpopular, positions.

All students are expected to contribute to a positive classroom environment. Disruptive behavior that diminishes the value of the class, such as dominating, discouraging, intimidating, or disrespecting other participants will be penalized. In particular, you are expected to treat colleagues with respect: disagree with an idea without discrediting the speaker; help others articulate their points of view; and use airtime judiciously.

Policies and Requirements



Attendance: Satisfactory class participation entails attendance at every session of the course; preparation of all materials for every session; and active participation in class discussions. Students missing more than one class for any reason other than excused medical emergencies will not be able to pass this course. Absences are never an excuse to miss an assignment or to hand it in late.

Team Case Presentation: Groups will be required to complete case analyses, which include quantitative calculations and qualitative decision-making, for any case after Wednesday June 26. The “Case Preparation” questions in the class schedule should be used to focus your group analysis. The deliverables for the group analysis include both a written case brief and a 15-20-minute executive briefing.

Case Brief: Briefs should follow the traditional case brief structure and contain three parts: (1) a short description of the main issue(s) presented in the case, (2) evaluation, and (3) recommendations. Do not waste space recounting the story/data presented by the case by way of introduction. It is safe to assume that the reader has read the case and therefore does not need a complete retelling. Focus the bulk of your brief on the evaluation section. Conclude with your recommendations backed by a sound rationale. Briefs should be 4-5 pages in length with 12 pt. font, 1-inch margins and double line spacing.

Executive Briefing: 4-5 power point slides showing the analysis and recommendations of your team. Slides will be due to me before the start of class, and the team will present their findings and lead some class discussion from the start of class.

Final Paper: For this assignment you will analyze the strategy of a company engaged in the renewable energy value chain and provide strategy recommendations.

In the first part of the paper, provide a brief but thorough introduction to the company and industry. Identify the company's core competencies, i.e., address questions such as “what lies at the heart of the company's success; what are they best at; and what differentiates them from competitors?”

Policies and Requirements



Second, obtain a copy of your chosen firm's annual report and sustainability report and use it to analyze the firm's renewable energy business model. Be sure to conduct additional research beyond the information reported by the company to determine the effectiveness of the initiatives highlighted.

Third, make a recommendation for how the company could advance beyond its current strategy by putting its core competencies to work in an innovative way through the revolution of its business model. Your recommendation should be informed by strategies we've discussed in class.

I expect that you will use a wide variety of resources to prepare this assessment and all sources must be adequately cited. **Please do not summarize what the sources say!** Instead, use your sources to help you analyze and reflect on an issue or make an original point. **Paper is due on July 7 (start your paper early!).** It should be 8-10 pages double-spaced and *must follow American Psychological Association (APA) guidelines*. The 8-10 pages in the paper do not include the cover page and reference section. Your paper should be sent to the professor electronically. **Please submit a Microsoft Word version** of your paper. *Please use the following naming convention to label your file, last name CRS 559 paper (e.g., Smith CRS 559 paper).*

+ Grading

GRADES ARE BASED ON A SCALE FROM · 0 TO 5 POINTS ·

ASSIGNMENT/GRADING ITEM	DUE DATE	PERCENTAGE
Class Participation	June 25 - 29	20%
Team Case Presentation	June 27 - 29	25%
Final Paper	July 7	55%

Policy on Incompletes: An Incomplete grade is not an option that you can select because you find that you weren't able to get everything done. The purpose of an incomplete is to provide a reasonable time extension for a student who cannot complete the course requirements by the usual time because of some bona fide emergency (an illness requiring hospitalization, etc.). Incompletes are generally unproductive for both the student and the instructor. They should be avoided if at all possible.

Extra Credit: Extra credit is not available in this course.

Academic Misconduct Policy:

Certain student behavior will result in the lowering of the course grade by at least one point level. These behaviors include, but are not limited to:

- Intentional disruption, obstruction, or interference with the process of instruction
- Dishonesty, including cheating, knowingly furnishing false information, or plagiarism

Plagiarism: According to APA's publication manual (1994),

"Quotation marks should be used to indicate the exact words of another" (p. 292) "Each time a source is paraphrased, a credit for the source needs to be included in the text." (p. 294) The key here is not to present the work of another as being your own.

Otherwise, it is considered plagiarism.

Otherwise, it is considered plagiarism

By accepting this contract, students agree that papers may be submitted to a plagiarism detection software. Papers will only be submitted if there exists a suspicion of plagiarism. Students may receive a zero for a written assignment if plagiarism is identified.

