

## Descriptions of Courses

### Undergraduate Course

#### MGT201 Management Engineering Practice

Selected contemporary issues in management engineering are analyzed and their solutions are researched through field study and case analysis based on management theory. The purpose of this course is to increase understanding of the management field and the ability of applying management theory to real world problems.

#### MGT210 Principle of Management

The primary objective of this course is to teach the students basic principles of management. The subjects covered in this course include organizational behavior, personnel management, decision sciences, production and operations management, marketing, finance, and business strategy. Thus, we will study most about the fundamental issues in modern management and business administration.

#### MGT211 Statistics for Management Science I

This course focuses on basic probability theories and statistic inferences. Topics include: random variables and their distributions, estimation, MLE.

#### MGT212 Statistics for Management Science II

This course focuses on statistic inferences. Topics include: T-test, estimation, chi-square test, ANOVA test, simple- and multiple-regression analysis, non parametric estimation.

#### MGT250 Theory of Microeconomics

This course aims to provide a firm microeconomic foundation for the analysis of advanced economic issues and to enhance economic reasoning through both analytic and mathematical approaches to the theories on consumer choice, production, market structure, and market performance and failure.

#### MGT300 Operations Research

This course serves as an introduction to the field of Operations Research (OR). The course will cover basic deterministic methods of operations research (linear programming, network flows, integer programming and nonlinear programming) and their applications to resource allocation problems in business and industrial organizations.

#### MGT301 Introduction to probability models

This course serves as an introduction to probability models with applications. The course will cover basic non-deterministic methods of operations research (introduction to probability theory, random variables, conditional probability, the markov process, queuing theory) and their applications to decision making problems in business and industrial organizations.

#### MGT312 Econometrics

This course emphasizes the methods of statistical analysis in econometric models. Topics include the estimation and hypothesis testing procedures in simple and multiple regression models, violations of assumptions of the classical linear regression model, dummy variables, stationarity, and unit root tests in time series models.

#### MGT320 Introduction to Information Systems

This course provides an introductory overview of information systems. The focus of the course is information technology but it also gives students an appreciation of the basic management issues surrounding the development and use of information technology (IT) in organizations. Students will learn how to apply the information technologies to solve practical problems found in the real business world.

#### MGT340 Managing people and Organization

This course introduces the basic concepts, theories, models, and cases of behavioral phenomena in the context of both profit- and non-profit organizations such as personality, learning, motivation, group process, leadership, organization design and culture, and organizational change.

#### MGT341 Financial Management

This course introduces various basic problems on financial management, and studies management problems related to capital financing and managing.

#### MGT342 Principles of Accounting

Undergraduate accounting courses usually focus on the technical aspects of the accounting process. On the other hand, this course focuses on the understanding of basic concepts and principles of accounting and applications of accounting information for investment and managerial decision making from a user's view. This course covers basic concepts of management accounting, auditing, and tax accounting in addition to financial accounting.

#### MGT346 Principles of Marketing

This course introduces basic concepts in management technology for marketing. Topics covered include: historical development of the marketing system, strategic marketing, planning process, analysis of product and consumer markets, marketing decision making, new product development, and management of marketing mix elements such as product, marketing channel, price and communication.

#### MGT350 Introduction to Operations Management

The operations function in business deals with the value creation processes of manufacturing and service organizations. This course introduces students to the basic issues of operations strategy and the design, operation and improvement of the value creation process. The topics include the strategic role of operations, operations-based competitive capability, productivity, quality, supply chain management, time-based competition, process design and development, demand management, operations planning and control, and operations innovation and improvement.

#### MGT351 Theory of Macroeconomics

This course aims to provide an intermediate level understanding of how an economy works. The topics include national income, aggregate demand and supply, money and banking, inflation and unemployment, foreign trade and the exchange rate, and economic growth.

#### MGT411 Business Forecasting and Decision Making

This course focuses on the way to think about and solve realistic and practical problems. Various methods of collecting, analyzing data, and decision making, developing strategies to meet a very uncertain future with technological innovations are discussed with real cases.

**MGT420 Management Information Technology**

This course studies data structures, software development techniques, and database systems as components of management information systems. It also covers system analysis, design, and implementation methodologies for information system development.

**MGT430 Principles of Business Communications**

The Development of Computer and communication technology leads information society. This course introduces from basic communication technologies to private communication methods.

**MGT432 Investments**

This course develops the tools and framework about portfolio theory that are necessary for successful investment management. These concepts are further integrated for understanding risk and return for individual securities and portfolios.

**MGT442 Strategic Management**

This course introduces the basic concepts, the process, and the various skills and techniques of strategy formulation, implementation and evaluation. Real cases of Korean and American corporations will be heavily discussed.

**MGT444 Venture Management**

This course reviews the characteristics of venture business and entrepreneurship. Also the entrepreneurial (new venture creation) process and major activities in each stage are examined. Next, fundamental management roles and skills required for entrepreneurs are introduced in view of change management. Finally, special issues such as internal corporate venturing and the globalization of Korean venture business are discussed.

**MGT451 Case Studies in Information Technology**

This course is focuses on case studies in the area of new information technology. Students discuss and debate the new IT products and strategies, finally they select new IT topics and present their final results.

**MGT452 Case Studies in Management and Innovation**

This course is focuses on case studies in the area of new management strategy. Students discuss and debate the new management strategies, finally they select new management strategies topics and present their final results.

**MGT490 Thesis Study**

**MGT495 Individual Study**

**MGT496 Seminar**

**MGT497 Topic Course**

This course is focuses on case studies in the area of new management strategy. Students discuss and debate the new management strategies, finally they select new management strategies topics and present their final results.

**? Graduate Course**

**MGT500 Probability and Statistics**

This course provides first-year graduate students with the necessary background of

statistics. Topics include: Basic the concept of probability, distributions, sampling, estimation, hypothesis, regression analysis, and experimental design

#### MGT501 Mathematics for Business

This course aims to study various mathematical tools useful in the areas of finance and economics. For the course, students are required to have knowledge of some basic concepts such as the real number system and functions.

#### MGT502 Statistical Decision Analysis and Forecasting

Various statistical analysis methods related to management decisions and decisions for government and public polices are introduced and studied with statistical experiments. Linear regression models, time series models, analysis of variance, multivariate analysis, principal component analysis, clustering and factor analysis are included.

#### MGT503 Management Statistical Analysis

This course provides first-year graduate students with necessary background of statistics. Topics include the basic concept of probability, distributions, sampling, estimation, hypothesis, regression analysis, and experimental design.

#### MGT504 Quantitative Analysis for Management

This course covers major concepts and techniques for managerial use of accounting information. The topics include cost concepts, cost-volume-profit analysis, the costing system, budget, responsibility accounting, cost allocation, cost variance analysis, performance measurement, and compensation.

#### MGT505 Management and Programming

This course is designed as an introductory course regarding information technology basics and their application; these fundamentals help to support research methods and tools for management research. This basic knowledge includes problem solving methods, elementary data structures and associated algorithms. Students also learn database concepts and web programming skills, and apply these skills to recent directions in research including data mining, agent-based models, and economic simulation programs.

#### MGT506 Mathematical Programming

The primary objective of this course is to teach the students basic principles of mathematical programming for analyzing managerial theories and practical issues. The subjects covered in this course include basic linear algebra, advanced calculus, linear programming (LP), nonlinear programming (Non-LP), network optimization, dynamic optimization, and applications.

#### MGT510 Leadership and Organization Management

The course provides basic frameworks and theories of organizational behavior and management of organizations. Main course topics include personality, motivation, and human relationships at the individual level, management of conflict and team, leadership, organizational structure and cultural management for designing efficient and effective organizations in a turbulent environment.

