

# Green Business and Policy Program Description of Courses

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## ■ Master's Program

### **GG501 Green Business Theory and Practice**

**3:0:3**

This course deals with green business issues for each business disciplines by identifying the research issues and methodologies, and studies case analysis. Thus this course is the milestone course for the following courses in green business. The subjects include green marketing, green strategies, green finance, green accounting, carbon finance, green value chain, green IT, green technology management, green venture and so forth.

### **GG502 Climate Change and Green Business**

**3:0:3**

This course studies the green business strategies and managerial decision makings for the era of climate change and energy shortage. Since many students in business school cannot take all the prerequisite courses on green technologies and policies, this course covers the green technologies and policies in self-contained manner.

### **GG510 Green Technologies and Green Industries**

**3:0:3**

The purpose of this course is to understand energy and environmental technologies for climate change and explore business opportunities. It covers the technologies for renewable energy, energy saving, carbon capture and storage, and safe nuclear energy.

### **GG511 Creating Green Business and Commercialization**

**1.5:0:1.5**

The purpose of this course is to provide ways to venture green technology business. The course examines risk and opportunities in venture companies through various cases.

### **GG513 Green Production and Carbon Reduction**

**1.5:0:1.5**

This course practices future potential possibilities and current issues in carbon gas emission from power plant station and industrial circles. Students learn following topics : 1) scientific technology in carbon gas air sampling, convergence, and reuse techniques, 2) economical values in carbon gas air sampling and preservation, and 3) rules and laws of other geographical areas such as US, EU, and Australia.

### **GG514 Case Analysis of Renewable Energy business**

**3:0:3**

This course focuses on discussing domestic and foreign cases of renewable energy technologies, businesses and market. Through presentations and discussion, we intend to develop successful models of renewable energy business.

### **GG531 Green Accounting**

**1.5:0:1.5**

This course covers the concept and principles of financial and managerial accounting for green firms. The course examines such topics including product costing, activity-based costing, life cycle costs, environmental budget matrix and control. It also deals with the issue of sustainable performance evaluation and financial statement analysis (FSA).

### **GG532 Carbon Emission Trading Market and Carbon Finance**

**1.5:0:1.5**

This course analyze effects of direct and indirect investment in carbon emission trading market. Learn investment strategy in climate change, roles of financial markets, and practice principle theories in carbon financial items.

### **GG535 Valuation of Green Firms**

**1.5:0:1.5**

In this course, green industry is analyzed and we explore various valuation techniques and investment criteria for green companies. Using such methods as DDM, DCF, RIM, EVA, and Real Options, we evaluate green firms on Environment, Society, and Governance (ESG).

- GG536 Green Fund Investment Strategy** 1.5:0:1.5  
This course introduces the relationship between risk and rate of return for green funds and explore the applicability and the efficiency of green fund market. The course covers management techniques of green funds and study theory and application of green funds. In this course, the issue of socially responsible investment is also covered.
- GG537 Green Derivatives** 1.5:0:1.5  
This course examines derivatives with underlying assets such as energy, metals, CO2 emission allowance. Market micro-structure, trading strategy, pricing and hedging issues of commodities market will be covered in this class.
- GG538 Case Study in Green Finance** 1.5:0:1.5  
This is a case study class on green financial markets. This course examines structures and characteristics of green financial markets and the cases of emerging green derivatives market. There will be student presentations at later stages of the course.
- GG540 Green Marketing** 1.5:0:1.5  
Environmental issues affect firms in many ways. To the marketing professional, environmental issues may provide a new market niche or product category through green marketing programs. This course will better prepare students for a marketing career.
- GG542 Green Innovation and Strategy** 1.5:0:1.5  
The objective of this course is to examine the implications of climate change and related policy and market issues upon businesses, followed by discussion on theory and cases of carbon markets, international climate change negotiations and related firms' strategy issues and new business opportunities.
- GG545 Green Value Chain and Carbon Management** 1.5:0:1.5  
To manage carbon emission and energy consumption, the green value chain is an effective method for analyzing the data about green accounting. This course investigates the methodologies for analyzing and controlling carbon and energy management.
- GG551 Green IT and Smart Grid** 3:0:3  
The course teaches basic concepts of Green IT and aims to understand principles and approach refinements in Green IT. Major focus is given to Smart Grid and cover the Smart Grid concept, technologies, applications, trials and business models.
- GG552 Security for Information and Energy Infrastructure** 3:0:3  
The objective of the course is to introduce students to theories, economics, technologies and policies associated with Information Security and Privacy with a special emphasis on organizations in the ICT and energy Industries. Topics typically covered include cyber-security, corporate-level information security and privacy, risk analysis/management, and security for energy infrastructure. The course combines lectures, student presentations, discussions and a team project.
- GG555 Environmental and Energy System Risk Management** 1.5:0:1.5  
This course covers topics of environmental and energy system risk analysis and management strategies for green growth perspective. Basic concepts of hazard identification, dose-response/effect relationship, exposure assessment, risk characterization and risk communication are discussed.
- GG570 Green Growth Policy** 3:0:3  
This course covers concept of green growth, the policy options to promote green growth, and methodological issues of assessing socio-economic impacts of green growth policies. The green policy issues are handled with methodology and case analysis.

