

## **Course Description**

### **FS503 Information Technology**

This course is designed to provide students with fundamental knowledge in advanced information technology. Internationally outstanding professor(s) will guide students to the basis for professional intellectual property and R&D through essential knowledge and new information. Students will learn and estimate the key technologies of information communications.

### **FS504 Environmental Technology**

This course is designed to learn introductory concepts on environmental technology under the context of global collaboration. Professors from Daejeon campus will deliver lectures and workshops on environmental policy, international collaboration, and development of environmental technology. Especially, potential solutions are proposed for the inter-connected problems of energy, environment, water, and sustainability which are global agenda in the 21st century and should be solved collaboratively

### **FS505 Bio Technology**

This course intends to provide surveys through which students can acquire the up-to-date knowledge and understanding on bio-medical technologies. Based on such knowledge and understanding, students can get insights on how to deal with those technologies in various lines of their work in the future.

### **FS506 Nano Technology**

Lecture includes introduction, status, prospect and future direction of nanotechnology in domestic and global societies. Basic principles, applications, and commercialization of nanotechnology will be discussed in the lecture.

### **FS507 Convergence Technology**

This course introduces the convergence technology among IT, BT, ET, and NT technologies. The basic principle of the convergence will be studied, and their industrial applications and technology trends are also dealt with some cases.

### **FS601 Introduction to Futures Studies**

This course introduces the futurology to research the Earth and future of mankind scientifically. The needs, goals, and limitations of the research on futurology, together with worldwide research history and status of futurology are explained. Especially, not only the probability but also the desirability of future are dealt with. To meet this, the cognitive uncertainty as well as normative uncertainty are dealt with. Throughout this course, the direction of Korea futurology research is examined.

### **FS602 Foresight methods**

This course overviews various methods on foresight including Delphi, Scenario, Trend, Emerging issues, Three dimensional methods. The methods are compared with application examples, and pros and cons of each method will be discussed.

### **FS603 Strategic foresight for future challenges**

This course overviews the future issues and challenges which we are facing now and future. For example, the technological innovation paradigm, climate changes, energy food and water, demographic change could be the examples. Additionally the key concept related to futures and strategic foresight will be discussed.

#### **FS604 Research Methods on Futures Studies and Strategy**

This course introduces what to be studied about the future and how to approach them. The course focuses on finding, building hypothesis and planning for verification of futures strategies and futures policies based on logical uniformity, practicality and scientific rationale. Next, the course will seek to devise new futures research method appropriate for Korea.

#### **FS605 Changing Structure of Future Society**

The major driving forces for future social changes include advance in science & technology, demographic change, climate change and resource depletion, and the order of international economic and political change. Each driving force (or macro-trend) itself has a strong influential power and creates new future challenges and opportunities through interact with each other. At first, this course overviews theories and methodologies of social change and foresight, and then, it explores a variety of factors that may lead to future environmental changes both at home and abroad. Next, it forecasts future social changes that will be caused by the factors and draws their implications in the Korean context.

#### **FS606 Practice on Policy Making of Future Research**

This course is to practice on policy making based on futures research through basic introduction lectures. The purpose of this course is to strengthen future strategy planning through whole participations by students in futures forecasting, establishing future strategy, and making detail policy. This process includes the group studies on community future visions, consensus building, and practice on alternative policy making.

#### **FS611 Leadership & Communications I (Future and society)**

This course introduces the essential leadership and practical experience for the successful life as a futurology specialist. Various changes by science and technology development are predicted, and responsible attitude on this together with the ways of dealing with mass media are also introduced. Scientific paper and report writing skills are also provided.

#### **FS612 Leadership & Communications II (Technology and Society)**

This course provides students with basic leadership necessary for successful social activities and practical examples. The purpose of this course is to forecast various changes (politics, economy, society, environment, culture, and religion) of human society as a result of science and technology evolutions, and to deal with communication methods for people and media together with responsible attitudes on the changes. Moreover, scientific writing of thesis and powerful writing of reports are introduced.

#### **FS620 Future Strategy for National Management**

In this course, we investigate a long-term future strategy over the whole field, on the national level. We multi-dimensionally examine agendas that are nationally of great importance, and discuss their priorities and weight. We also examine issues that should be considered by a government during policy making and execution, in the process of realizing a future society. Overall, we learn how to deal with various future strategies on the government management level.