#### MGT511 Strategic Management

This course introduces concepts, theories, approaches and analytical models associated with the process of strategy formation and implementation in both profit and non-profit organizations. It also provides opportunities to make strategic analyses and to make

decisions for strategic issues of real organizations through participation in class discussions and performing group term projects.

#### MGT512 Research Methods

The purpose of this course is to provide MBA students with the basic concepts, research approaches and analysis techniques; students will need to write a masters thesis and to understand research papers. The course is composed of the following sections: (1) Theory Building & Research Design, (2) Data Collection & Measurement, and (3) Case Study & Statistical Analysis.

#### MGT514 Principles of Economics

This course focuses on the issues involving the rapidly changing international economic & political environments and their impacts on the decision making processes of businesses. Mutual relationships and dependence among advanced and developing economies make firms change their organizations and strategies. Students will review recent articles and relevant references.

#### MGT515 Economics of Strategy

This course provides an economic foundation for competitive advantage, competition, market analysis and business model development. Topics include a concise economics review followed by the study of horizontal and vertical boundaries of the firm, transaction costs of market exchange, industry and market analysis, diversification, strategic commitment, pricing rivalry, entry and exit, strategic positioning for and sustaining of competitive advantage. This course also discusses these topics from the digital economics point of view. This course tries to help students to gain an analytic base, generalize and form robust insights into business strategy by focusing on various case studies and thesis research in such areas as core competence, competitive analysis and business model development. A minimum level of mathematics, such as the first order derivatives of functions, is required.

#### MGT516 International Business

This course surveys some key issues in international business and seeks to enable students to develop a conceptual framework in management of the firm in international settings. In particular, this course focuses on both the forces of globalization and their impact upon the modern firm and its appropriate organizational and strategic responses to global challenges.

#### MGT517 Negotiation and Conflict Resolution

This course reviews the strategies and tactics of distributive and integrative bargaining approaches in the theory and practice of business and international negotiation. Students also practice, through various simulations and case studies, skills to achieve the best available objectives in various business and international negotiation settings.

#### MGT518 Global Competition Strategy

The GCS course explores the determinants of competitiveness and successful economic development viewed from a bottom-up, microeconomic perspective. While sound macroeconomic policies, stable legal and political institutions, and improving social conditions create the potential for competitiveness, wealth is actually created by firms at the microeconomic level. The course focuses on sophistication and productivity of firms, the vitality of clusters, and the ultimate determinants of a nation's or region's productivity. The course

has been designed not only for students at Harvard but as a platform that can be taught at universities throughout the world.

#### MGT520 Marketing

This course takes an analytical approach to the study of marketing problems of firms. Attention is given to the influence of the marketplace and the marketing environment on marketing decision making; the determination of the organization's products, prices, channels, and communication strategies; and organization's system for planning and controlling its marketing effort.

#### MGT521 Marketing Research

This course covers main concepts and techniques useful for identification, collection, and analysis of information necessary for marketing decision making. Emphasis will be given to the research design for data collection and computer practice for processing and analysis of collected data. Topics include problem definition, experimental design, sampling, questionnaire design, and various multivariate data analysis techniques.

#### MGT524 Design Management

This course is designed to teach graduate students how to manage various types of design organizations and large scaled design projects within an agreed upon time budget

#### MGT530 Operations Strategy and Supply Chain Management

This course deals with the strategy, design and diagnosis, development, operations and improvement of the supply chain, on which business information and physical goods flow. The success of a business is determined by the competition among supply networks rather than the competition among individual firms. Competitiveness of a supply network depends on how the value creation activities of constituent firms are integrated and provide the values the market needs (price, speed, quality, variety, etc.). In order for a network to be successful, the product and process developments, information management (demand forecasting, order management, production planning), procurements, operations, logistics, and service activities of individual firms should be coordinated and / or integrated. This course prepares students to be able to approach supply chain integration issues by providing strategic and analytic tools that can be used to evaluate the value creation and value transfer processes over a supply chain.

#### MGT531 Global Supply Chain Management

The primary objective of this course is to teach the students the key issues in Global Operations Management (GOM). Although the global nature of business management has been recognized for quite a long time, this course, Global Operations Management, is a fairly new development in the field. We start with examining research frameworks that help us to obtain conceptual and analytical tools so that we can formalize the ensuing inquiry into various subjects in GOM. After this theoretical introduction, we take on more empirical aspects of the subject, supplemented by case studies. During this course, the students are expected to develop the expertise to identify critical issues in actual business situations in an international context, as well as the ability to fully comprehend theoretical postulates offered by researchers in business administration and economics. The instructor also expects the students to be able to express their analyses unambiguously and confidently in class.

#### MGT532 Strategic Management of Technology

This course covers current issues and theories on technology strategy, management of technology, and venture management. The major issues covered include principles of technology management, designing and implementing technology strategy, strategic management of innovation, and new product development. Some emerging issues will also be discussed.

#### MGT533 R & D Management

This course covers theories and practices on the management of R&D activities, primarily from the micro perspective. The major issues covered include principles of R&D management, and approaches and techniques on the management of R&D information, projects, professionals, organization and resources. R&D strategy will also be discussed.

#### MGT534 Entrepreneurship and New Venture Creation

This course examines theories and practices on entrepreneurship and venture management and introduces how to start new ventures. Key components of entrepreneurial management, success / failure factors for new ventures, practical start-up processes are covered through analysis of research papers and case studies. Students as a team are required to prepare a business plan. Some special issues are also discussed.

#### MGT535 New Technologies and High-Tech Industries

This course is designed to introduce recent trends in emerging high technologies and to discuss strategic and managerial issues and cases in these high-tech industries. Students will have an opportunity to learn new perspectives on strategies as well as technological knowledge and implications in emerging high-tech industries. Especially, information and communications technologies, internet-related industries, computer and display sectors, and life science industries will be covered. Several industrial experts will be invited to deliver seminars.

#### MGT536 Environmental Management

This course deals with the linkage of strategic management and environmental management system. Topics included are development and implementation of corporate environment strategy, reactive and proactive environment management issues, environmental technology, and new business opportunities. We also discuss the issues of environmental management and business profitability, green marketing, and ISO 14000.

#### MGT537 Environmental and Resource Economics

In this course, analytic frameworks are provided for the investigation of economic issues in natural resources and environment AL policies. Class discussion of selected published articles on these issues will be emphasized. The main objective is to identify international as well as domestic issues, to develop appropriate policies to address those issues, and to assess currently implemented policies.

#### MGT538 China's Economic Development and Korea

China's rapid economic and technological development have given Korea both opportunities and challenges. This course handles technological, economic, historical, cultural and socio-political issues with China's rapid development and what Korea should do to cope.

#### MGT540 Business in Society

This course will study frameworks and concepts of responsible and sustainable management. The approaches to be taken are multi-stakeholder approaches – integrating ethics issues,

transparency, governance, social responsibility, environmental responsibility and economic responsibility of firms. This is an emerging paradigm of business management – as a comprehensive corporate risk management framework and also as a sustainable value creation framework. Sustainability reporting (SR), ranking and evaluation models and socially responsible investment (SRI) will also be discussed.

#### MGT541 Electronic Commerce and eBusiness

Electronic Commerce (EC) and eBusiness were born with the propagation of the Internet. EC and eBusiness have drastically changed the way of retailing, manufacturer's direct marketing, banking and services. EC deals with the corporate relations with external customers, suppliers and other partners, while eBusiness deals with the eTransformation of internal part of business including manufacturing and procurement process. This course studies the key trends, principle technologies for EC and eBusiness, and business strategies by reading texts, practicing sites, and discussing cases. Role playing is exercised under real world case scenarios.

#### MGT542 Management Information Systems

The purpose of this course is to present the relationships among the key components of MIS. This course reviews fundamentals on hardware, software, I/O devices, file and data management, system analysis and design, project management, decision support systems, expert systems, and telecommunications. This course does not intend to merely review the basics of computers, but to emphasize more advanced topics like hardware selection, software development strategy, MIS organization and research methodology. All faculty members who are experts in each issue will teach the relevant topics.

