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## Green Business and Policy Course Descriptions(2021)

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### **BGM500** Green Business Theory

**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.

### **BGM501** 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.

### **BGM502** 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.

### **BGM503** 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.

### **BGM510** 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.

### **BGM511** Green Information Systems

**3:0:3**

The purpose of the <green information systems> is to improve students' understanding the value of information and information systems as one of organizations' key strategic assets and their applications in a wide range of business field. In particular, the course focuses on the changes, investment, performance, and challenges existing information systems face in advancing to the green, sustainable management system.

**BGM521 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.

**BGM522 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.

**BGM523 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.

**BGM524 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.

**BGM530 Green Business Financial Feasibility Assessment****3:0:3**

This course is designed to understand the whole process of feasibility assessment of green biz, strengthen students' analytic skills, understand diverse green business models and (4) understand the Project Financing and the assessment of project owner and main stakeholder.

**BGM540 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).

**BGM541 Green Firm Valuation and Social Finance****1.5:0:1.5**

This course is designed to help you to understand the fundamental functions of green firm valuation and social finance. We explore green valuation issues including valuation of green technologies, ESG (Environmental, Social and Governance) issues, and various green firm valuation models. We then explore the issues of social finance including social rate of investment (SROI), socially responsible investment (SRI), impact investment, and social impact bonds.

**BGM542 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

**BGM543 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.

**BGM550 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.

**BGM551 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.

**BGM552 Sustainable Development Policy** **3:0:3**

The global community faces massive environmental, economic and socio-political challenges. To combat these, the Sustainable Development Goals (SDGs) define global priorities and aspirations for the year of 2030. This course discusses the evolution, key concepts and theoretical debates on sustainable development as well as what the roles of diverse actors including private sectors and business play in this field.

**BGM553 Microeconomics and the Environment** **3:0:3**

The goal of this class is to introduce students to (1) necessary microeconomic tools to analyze environmental problems, (2) both classical and modern theoretical techniques to model externalities, (3) game theory to analyze collective action problems.

**BGM554 Energy technologies and economic evaluation** **3:0:3**

Various energy conversion technologies and the technology development history will be first reviewed. This will be followed by lectures to make students understand and apply basic principles of thermodynamics relevant to the technology evaluation and important concepts used for the economic analysis.

**BGM560** 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.

**BGM610** 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.

**BGM611** 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.

**BGM620** Introduction to Renewable Energy and Energy Storage Systems **1.5:0:1.5**

This course explores a set of emerging concepts, technologies, applications and business models in the field of renewable energy and energy storage systems.

The class will focus society's present needs and future energy demands, and then focus on alternate energy sources such as solar, wind power, fuel cell energy.

**BGM621** 4th Industrial Revolution and Green Technology **1.5:0:1.5**

Focusing key interconnections between green technologies and the 4<sup>th</sup> industrial revolution technologies, this course undertakes case studies on energy, mobility and communication area. New trends on climate change and AI, carbon emission and blockchain will also be explored.

**BGM622** 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.

**BGM640** 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.

**BGM641** 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.

**BGM642 Climate-related Financial Disclosures** **1.5:0:1.5**

This course focuses on Tasks force on Climate-related Financial Disclosures (TCFD) in green accounting. It aims to narrow the gap between climate change scenario and business scenario, by analyzing climate-related impacts on firms' strategy, business, and financial performance.

**BGM650 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.

**BGM651 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.

**BGM652 Energy Industries and R&D Policy** **3:0:3**

This course introduces students to the major concepts, issues, and problems of energy industries and R&D policy. Starting with energy technologies forming the bedrock of the energy system, the course examines various ways in which energy industries have evolved with grand challenges of climate change and sustainability. A comparative analysis of energy R&D across world regions and countries is also provided for students to critically analyze Korean energy R&D policy.

**BGM660 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.

**BGM661 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.

**BGM662 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.

**BGM663 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.

**BGM810 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.

**BGM820 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.

**BGM950 Sustainability Projects** **2:3:3**

This project course is designed to address business problems associated with sustainable development with teams of students. It provides learning and consultation experiences on market analysis and strategy development for individual firms, so that they implement sustainable business strategies and advance to global sustainability markets including those of developing economies.

**BGM951 Green Finance Projects** **2:3:3**

This project course is designed to identify and solve green financing issues or missions in organization. It provides students with learning and consultation experiences from the diagnosis of firms' specific green finance tasks and/or challenges to the suggestions for solving the mission of organizations.

**BGM960 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.