Expected Classroom Behavior:

- Participating in class activities
- Respecting the diversity of cultures, opinions, viewpoints in the classroom
- Listening to fellow students, professors, and lecturers with respect
- Prepared for class
- Mobile Phones will be stored away at all times during class time
- Laptop computers are permitted during class discussion but must be stored away when fellow classmates are presenting.

Course Resources:

- All cases as well as HBR and CMR readings are included in the Harvard Case Book
- The MacKay book is available free online at withouthotair.com
- Hyperlinks are included in the syllabus for other readings

Course Syllabus

JUNE 25

Why does Cleantech matter?

A. WHY RENEWABLES?

1. MacKay pages 1-28
2. Energy Strategy for the C-Suite. Harvard Business Review. Jan-Feb 2017.

B. CLIMATE CHANGE

1. Hoffman, Andrew J. California Management Review, Climate Change Strategy: The Business Logic behind Voluntary Greenhouse Gas Reductions. Spring2005, Vol.47 Issue 3, p21-46
2. Climate Business/Business Climate. Harvard Business Review Oct. 2007

JUNE 26

Biomass

A. GREENHOUSE GAS EMISSIONS

- Case: Renewable Energy at the National
- How should Leo and the other leaders of the U.S. Cattlemen's Association (USCA) respond to the rumor that the Environmental Protection Agency (EPA) was considering the imposition of a carbon tax on livestock methane emissions under the Clean Air Act?
 - How did Midland Bull Test tailor its marketing strategy to meet the expectations of its customers?

B. TRANSPORTATION & BIOMASS

1. MacKay Chapter #20 and pages 42-44

JUNE 27

Ethanol Success & Introduction to Wind

A. BIO-FUELS (ETHANOL)

- Case: Mid-Missouri Energy: Ethanol from Corn (9-711-004)
- What has been MME's strategy in the ethanol production industry? (Be sure to use Porter's Matrix of Generic Strategy to answer this question)
 - Which of the challenges facing the corn ethanol business in 2010 should concern Ryand Utlaut the most? What should he recommend to MME's board members at their annual meeting in January?

B. WIND

1. <https://gvcc.duke.edu/cggclisting/wind-power-generating-electricity-and-employment-chapter-11/>

JUNE 28

Wind Resistance & Introduction to Solar

A. NIMBY

- Case: Cape Wind: Offshore Wind Energy in the USA (9-708-022)
- What are the costs associated with this Cape Wind project?
 - Why has the Alliance been so successful—delaying the project now for nine years?

B. SOLAR & ENERGY STORAGE

1. MacKay Chapter #26
2. Haley, Usha C.V. and Schuler, Douglas A. California Management Review, Government Policy and Firm Strategy in the Solar Photovoltaic Industry. Fall 2011, Vol.54 Issue 1, p17-38

Course Syllabus

JUNE 29 AM

Remote Power and Energy Services

A. REMOTE APPLICATIONS

Case: Hydro: From Utsira to Future Energy Solutions

- Has the Utsira project been successful based on the goals set by Hydro? (Be explicit with your definition and measurement of success) What has Hydro learned from this project, and how should these insights influence future similar installations?
- How might the potential commercialization of this project contribute to sustainable development at Hydro or for its customers?
- How attractive are the two potential markets, namely remote communities and grid balancing, for commercializing the system? Identify a minimum of four important criteria and provide a comparison of the two markets on these criteria. Which market should Hydro pursue?

B. SOLAR BUILDING INTEGRATION (SERVICES)

Case: Verengo Solar Plus! (9-812-049)

- What have been the key steps in building the business to date?
- What should Verengo's Board of Directors be thinking about?

JUNE 29 PM

Retail Power Applications

A. RENEWABLE ENERGY (RETAIL)

Case: Renewable Energy at the National Aquarium (W04C51)

- Conduct a financial analysis of the options presented. What additional factors will significantly impact the choice between these options?
- What option should Gomez recommend? Use a strategy framework to support your recommended strategy.

B. SOLAR ENERGY (RETAIL)

Case: REI's Solar Energy Program

- Do you agree with the analytical approach taken by REI in evaluating Phase 2 solar installations? Refer to Exhibit 5 and the spreadsheet shown in Exhibit 6.
- Which economic assumptions are the most crucial in REI's financial assessment of potential new solar installations?