#### MGT543 Information Systems Analysis and Design

This course covers the various methodologies (Structured Analysis and Design, Information Engineering, etc.), techniques (data modeling, process modeling), and tools (CASE, RDBMS, data dictionary) used in developing information systems application. Students are expected to work on a class project to apply what they learned from the course.

#### MGT544 Database Management

This course mainly deals with online transaction processing. The focus is on how a database engine manage concurrent multiple-user data accesses is exploited in terms of data consistency, transaction serializability, transaction atomicity and update durability. Commercial database engines are introduced. Distributed paradigms for transaction management such as global agreement protocols are also dealt with. Cases of distributed processing are introduced.

#### MGT547 Business Strategy & Use of Information Technology

This course is offered to graduate students in a seminar format during a semester. The seminar is to focus on exploring and articulating the framework and methodology associated with deployment of Information Technology to help formulate and execute business strategy.

#### MGT548 Data Modeling

Case study-oriented database design will be conducted and supervised throughout the course. Data modeling methodologies are employed for this term project-style practice.

#### MGT549 Information Technology for Financial Application

This course is designed to help students acquire skills necessary to implement a wide range



of financial theories and models to deal with the practical financial issues. It will cover basic tools such as EXCEL, C, and MATLAB and special issues related with information technology for financial applications.

#### MGT550 eBusiness Technology

This course deals with an overview of the technologies relevant to electronic business. Aspects covered are communications and networking, the Internet and mobile eBusiness, architecture of web systems, data interchange, access and cryptographic security, electronic payments, databases, multimedia, mass personalization and recommendation systems, search engines, data mining and intelligent agents.

#### MGT552 Security Management in Information Systems

A complete information security system consists of — in the order from bottom to top — network security, operating system security and database security. Data cryptologies, digital signatures, digital certifications are also dealt with.

#### MGT553 Internet Marketing

The objective of this course is to provide insights into the converging logic of traditional marketing in the information age from the consumers' perspective. We will examine the impact of new technologies, namely the Internet on its users e.g. consumers, within the framework of the traditional marketing paradigm. The goal is to develop an awareness and understanding of the current relevant issues, advantages and disadvantages of this marketing medium, and specific techniques involved in using the Internet as an effective marketing tool. We will also introduce sociological issues such as freedom vs control, trust and privacy confronting consumers decision making.

#### MGT554 Digital Economics

In this course, students will learn how to apply the traditional economic theories to the Internet economy and will specifically focus on the issues arising when the micro-economic theories are applied to Internet business. eBusiness often requires new business models that will be supported by a new market mechanism. Information economics, economic analysis of business models, competition models of new business, network effect, lock-in, dynamic pricing, and auction theories are the main topics of this course.

#### MGT560 Financial Accounting

This course covers basic concepts of accounting and its role in the capital market. The topics include accounting process, meanings and interpretation of financial statements, understanding of financial statement items, basics of financial statement analysis, and investment and loan decision using accounting information.

#### MGT561 Corporate Financial Policy

This course is designed to provide a conceptual framework for understanding the field of corporate finance. The issues addressed in this course include time value of money, relation between risk and return, capital budgeting, capital structure, dividend policy and corporate governance. This course will emphasize the logical structure of various theories and empirical evidence on them.

#### MGT562 Case Studies in Finance

The principal objective of this course is to study cases in Finance so that students develop practical skills to solve real business problems by applying Finance theories and tools. This course will provide students with a highly interactive and dynamic learning experience.

The prerequisite for this course is Corporate Finance (MGT 561) or equivalent graduate Finance courses. All in-class discussions are in English.

#### MGT563 Investment Analysis

The course serves as an introduction to the theory of investments. It will address the major concepts and issues associated with the allocational role of financial market. It will cover a theoretical foundation for the portfolio choice, the valuation of financial securities, the financing and investment decisions of firms, and the structure of financial markets.

#### MGT564 Microeconomic Analysis

This course aims to study various modern microeconomic models to understand complex market phenomena. It will provide students, especially those in economics related majors such as economics, finance, marketing and strategy with basic tools to think and analyze for their future research. Non-economics students will also benefit, not only from acquiring some basic knowledge of the market mechanism, but also from learning useful methods to tackle and analyze real-world problems. Although some basic mathematical tools will be taught during the lecture, students are required to have basic knowledge of calculus.

#### MGT565 Economic Development of Korea

This course is a blend of a survey of various theories on economic growth and an analysis of the Korean economy. In order to build a framework for the analysis of the Korean economy, various growth models, including neoclassical growth models, endogenous growth models, and R&D-based growth models, will be studied. Based on the intermediate knowledge on economic growth, the process and characteristics of the development of the Korean economy will be analyzed and discussed. A working knowledge of calculus is needed.

First, we will review some stylized facts on economic growth. Then, by studying existing growth models, we try to understand why some countries produce much more output per worker than others. In particular, the focus will be on the mechanics of the accumulation of various production factors such as labor or human capital, physical capital, and technological knowledge. In addition, recent models emphasizing R&D (technology) and social infrastructure as major determinants of economic growth will also be studied.

Second, we will apply the predictions and implications of the various growth models to the evolution of the Korean economy. In doing so, we will discuss government policies, business strategies, and social infrastructure as well as future strategies for economic prosperity.

#### MGT566 Money and Banking

This course presents a comprehensive analysis of the economic role of financial intermediaries and the art of central banking. This course also covers the theoretical framework on monetary policy and the supply of money. It emphasizes the practical implications of macroeconomic policy on the real sector of the economy and financial markets.

#### MGT567 Management of Financial Institutions

This course will focus on (a) the nature and the role of financial institutions on the economy and (b) several aspects of financial institutions management. First, this course will overview the financial system in Korea, and examine the role of the financial market and financial instruments. Second, this course addresses the various issues concerning the management of various financial institutions, focusing on risk management. Also, the recent trend and developments in the financial service industry will be studied.

#### MGT568 Risk and Insurance

This course focuses on risk analysis, risk financing, risk control, and risk management. It provides students with a conceptual understanding of the existing services and products of various insurance fields that will serve as grounds for further developments of services and products.

#### MGT569 Futures and Options

This course introduces the pricing models used in options and futures markets, and risk management techniques. This is to help students understand options and futures in more detail by examining the structures of the markets, analyzing pricing models and examining related empirical results.

#### MGT570 Security Analysis and Trading

This course is to provide students with an in-depth discussion of analytic tools and concepts needed for the analysis of securities. The concepts and tools developed in the class are applied to real world problems.

#### MGT571 Korea Economy and Financial Structure

This course focuses on the distinctive structural nature and historic perspectives of the Korean economy and financial structure. The goal of this course is to foster analytic skills and the ability that is necessary in dealing with the current issues of the financial structure and policy of Korea.

#### MGT572 Financial Statement Analysis

The course is designed to provide a framework to analyze financial statements and apply it in specific decision contexts such as investment and performance evaluation of a firm. It also covers business valuation and credit evaluation of a firm using financial statement analysis.

#### MGT574 Multinational Corporate Finance

This course extends the principles of finance to an international setting. International finance differs from purely domestic finance in at least two important ways. First, firms and individuals operating in an integrated world economy face the risk of fluctuating exchange rates. Second, international capital markets are highly imperfect, reflecting various barriers to cross-border capital flows, such as excessive transaction costs, information asymmetry, and legal / institutional regulations of foreign exchange and capital markets. Throughout the course emphasis is placed on how to deal with exchange risk and market imperfections using various instruments and techniques available while maximizing the benefits from the expanded global opportunity set. Major topics of the course include foreign exchange markets (spot, forward and options), determination and forecasting of the exchange rates, foreign exchange risk management, international portfolio investments, international capital budgeting, and international management.

