

Course Description

FS501 Information Technology Strategy

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.

FS502 Environmental Technology Strategy

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

FS503 Bio Technology Strategy

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.

FS504 Nano Technology Strategy

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.

FS505 Convergence Technology Strategy

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.

FS506 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.

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.

FS601 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.

FS602 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.

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.

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.

FS607 Foresight in Practice : Process and Methods (hands on training course)

Research results on futures research quality cannot be dichotomically evaluated as correct/incorrect. The quality and reliability of futures research results depends on how detailed the overall process has been constructed, and how methodologies and toolkits have been adequately selected on each stage of research. This course focuses on practicing foresight based on foresight theories and methodologies. Throughout the course, students will learn, understand and adapt to changes in society and learn to tailor changes in need.

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.

FS636 Futures of Democracy

This course examines problems and limitations that democracy faces and search for unforeseen causes that may influence future of democracy, such as bipolarization and ageing. Also, this course examines different types of democracies and formulate new type of democracy models that fulfills the needs of the future.

FS637 Futures of Political Party

In this course, we observe main factors that brought challenges to the party system such as distortion of representation, separation from the will of the people, authoritarianism of political elites. It also seeks for diverse methods to overcome the challenges by utilizing technology.

FS638 Futures of Decentralization and Local Governance

In this course, we explore ways to balance central and local governments, strengthen local governance, thus, empowering the national competitiveness as a whole. Also, we discuss how demographic changes in the future will impact the role of local governments.

FS639 Future Oriented Budget, Account and Financial System

In this course, we observe ways to manage national finance through future-oriented budgeting and accounting process with fair and equal distribution of resources (financial balance) for both current and future generations. Also, this course examines generation gap that results from financial unbalance that current political system creates. Through 'intergenerational accounting', it seeks for quantitative and qualitative alternatives in pursuit for generational fairness.

FS640 Futures of Conflict Management

In this course, we examine systematic cause of major conflicts among regions, social stratum and generations. We further explore strategic stages for conflict resolution, conflict impact assessment and analyze diverse case-studies.

FS641 Data Strategy

The students in this course, by drawing on related theories and cases, (1) learn about the basics of strategy and organization design, and (2) develop their knowledge of 'data strategy', which is based on the core capabilities of collecting and using data, and strategic design of 'AI organization' to gain the core capabilities. In their term project, they deepen their learning by apply what they have learned to the organization (government, company, industry, community, etc.) they selected. Their term project may develop into their thesis

FS642 Time Series and AI Forecasting

The main goal of this course is to understand various time series and AI (Artificial Intelligence) forecasting models for times-series analysis including regression, exponential smoothing, ARIMA model, ARCH/GARCH model, aggregation, Deep Learning. This course also requires programming exercises in R and Python. By the end of the unit, students will be equipped with appropriate forecast modeling and statistical analysis skills to contribute to forecasting research projects.

FS643 Political Epidemiology of Global Crisis

Global crises bring rapid changes in socioeconomic, cultural, and environmental factors affecting health, yet often overlook their political and social determinants leading complex emergencies. The proposed course aims to explore these determinants, focusing on marginalized populations globally and emphasizing the profound impact of political inequalities on human health and their implications for humanitarian, human rights, and security discussions concerning vulnerable populations.

FS690~FS693 Future Strategy Special Lecture I ~IV

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