#### **FS621 Future strategy for Science and Technology**

Introduction of scientific and technological progress and changes in human society as well as S&T and human resource development of the major developed countries in the 21st century. Coping strategies for changes in future society based on science and technology through analysis of future predictions of social changes. Planning for the effects and roles of S&T development in the realization of becoming a

developed country, and for policy making about the future of science and technology in Korea

#### **FS622 Future Strategy for International Relations**

This course overviews the future international relationship focusing on the adjacent countries such as USA and China. The change of international politics of the 20th century and that of international relations around Korean peninsula are discussed. Based on this, the future strategy for the national security of Korea including foreign affair and national defense is examined

#### **FS623 Future Strategy for Economy and Industry**

Modern science and technology exerts great impact on industries and the overall economy. Innovations in IT, BT, NT, and ET are fundamentally changing the industrial ecology. A new kind of economy is emerging with internet business and mobile business. Recognizing the limitations of the existing economic theory in meeting the challenges of the structural change in the economy, we will explore a new framework. We will think about ways to help science-technology-based new industries grow and think about future-oriented economic strategies for Korea.

#### **FS626 Future Strategy for Risk Management**

Modern society is risk society. As science advances, the aspects of risk are changing. We examine the appropriate crisis management strategy for the future society. This course examines what kinds of risk elements are arising at the government, enterprise, society, and individual level, and offers ways to overcome and prepare those elements.

#### **FS627 Future Strategy for Information Media**

In the future, new forms of media will continue to emerge with personal media and social networks expanded. To keep pace with such changes in the media environment, this class finds out how to upgrade our political, economic, social and educational systems, and thus that will help our systems to be prepared for the world's most competitive digital democracy and innovative market economy.

#### **FS628 Future Strategy for Innovation**

This course overviews the future strategy from the perspective of innovation and design innovation strategy. Students will review important innovation paradigms of 20th centuries, such as Open Innovation, Disruptive Innovation, User Innovation, Technology Saturation, and learn and search for a new innovation paradigm of current society in the perspective of technology, society, firm and nation.

#### **FS629 Future Strategy for Culture Technology**

The future of Korea lies upon the strength in its culture as well as technology. This course covers the issue of R&D in culture technology (CT) for a variety of areas including science journalism, contents industry and digital arts. Future directions of interdisciplinary research for CT industry as well as education for human resources in the age of convergence will also be explored.

#### **FS630 Future Strategy for Intellectual Property**

Intellectual property rights are regarded as core factors of production in the age of the creative economy. It is not an exaggeration to say that the future of our companies and our nation heavily relies on how to create, commercialize, and protect intellectual property rights. This course is designed to enable students to learn key issues of intellectual property including patents, trademarks, copyrights, and design rights that are key assets for future creation and their legal and managerial implications through both business and legal case studies of major global companies.

**FS631 Future Strategy for Environment & Energy**

This course overviews the future environment problems such as climate change and pollutions of air, water, soil, food, as well as the renewable energy, and nuclear or fusion energy. Strategic solutions for these issues are also provided with.

**FS633 Future Strategy for Defense & Intelligence**

This course overviews the future national security focusing on the defense and intelligence issues. The methods for the military power building and smart military forces based on science and technology are discussed. The current issues on the co-development of the defense intelligence and national intelligence for the advanced intelligence system are also discussed.

**FS634 Social Cognitive Neuroscience**

The advance of science and technology also brought progress to the understanding of human and society. Latest technologic and scientific knowledge is being applied to cognitive science, neuroscience, artificial intelligence, history, linguistics, forensics, and criminal psychology, and the concept of “human” and “society”, which has long been classified as the non-scientific area, is becoming the subject of scientific research. We should survey the humanities and social sciences in the scientific perspective as a member of East Asia, whose job is to create and lead a new world order. Thus, in this course, we learn to design future strategy based on social psychology.

**FS635 Global Issue: Food and Disease**

Understanding and control of cancer and contagious disease are essential for sustainable prosperity of human-being. This lecture deals with diagnosis and treatment of various diseases and production and distribution of food resources under the context of most recent development of genetic engineering and advanced analytical tools.

**FS690~2 Future Strategy Special Lecture I ~III**

This course is created upon the need for new topics or issues on futures strategy.

There is no limit to the subject and scope of the lecture. The professor in charge will choose the topic and create the course.

**FS960 Thesis Research (M.S.)**

This is a research course for writing thesis and conducting individual research. This course provides an opportunity to converge futures strategy technologies along with expert knowledge of respective fields under advisory professors and collaboration works. The research topic transcends diverse fields of futures strategy. Advisory professors supervises research and they can conduct special lectures on research methods and colloquiums if considered necessary. Students can also set up student-led courses and host special lectures and colloquiums

**FS965 Individual Research (M.S.)**

This is a research course for writing thesis and conducting individual research. This course provides an opportunity to converge futures strategy technologies along with expert knowledge of respective fields under advisory professors and collaboration works. The research topic transcends diverse fields of futures strategy. Advisory professors supervises research and they can conduct special lectures on research methods and colloquiums if considered necessary. Students can also set up student-led courses and host special lectures and colloquiums