#### MGT575 Global Financial Markets

The course applies principles of finance to the international setting. The existence of multiple currencies adds both opportunities and risk to investment and financing decisions. The course will discuss the determination and volatility of foreign exchange, barriers to international capital flows and international diversification and risk hedging. The applications of these themes will range from portfolio management strategies to corporate

financing decisions.

#### MGT577 Macroeconomic Analysis

This course serves as a graduate course in the field of Macroeconomic Analysis. The course will cover advanced theoretical models and empirical analyses on macroeconomic aspects. The topics are (1) the Ramsey model and Overlapping-Generation models, (2) classical and endogenous economic growth theories and empirical analysis, (3) traditional and Real-Business-Cycle economic fluctuations, (4) microeconomic foundations of incomplete nominal adjustments, (5) advanced theories and empirical analysis of investment and consumption, (6) macroeconomic aspects of monetary and fiscal policy, and (7) open macroeconomic aspects of technology and innovation.

#### MGT580 Applications of Telecommunications Systems

This course aims to provide a comprehensive introduction to the technologies and systems of telecommunication systems and data networks. It is geared to non-specialists who are interested in the strategic use of telecommunications and the Internet. Students' appreciation of the basic concepts and principles of telecommunications networks and systems, as well as the underlying technologies, is emphasized, while technical details are minimized. Basics of analog and digital communications, telephone and computer networks, wireless communications, and the Internet form the main body of the course. Current topics such as broadband access, wireless communications, Next Generation Internet and wireless Internet are also discussed.

#### MGT581 Introduction to Computing Technology

This course can be viewed as "Introduction to Computer Science," focused towards graduate students of management school. Current technology trends in operating systems, computer architectures, programming languages, database systems and network computing are introduced topic by topic.

#### MGT582 Economics of Telecommunications

Since the 1980s, the telecommunications industry has grown remarkably thanks to technological advancement, demand growth, deregulation and liberalization. The structure of the industry has become more and more competitive and the conduct of its constituents has become unprecedentedly diverse and complex, creating numerous regulatory problems. The phenomenon has been accelerated by the recent trend in which the computer, broadcasting, entertainment and the Internet are converging. Now is the time for a shift toward new policy paradigm.

This course aims to examine the structure and operation of the telecommunications industry utilizing the tools developed in the area of microeconomic and industrial organization theories. It further studies various economic principles to achieve economic efficiency through competitive system as an alternative to natural monopoly.

#### MGT583 Introduction to Telecommunication

This course focuses on fundamental concepts and technologies in telecommunications: Analog and digital transmission, multiplexing and switching, data transmission, cellular system, optical communication system, data communication, and local area network. Experiments on basic communication concepts are also analyzed.

#### MGT584 Progress in Internet and its Analysis

In this course, we review recent developments of the Internet, its technologies and

operation, and its governance structure, and survey emerging Internet technologies and their potential implications in the development and use of the new generation Internet. We then study the nature and character of Internet commerce, and proceed to explore the place of the Internet in business, developing as a narrowly-defined new sector of the economy made possible by the Internet, in the economy as a whole, as seen to be emerging as a result of fundamental transformations taking place in all sectors of the economy through Internet-enabled set of powerful tools, and in society. The policy choices faced by society as the Internet takes deeper root in our lives are also discussed.

#### MGT585 Technology and Telecommunications Policy

The aim of the course is to develop understanding of the interrelationship between technological change and telecommunications policy. The role technological change has brought about major redirections in telecommunications policy and the manner in which telecommunications policy has affected the process and direction of technological change are reviewed. Current technological developments centered around the 'Internet Phenomenon' are studied in the context of their implications on telecommunications policy and corporate strategy. The course consists of instructor's lectures, students' presentations and class discussions on reading assignments.

#### MGT586 Telecommunication Business Analysis

In this course, students will learn new product demand forecasting, market research, economic analysis, regression analysis, time series analysis, cross section data and survey data. After building a theoretical base, case studies on domestic telecommunication business are explored. These methodologies can play an important role in marketing strategy developing decision making for any business field.

#### MGT587 Introduction of Internet Technology

This course comprehensively introduces students to the basic concepts and architectures of various Internet technologies, which are essential, or at least beneficial, for understanding and developing Internet applications. Covered are those areas such as Internet protocols, including those for the next generation Internet, E-business applications, and the enabling broadband telecommunication infrastructure. Emphasis is placed on providing insight on how all these technologies are put together to render the ubiquitous and omnipotent Internet.

#### MGT590 Cross Cultural Management

This course is designed to provide participants with an intellectual and an experiential forum for developing the interpersonal, intercultural communications and interaction skills necessary for international managers. As we move into the 21st century, where globalization is taking root and demographics are changing, it is vital that our workforce has a solid and practical understanding of the interrelationships between the self and world economy. The ability to communicate cross-culturally and understand diverse perspectives is a necessity in order to achieve a competitive advantage in our global economy. This course is much more than the study of cross cultural communication. It involves the study of international business practices and managing diversity in the context of understanding multicultural and international affairs.

#### MGT591 Global Immersion Practice

The primary objective of this course is to help MBA students to grow as global managers through global / international experiences. This course consists of subjects such as

global leadership, international negotiation, global management principles, community services, etc., that encourage students to experience and practice what they have learned in classroom lectures.

#### MGT592 Global Immersion Practice for Telecommunications

This course examines the upcoming issues in international telecommunications. It consists of subjects such as global leadership, international negotiation, global management principles, etc. In addition, it helps students to grow as global managers through global / international experiences.

#### MGT594 International Studies

This course offers the KAIST graduate business students an engaging experience on how business operates in the United States and China (or other region(s) of current interest) in comparison to South Korea. The economic, regulatory and managerial issues faced by multinational organizations—including ethical issues—intra-organizational relationships; and the business outlook and opportunities for the region as governmental and economic structures change are also addressed.

#### MGT600 Optimization Theory

This course is designed to provide students who have a basic OR background with advanced theoretical topics in deterministic optimization. Linear and nonlinear optimization problems will be covered from the theoretical perspective, the basic theory and applications of optimal control problems will follow.

#### MGT601 Decision Analysis Theory and Application

This course is composed of two main parts: Individual and Group DSS, more details, concepts and classifications of DSS, decision making methodologies, electronic meeting system, model management system, man-machine interface using multimedia, Executive Information Systems, model building using spreadsheet, etc. This course emphasizes the teaching of basic methods and techniques selected on DSS and the improvement of students' competency via their term projects and homework. Students are expected to demonstrate their knowledge on DSS through classroom presentations.

#### MGT602 Forecasting Theory and Its Applications

In this course, students will learn and model the ARIMA model, which is the representative model for financial time series analysis and forecasting. To handle the specific characteristics of financial time series, advanced models, such as ARCH, GARCH, VAR (Vector AutoRegressive), Cointegration, ECM (the Error Correction Model) and the State Space Model, are also covered.

#### MGT603 Computer Simulation

This course answers the questions about how and why we simulate. Students will form simulation project teams and generate substantial team effort.

#### MGT604 Human Resource Management Systems and Strategy

This course focuses on how to design and execute human resource management strategies. The course objective is not to deal with technical details of personnel management (*e.g.*, the specifics of job evaluation methods, the mechanics of interviewing, the specifics of employment law, the psychometric aspects of test validation), but to address fundamental

human resource issues from a strategic perspective, adopting a general manager's viewpoint. Having an effective system for obtaining, mobilizing, and managing the organization's human assets should be as important as other value-creating activities such as conceiving of innovative product design, forging a successful marketing strategy, cultivating an advanced production technology, all of which are critical in enhancing the firm's competitive advantage in the global market. This course adopts an integrative perspective, drawing upon fundamental courses constituting the core curriculum in management. It covers both analytical and managerial approaches to develop the concepts and strategies that enable general managers enhance the value of human resources (*i.e.*, people) in their organizations.