- GG571 Green Technology R&D and Green Industry Policy** **1.5:0:1.5**  
The purpose of this course is to provide an overview of strategic management of technology and innovation in the context of green technologies. The course studies the green technology management both corporate and government point of view.
- GG572 Energy and Environment Economics** **3:0:3**  
This course is devised to discuss economical issues in energy and environmental problems. Particularly, it introduces current issues in energy market, tradable permit system, power market, and environmental market.
- GG574 Environmental Policy** **3:0:3**  
In environmental policy area, traditional command and control approaches are replaced by economic incentive-based approaches due to information asymmetry. This course deals with the incentive-based regulation mechanisms such as emission charges, the emission trading system, and the deposit system. We focus on the interaction of governmental policy and corporate strategies.
- GG575 Green Resource Policy** **1.5:0:1.5**  
This course deals with policies of waste management policies. As a waste management strategy, 4R (Reduce, Reuse, Recycle, and Recover) strategy will be discussed with example. Four methods for energy from waste will be investigated.
- GG576 Climate Change and International Collaboration** **3:0:3**  
This course aims to understand international cooperation system on climate change. Special focus will be given to the newly established international organizations : GGGI and GCF. In pursuit of New Climate Regime, this course will also seek sustainable ways of economic development cooperation with the ODA.
- GG587 Green City** **1.5:0:1.5**  
City is the major consumer of energy. To save energy and reduce carbon emission within the city, energy saving methods in designing green city and green buildings need to be created. Students will study the concept of green city and green building and the method of waste recycle infrastructure with the perspective of technology and policy.
- GG588 Food, Forest and Water Policy** **1.5:0:1.5**  
Food and forest are the foundation of survival and growth that is possible only by providing water, particularly at developing countries. Farming bio mass and developing CDM and ODA projects are important opportunities for developing countries.
- GG589 Green Transportation** **1.5:0:1.5**  
In order to save energies and reduce carbon emission in transportation, green transportation methods in electric vehicles, green ship and green air craft should be developed. In this course, students learn the concept of green transportations and industry trend.
- GG591 Environmental issues and policy analysis** **1.5:0:1.5**  
This course is devised to discuss policy issues in environmental problems. Particularly, using policy analysis methodology the ability of solving environmental issues will be enhanced.
- GG592 Green macroeconomics** **3:0:3**  
Since Nordhaus' s (1994) pioneering work (the DICE model), it has been a norm to adopt the standard approach of modern macroeconomic theory. This course introduces basic elements in modern macroeconomics for understanding the DICE model.
- GG601 Research Methodology for Green Business** **3:0:3**  
This course studies the research methodologies for green business and green policy. Based on the

background of research methodology for social science, this course identifies unique subjects that are necessary for the green growth research.

**GG603 Special Topics in Green Business**

**3:0:3**

This course covers special topics on the emerging research issues of green business. Even though these contemporary topics are not suitable to get established as a regular course, they are important for the development of new research topics.

**GG604 Studies on Green Growth Strategy**

**3:0:3**

The course mainly covers the origins of Korean Green Growth strategies and highlights the lessons learned and future directions. This class also explores diverse social theories to identify due topics and characters of green growth paradigm. Leaders of various fields from academia, policy circles, international organizations, business communities and CSOs will also interact with the students to find out ways out with ‘compelling’ reasoning.

**GG810 Special Lecture in Green Business**

**3:0:3**

This is a special course for new topics in green business and policy area with special interest and potential for development as a regular course.

**GG820 Special Topics in Green Business and Policy**

**1.5:0:1.5**

This is a special course for new topics in green business and policy area with special interest and potential for development as a regular course.

**GG951 Green Project**

**0:3:3**

This capstone course aim to perform research project on green growth individually or in team. Students should fulfill a report and article.

**GG960 Thesis for Graduate Students**

**0:0:0**

This is thesis for Graduate students. It enables the Master students to integrate what they have learned from the courses and to solve real and specific problem by building diverse management disciplines.