#### MGT605 Business Communication

This course focuses an intensive practice to enhance skills for English presentations, writing, and negotiation. Principles for business communication are introduced and students are requested to exercise in several situations following specified guidelines.

#### MGT606 Law on International Business

Law can guide international business and protect it from uncertainties and risks. This course will cover important components of international business transactions: international sales, foreign direct investment, and intellectual property. It will also cover the World Trade Organization at the macro level of international business law.

#### MGT607 Legal Aspects of Business

Law continues to become more and more important to managers. This course attempts to provide an integrated treatment of law and management that shows how the law provides ways for managers to minimize risk while creating value and attaining core business objectives. It covers agency, contracts, sales, e-commerce, torts, and product liability.

#### MGT608 Legal Aspects of Business Association

The fierce competition in today's open, global market requires managers and entrepreneurs to successfully perform three main tasks: Sourcing, corporate learning, and market positioning. This course will cover various forms of business organizations created to achieve these three tasks, the advantages and disadvantages of each form, corporate governance issues, the rights & duties of directors, officers, and major shareholders, public and private offerings of securities, securities fraud and insider trading.

#### MGT610 Research Methods

This course will serve as the basis for the understanding of a broad overview and state-of-the-art research methodology in Management. The course provides students with the capabilities they need to write a masters thesis and to understand research papers. Students are expected to learn how to apply research methodology to perform actual research projects.

#### MGT611 Organization Behavior Theory

This course is designed to provide an intermediate level of knowledge in organizational behavior and theory. The topics covered in this course include both micro organizational behavior such as personality, perception, attitude and value system, learning, motivation, and work groups and teams, and macro organizational behavior such as organizational analysis and design, culture, international organization, and organizational change. It also presents recent research trends in each topic in organizational behavior. Basically,

it emphasizes a theoretical foundation for understanding organizational phenomena and methodological approaches to organizational analysis.

#### MGT612 Organization Theory & Design

This course is designed to provide an intermediate level of knowledge in organization theory and design. It begins with an introduction and basic concepts of organization design, and covers the effects of the external factors such as the environment, the inter-organizational relationships, and technology on organizational structure. It also addresses such internal factors as the organizational life-cycle, organizational culture, and the challenge of innovation that influence organization design. Finally, current process issues such as globalization, knowledge management, and organizational learning are discussed.

#### MGT613 Strategic Management

This seminar explores the foundation questions of the strategy field. The purpose of this seminar is to expose students to samples of the contemporary strategy research and to point out some access points to the broader universe of thought on these topics. In discussing various readings, attention will also be given to identifying strategic issues that involve, in some way, the questions addressed in the readings. By the end of the semester, students will be prepared to approach the strategy field in a sophisticated, analytical, and theoretically well-grounded way.

#### MGT614 High Tech Management

This course deals with major issues related to management of high technology firms. The main focus will be on making marketing related decisions for high-tech firms. We will discuss issues on opportunity identification, marketing research and demand forecasting, creating and managing products, pricing, communications, and channel strategies, and market evolution related to high-tech firms. We will also spend some time defining high-tech marketing and identifying strategic issues unique for the high technology based firms.

#### MGT615 Management Decision Laboratory

Management Decision Laboratory is designed to offer students the experience of running a business enterprise. The course makes use of a sophisticated computer simulation called Intopia 2000. The simulation compiles the quarterly decisions of student teams and calculates 'firm' performance. Intopia is a living case study in strategic management. The simulation offers more dynamism and realism than a written case or just about any other classroom experience. The outcomes are not known in advance, conditions change from period to period based on the actions of student teams, and 'firm' performance depends on the quality of team decisions. Teams manage and operate every aspect of a 'firm' from long-term strategic policies to operational level decisions. The setting is high technology. The problems that a team faces are those typically dealt with by top managers. What lines of business are we in? What modes of entry will we use to enter foreign markets? What will our pricing policies be? How will we react to technological advances? Intopia is a capstone experience which will draw upon the collective experiences and talents of your team. The intensity of the experience and the sheer number of skills necessary will demand that each team member contributes and cooperates.

#### MGT617 Management Consulting

This course is designed as a capstone program for MBA students to integrate their knowledge



and experience in various management areas. Students, as a team, must contact the firm they are interested in and execute consulting projects to advise solutions for its management problems. The performance of their consulting outcomes will be evaluated by the managers of their client firms.

#### MGT620 Marketing Theory

This course introduces main research areas in Marketing. The students will deal with basic research issues and representative academic studies on the issues for each of the areas. They will also discuss fundamental theories studied in Marketing as well as their applications.

#### MGT621 Quantitative Models for Marketing Decisions

This course introduces how marketing models are developed and applied for improving various marketing decisions. Current, available models are analyzed to show how OR and statistical methods are applied for advertising, pricing, sales force, promotion, new product, and distribution decisions. Also, opportunities to develop and use models will be offered by analysing case studies and completing of term projects.

#### MGT622 Marketing Strategy

The objective of this course is to develop strategic marketing decision making skills for students who have learned principles and main functional fields of marketing. To the end, realistic cases and recent research papers will be analyzed and discussed. Completion of a team project is required for each student to learn the planning and execution of marketing strategies.

#### MGT623 Marketing Promotion Management

Among various marketing activities, Marketing Communications (or Promotions) directly connect consumers and firms. Among promotion activities of a company, budgets for advertising and sales promotions amount to 60–70% of the total promotion budgets. This course will deal with concepts, roles, and effects of advertising and sales promotions. Also, it will deal with major theories explaining how consumers respond to the advertising and sales promotions.

#### MGT624 Consumer Behavior

This course deals with issues related to purchasing and consumption by the consumer. We are mainly interested in understanding and predicting consumer behavior based on theories of consumer psychology. Emphasis will be given more to cognitive theory and social cognitive psychology. We will also spend some time on consumer attitude theory that is valuable for predicting consumer behavior. For every issue, we will also spend some time discussing consumer behavior in the internet environment.

#### MGT625 International Marketing

This course deals with analyzing the marketing environment and opportunities from the global perspective. It covers concepts and tools for developing and implementing global marketing strategies. More focus will be given to identifying marketing opportunities, getting over barriers, and strategies of expanding abroad for managers of small businesses.

#### MGT626 Marketing Channels Management

Distribution is to deliver products and services to end-users. In this course students learn what functions are needed for effective and efficient distribution, who channel

participants are to undertake the functions, and how the participants are organized and governed. This course also offers opportunities to acquire the knowledge and skills to manage a firm's distribution channels so as to reach its marketing objectives. Any student with a background of organizational behavior and industry organization will particularly benefit from this course.

#### MGT632 Strategic Management of Service Operations

Service operations make up a critical competitive field both in the manufacturing and service industry. This course deals with the strategic issues in design, operations, improvement and innovation of the service delivery process, where customer satisfaction, and hence the competitive performance of a service operation, is determined.

#### MGT633 Venture Capital

The paradigm shift of Korea from the conglomerate to small & medium firms, particularly the start-ups, has been an important issue in recent years. This deals with the venture capital industry and how corporate finance concepts are applied to venture capital. Also, invited venture capitalists and entrepreneurs discuss on their experiences and issues facing their particular industries.

#### MGT635 Economic Assessment of Technology

Economic analysis and evaluation in technological issues including environmental ones are the main concerns of this course. Issues covered include cost-benefit analyses in science and technology, venture investment, environmental issues with water resources & pollution, and economic development.

#### MGT637 Energy and Environmental Policy

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. Closely related topics of the national energy system and energy policy will also be covered.

#### MGT639 Theories and Strategies for Technological Innovation

As a research-oriented survey of theories and empirical studies on R&D, the main goal of this course is to understand and evaluate existing theories and economic models explaining important aspects of R&D and technological innovation and thereby to develop future research opportunities. This course may be helpful for students in the area of marketing (e.g., marketing of high tech products) and business strategy (e.g., core technological competence).

#### MGT640 Enterprise Integrated Information System

This course deals with advanced information theories and practices related with products and / or service creation activities. The emphasis is on knowledge management in consideration of the importance of knowledge as part of the enterprise resources. For related technologies, ERP (Enterprise Resource Planning) systems (basic concepts, configuration technologies, implementation strategies) are covered.

#### MGT641 CRM and Service Management

This course approaches CRM as a partnership between company and customer and introduces

critical concepts and methods such as customer value, customer asset value, CRM vision and strategy, CRM strategic planning methodologies through real world cases and industry expert lectures. After completing this course, you will be able to understand the critical CRM issues, conduct a CRM strategy planning project, and analyze the feasibility of CRM investment.

#### MGT642 Financial Information Systems

The main topics include basic concepts of financial management, DSS for financial planning, analysis of financial conditions related to the accounting information system, the information system for analyzing engineering economic data, the investment advisory system for securities, the information system for financial institutions, development of a financial network, systems for future transactions and financial payments, and home banking. Financial experts in the field are frequently invited to speak.

#### MGT643 Accounting Information Systems

The objective of this course is to help students develop a level of competence so that they are capable of understanding the theoretical as well as practical issues in applications of the most up-to-date information technology for accounting. The topics include the analysis and design of accounting information systems, accounting database, and IS control and audit. The accounting implications of ERP, Electronic Commerce, and advanced information technologies are studied.

#### MGT644 Intermediate Accounting

This course is designed to study the topics presented in the introductory accounting course in more detail. The topics include all the areas of accounting such as lease accounting, pension accounting, accounting for derivatives, and deferred tax, etc., other than consolidation and government accounting which are covered in the advanced accounting course.

#### MGT646 Information System Audit

This course covers major concepts and techniques of information system audit and security. The topics include the design and evaluation of internal control and security system under computerized environments, risk analysis and management of an information system, system development audit, the audit of system management functions, and security evaluation and management. The students are strongly recommended to form a study group and take the CISA (Certified Information System Auditor) examination.

#### MGT647 Management of Information Systems

The purpose of this course is two fold: first, to create the strategic IT vision based on in-depth examination of IT literature and cases, second, to develop top-notch communication skills (both written and oral) through intensive rounds of write-ups, presentations, and debates. The course will be presented from the perspective of an IS manager, focusing on the strategic and economic forces behind the organizations' investment in information technology. Through extensive real-world case studies, students will learn how to deal with the specific managerial problems encountered in a real IS environment.

#### MGT650 Data Mining

This course presents techniques for identifying valid, novel, useful and understandable patterns in data. It introduces predictive models from data: classification, regression,

and probability estimation, and it discusses the discovery of clusters and association rules.

#### MGT651 Practice in MIS

This course is a practicum to give teams of students a chance to tackle practical problems from companies. Each team of student selects a project from a list of contract projects from companies with a fund of 5 Million Won. Each team is responsible for carrying out the chosen project with the guidance of lecturers and should produce the outputs (documentations and software if necessary) at the end of the term.

#### MGT652 Consulting Methodology

The aim of the course is to provide the students with theoretical and practical knowledge in consultation work. It deals especially with basic techniques for consulting and in-depth case studies, so the students can get opportunities to consult.

#### MGT660 Advanced Financial Management

This course is designed to provide a framework for understanding the field of finance. It emphasizes logical analysis of major topics in finance. The topics will include financing and investment decisions of a corporate as well as asset pricing models.

#### MGT661 Mergers and Acquisitions

This course will cover various topics concerning mergers and acquisitions. Topics include theories and empirical evidence on M&A, valuation of a firm, takeover defense strategies, accounting issues in M&A, legal aspects of M&A, corporate governance issues in M&A, and IT problems in M&A.

#### MGT662 Numerical Methods in Finance

This course is designed to introduce numerical methods used to solve mathematical problem in finance. It covers various numerical methods to solve the valuation problem for derivative securities. It focuses on binomial methods and finite-difference methods to analyze derivative securities with complex structure.

#### MGT663 Securities Markets

This course examines the characteristics of different types of securities, how they are issued in the primary market, and how they are traded in the secondary market. In addition, this course examines regulations in securities markets. The course also studies empirical papers that examine various issues related to securities markets.

#### MGT664 Strategic Fixed-income Securities

This course provides the concepts and analytical tools for bond portfolio management. The bond valuation model, the estimation of an implied spot curve, duration, convexity, and immunization are major issues to be dealt with in this course. After students are equipped with skills such as traditional bond analytics, these concepts are extended to address how to identify and manage risk in the real world.

#### MGT665 Econometrics

The goal of this course is to introduce quantitative techniques commonly used in economic analysis and research. Class members will be introduced to widely used tools of analysis, and will be prepared to perform analytical statistical work in fields such as economic research, financial research, and marketing research.

#### MGT666 Game Theory and Applications

This course presents a formal treatment of game theory, particularly noncooperative game theory, developed during the 50s and 60s that concerns cooperative game theory. Recently, however, the emphasis has shifted toward noncooperative game theory to the point where noncooperative game theory has become a very important tool for microeconomics, industrial organizations, marketing, environmental regulations, international negotiations and others. The game theory is not a theory of fame itself, rather it is the multi-person decision theory, theory of competition, or theory of conflicts.

#### MGT668 Microeconomic Theory

This course analyzes microeconomic theories using mathematical tools and thereby discusses the behavior of economic agents and market performance. Knowledge of basic mathematical concepts and optimization theory are prerequisite.

#### MGT670 Industrial Organization

The purpose of this course is to introduce various recently developed theories of industrial organization. These theories heavily use game theory that has advanced at a remarkable pace during the last decades. Although this lies in the realm of economics, this course will benefit students from other related areas such as production, finance, marketing, organization, and R&D for their future research.

#### MGT672 Financial Risk Management

We have seen tremendous increases in uncertainty in the financial markets due to drastic changes in the financial environment. This course is designed to introduce students to basic issues of financial risk management including the definition of risk, measures of financial risk and the concept of financial risk management. It focused on various risk management techniques including value-at-risk developed to deal with the problems associated with the changes in the financial environment. It covers how to handle practical problems for financial institutions and firms arising from when they apply risk management techniques.

#### MGT673 Advanced Derivate Securities

The course covers characteristics and the valuation models for a variety of derivative securities. It will focus on the theory and computational methods to value exotic options, interest rate dependent options and corporate securities with option features.

#### MGT675 Market Microstructure

This course covers various issues related to the market microstructure, including the structure of secondary markets, quotes, order flow and etc. The course also covers how different market microstructure affects the price discovery process and the liquidity of a security. In addition, the course discusses how to incorporate the empirical findings in the market microstructure literature into trading strategies.

#### MGT678 Management Accounting

Recently the role and area of management accounting is changing rapidly. Management accountants are no more record keepers for enterprise activities. They should do the best to increase enterprise value, get competitive advantages, and implement strategies. These changing situations expand the role of management accountants so that they also deal with nonfinancial data as well.

This lecture covers the basic concepts and foundations for management accounting,

cost allocations, performance of divisions and individuals, decision-making using management accounting information, and cost and benefit analysis. The state of art of traditional cost accounting for example departmental accounting, job order accounting, process accounting, standard cost accounting will be presented as the base of management accounting. Activity-based costing, strategic cost accounting, balanced scorecard, and capital budgeting will be presented in the advanced course.

#### MGT679 Recent Developments in Financial Engineering

This course addresses the current advances in the financial industry. It consists of lectures on key principles and seminars by industrial experts. The focal part of the course includes the analysis of the major issues of the financial industry and a discussion of the measures to cope with the diagnosed problems. Active participation of students is expected.

#### MGT680 Internet Business Strategy and Case Studies

This course deals with issues such as telecommunications service development, marketing strategy, and Internet business strategy for telecommunications service providers. Specifically, telecommunications service design, M&A, lock-in strategy, e-loyalty, global business strategy, wireless Internet, mobile commerce, location commerce strategy are the major topics. Through the business case analyses and term project in addition to the lectures, students are expected to develop insight into the telecommunications industry, and experience a problem-solving approach.

#### MGT681 Design and Management of Telecommunication Networks

This course is designed for students who have some knowledge of both telecommunication technologies and operations research. The course provides an overview of telecommunication networking technologies, standards, and protocols, and reviews some basic probability and optimization tools for modeling. We then examine telecommunication networks from three different perspectives: the client, the designer, and the implementor. The focus will surround the role of the designer. This role involves determining telecommunications requirements from the client and translating these requirements for specific design and management issues of telecommunication networks. Several illustrative case issues will be dealt with aforementioned modeling tools.

#### MGT682 Applications of Data Communications Networks

This course focuses on the study of data communication systems. Topics include: network planning, network investment analysis, network structure design, telecommunication systems design, and distributed resource allocation, telecommunication policy. Requirements include project results of real-life telecommunication problems.

#### MGT683 International Telecommunications Policy

This course examines the current and upcoming issues in international telecommunications such as efficient flow of information across borders, global development of telecommunications infrastructures and harmony with participating countries' interests. The course focuses also on international order and relationships from the viewpoint of Korea.

#### MGT684 Wireless Communications

The purpose of this course is to initiate the newcomer to cellular radio and wireless personal communication, one of the fastest growing fields in the world. Technical concepts

which are at the core of design, implementation and invention of wireless communication systems are presented in an order that is conducive to understanding general concepts, as well as those specific to particular cellular and personal communication systems and standards.

This course has been mainly prepared for the student or practicing engineer who is already familiar with technical concepts such as probability, communication theory, and basic electromagnetics. However, like the wireless communications industry itself, this lecture combines material from many different technical disciplines, so it is unlikely that any student will have had introductory courses for all of the topics covered. So, during the lecture, some focuses on the basic theory and fundamental disciplines might be presented for the student who does not have enough knowledge in electrical or communication engineering.

To accommodate students with a wide range of backgrounds, important concepts throughout the lecture are covered from the principles, so that students learn the foundations of wireless communications.

#### MGT685 Broadband Communications

The main topics of this course are the ATM concept, the BISDN protocol the Reference model, ATM traffic control, ATM switching, ATM interworking and ATM prospects.

#### MGT686 Digital Signal Processing

The basics and principles of deterministic (non stochastic) digital signal processing will be discussed. Topics include Fourier analysis, Z-transforms, discrete and fast Fourier transforms, sampling and reconstruction, and filter designs.

#### MGT687 Research Methodologies in Financial Engineering

This course is designed to help students prepare a dissertation in financial engineering. It covers research methods to analyze the issues in financial engineering and various numerical methods to deal with derivative securities with complex structure and risk management issues. As a culminating experience, students are expected work on an issue of choice for their dissertations. A preliminary version of the dissertation is to be submitted, presented and evaluated as a term paper.

#### MGT700 Probability Models with Applications

This course is designed to provide graduate students in Management Science / Industrial Engineering and related areas with advanced-level probability models with various applications required for the graduate level research.

#### MGT701 Multivariate Statistical Analysis

This course covers the use of multivariate normal sampling theory, linear transformations of random variables, one-, two-, and multi-sample tests, profile analysis, partial and multiple correlation, multivariate ANOVA and least squares, discriminant analysis, principal components, factor analysis, Cluster analysis, data mining, and some special topics. Some statistical packages, SAS, SPSS, and MATLAB, are also included.

#### MGT705 Special Topics in Management Engineering I

#### MGT706 Special Topics in Management Engineering II

#### MGT707 Special Topics in Management Engineering III

#### MGT710 Organization Change & Innovation

This course is designed to provide in-depth understanding of change and the innovation process in an organization. Theoretical models, practical tools, and business cases are discussed in the class and a special research project will be assigned to students, reflecting their research interests, on a group basis.

#### MGT711 Advanced Seminar in Strategy

This seminar explores contemporary issues in strategy research. The main objective of this course is to expose students to important research streams in the strategy field. This course seeks to enable students to develop sophisticated conceptual and analytical skills that are necessary for conducting research in the future.

#### MGT720 Marketing Data Analysis

For those who are familiar with Research Methods and Marketing Research courses, this course offers an in-depth opportunity to understand and apply data analysis techniques in Marketing. After briefly reviewing issues regarding causality, validity, reliability, experimental design, measurements, and sampling, quantitative and qualitative data analysis methods will be dealt with in depth with their theoretical background.

The data analysis techniques to be dealt with include parametric and nonparametric statistical testing techniques, exploratory data analysis techniques, cross tabulation, multidimensional scaling, regression, analysis of variance, discriminant analysis, factor analysis, cluster analysis, conjoint analysis, canonical analysis, Logit, and LISREL.

#### MGT730 Operations Strategy

This course deals with the theoretical and empirical research results in the operations strategy area, such as contents and process of operations strategy, relationships among quality, lead time, operational flexibility and competitive performances. Also covered are strategic decision-making problems related to the physical, organizational, and external resources of manufacturing and service operations, performance measurement systems, supply chain strategies, and environmentally conscious design and manufacturing issues.

#### MGT731 Supply Chain Management

Nowadays, the use of Information Technology (IT) in Supply Chain Management is inevitable to maximize the efficiency of management. This course provides the techniques of Supply Chain Management and the Implementation Strategy & Methodologies of CALS.

#### MGT732 Management and Optimal Control Theory

The primary objective of this course is to teach the students the most fundamental aspects of management as a system from an analytical perspective, and enable them to figure out dynamic interactions among key factors present in the complex management system. The physical configuration and technology of the system, the organizational control mechanism governing management principles, and the interaction of the two will be covered.

#### MGT734 Special Topics in Environment Management

This is a special course reserved for any new topics in the environmental management area of temporary interest or of potential for a regular course development. This course deals with new issues around corporate environmental strategy, environmental policy, industrial ecology, environmental management systems, and green business development areas. Specific topics will be announced by the instructor before the course begins.



MGT740 Intelligent Information System

As Artificial Intelligence and Expert Systems (AI/ES) technologies progress, MIS managers need to understand not only the fundamentals of AI/ES, but also their relationships with the existing information systems technologies such as database and mathematical models. To meet this need, this course teaches the basic concepts and development tools of AI/ES and applies them to the managerial decision support. The discussion of cases and participating in a project are encouraged to learn real world experience of developing intelligent information systems.

MGT742 Application of Decision Support Systems

Decision support systems concepts, applications and methodologies for developing and evaluating them will be studied. Further issues addressed will include Executive Information Systems, Executive Support Systems, data warehousing, data mining, agent and intelligent systems.

MGT760 Capital Markets : Structure and Performance

The objective of this course is to analyze the capital markets including the stock market, the bond market, and the money market. The determining factors of the yield curve and its term structure, the fund management of the financial agents, the structure of the financial market, transaction cost, and the interrelationship among the money market, stock market, and bond market are major issues to be dealt with in this course.

MGT761 Financial Econometrics

This course covers econometric methods used in finance and recent developments in the empirical research in finance.

MGT762 Special Topics in Financial Engineering

This course is offered as needed to cover special issues in financial engineering which are not covered in other courses.

MGT763 Financial Engineering

This course is offered as needed to cover methodology and techniques to analyze important new issues that arise in the field of financial engineering.

MGT764 Advanced Theory of Insurance and Risk Management

This course is designed to help students understand the issues related to insurance and risk management of individuals, organizations, and society. The course adopts rigorous and logical approaches to analysis on issues based on economics and mathematics.

MGT775 Special Topics in Management I

MGT776 Special Topics in Management II

MGT777 Special Topics in Management III

MGT778 Special Topics in Technology Management

This is a special course reserved for new topics in the techno management area of current interest or of potential for regular course development.

MGT779 Special Topics in Management Information System

MGT780 Special Topics in Telecommunication Management

This course addresses special topics of emerging data communication and management technologies. Possible topics include mobile communication, distributed information infrastructure, emerging telecommunication management techniques, Internet & Intranet application, Enterprise Telecommunication Infrastructure Modeling, etc.

MGT800 Multiple Criteria Decision Analysis

The problems of multi-criteria decision-making (MCDM) are broadly classified into two categories: MADM and MODM. The purpose of this course is to provide theories and methods for both MADM and MODM.

MGT810 Doctoral Dissertation Seminar Management

The course provides the current research streams in major behavioral research areas such as organizational behavior, strategic management, technology and venture management. This course is basically designed for doctoral students in the area of behavioral science. Students can develop their dissertation ideas and learn new analytical tools and research methods, as well as state-of-the-art theory through various research topics in this course.

MGT820 Advanced Issues in Marketing

The course deals with recent theoretical and practical issues in Marketing for Ph.D. students.

MGT843 Distributed Information System in Internet Environment

This course is offered to graduate students who aspire to acquire discipline in building Distributed Information Systems in Internet Environments.

MGT860 Foundations of Financial Models

This course is designed to lay down mathematical and economic foundations for discrete and continuous time models in modern finance theory. It covers stochastic calculus, partial differential equations and optimization techniques and models to analyze advanced issues in the multi-period portfolio theory, the arbitrage pricing theory, term structure of interest rates and the multi-period asset pricing theory.

MGT861 Advanced Special Topics in Finance

This course deals with advanced special topics in finance. The purpose is to introduce fore-front financial theories, developments, and applications.

MGT862 Applied Econometrics

This offering is designed for students interested in applied econometrics methods in economics and business. It covers topics typically encountered in conducting empirical econometric research including nonlinear regression models, time series-cross section models, models with lagged variables, discrete choice models, and limited dependent variables models.

MGT863 Advanced Topics in Game Theory

This is a doctoral seminar course for those who are interested in game theory and application. This course deals with new research issues around equilibrium refinement, competitive analysis, bargaining, auction, mechanism design, and evolutionary game areas

in depth. Specific topics will be announced by the instructor before the course begins.

#### MGT880 Telecommunication Systems Analysis

Key performance evaluation issues for designing and operating various telecommunication systems are investigated, and the associated analytic methodologies are studied. Prerequisite analytic tools such as queueing and reliability models are also covered.

#### MGT910 Basic Fluency I

This class is designed to help students develop basic communicative skills in terms of ease, speed and smoothness of speech. The content of the class allows maximum discussion on a wide variety of basic topics. (Beginning / Low Intermediate).

#### MGT911 Basic Fluency II

This class is designed to help students further develop their communicative skills to enhance conversational ability. Course content focuses on discussion, consensus, problem-solving and current events. (Low / Mid Intermediate)

#### MGT912 Newspapers-Reading and Discussion

This class uses various newspapers to investigate current events. The class will focus on the skills of reading, narration, and discussion. Students will develop an understanding of how to obtain information efficiently and how to express that information concisely. Topics for discussion will vary, but they will be selected based on the interests of the students and the instructor. (High Intermediate / Advanced)

#### MGT913 Case Studies in Business

This class is designed for students who want to discuss issues in business while improving their communicative skills. This course focuses on case studies and background information in the areas of management, marketing, negotiations, and conflict resolution. It is ideal for the students who want to develop basic analytical skills as well as those who want to evaluate their personal management skills. (High Intermediate / Advanced)

#### MGT914 American Popular Culture English

This is a video-based course designed to teach students about American popular culture through television and movies. The primary focus of this course is on developing the listening skills of students. Various listening comprehension exercises will be done through these videos to build skills to facilitate interaction with native speakers of English. (For beginners to Mid-Intermediate level students.)

#### MGT915 Business English – Blended

This course uses video and reading materials to increase the business knowledge of students. Videos and Business communication exercises are used to teach practical business matters and develop English language skills. The video component of the course improves listening comprehension. When reading materials are used, students practice how to communicate with the customer and others in the business world. Thus, this course teaches all four language skills while exposing students to business practices. (For Intermediate-level and higher students)

#### MGT916 Real Life English

This is a debate and discussion course designed to enhance the conversational ability of students. Formal debates are held between teams of students through the use of movie

segments. The textbook, World Class English, is used to further develop conversational ability. This course prepares students to think on their feet when dealing with real-life situations in English. (For Intermediate-level and higher)

#### MGT917 Job Search English Skills

This class develops English language skills to help students obtain employment in Korea and around the world. Topics include starting the job search, cover letters, resumes, and interviews. Additionally, students will take several practice TOEIC tests since it is a requirement for many companies. (For intermediate-level and higher students)

#### MGT918 Business English Writing – Blended

This course is an introduction to English Business writing. This course assumes that students have acquired a reasonable fluency in spoken English (minimum OPI Level 3) and have a good working knowledge of English sentence structure. The main thrust of this course is on the basic elements of paragraph and essay writing. Then the focus turns to writing short business reports, proposals, and executive summaries.

#### MGT919 Academic English Writing II

This course uses the North American style of teaching to develop academic writing skills in English. It is student centered in its approach in that students will write critiques on articles they read and lead class discussions on them. Additionally, students write a 5-10 page term paper which is to be completed in 3 drafts. PLEASE NOTE: THIS IS A RIGOROUS COURSE AND STUDENTS SHOULD BE PREPARE TO DO SEVERAL HOURS OF HOMEWORK EACH WEEK. (For Mid-Intermediate-level Students and students)

#### MGT920 Listening Skills I

This course is aimed at mid-intermediate to high-intermediate students (OPI 3, 4, 5). In this course you will improve your ability to listen to material found in many settings including academic settings. You will gain a better understanding of the listening process and how to listen actively. You will also develop the necessary skills needed to take effective notes in an academic lecture.

#### MGT921 Listening Skills II

This course is aimed at high-intermediate to advanced students (OPI 5, 6, AS). In this course you will improve your ability to listen to material found in many settings including academic settings. You will gain a better understanding of the listening process and how to listen actively. You will also develop the necessary skills needed to take effective notes in an academic lecture.

#### MGT922 American Immersion I

This course is designed to help students function better if they plan to go to America to further their studies. American culture is the main focus of the course, both from a historical and contemporary perspective. This course will use the textbook, *The American Ways*, and the television series "Friends" as the basis for instruction. All four language skills will be developed: listening, speaking, reading and writing. It is designed for high-intermediate level students and above.

#### MGT923 American Immersion II

This course is designed to help students function better if they plan to go to America to further their studies. American culture is the main focus of the course, both from

a historical and contemporary perspective. This course will use the textbook, *The American Ways*, and the television series "Friends" as the basis for instruction. All four language skills will be developed: listening, speaking, reading and writing. Please be advised that American Immersion 1 is *not* a prerequisite for this course; the material covered in this course is different from American Immersion 1. Both courses are designed for high-intermediate level students and above.

#### MGT924 American Classic Films

In this course students will improve their listening and speaking skills while seeking to understand the content and cultural issues associated with three classic, Oscar winning American films. We will explore the historical and social issues that provide the setting for the films. You will be responsible for learning and understanding the content of the films in addition to the language skills practiced.

#### MGT925 English Debate and Critical Communication Skills

The purpose of this course is to introduce students to the art of proper debate. The course will focus on the purpose of debate, the rules of debate, and the development of a sound argument within a debate. Debating is an art that requires the combination of a logical and sound argument with the ability to communicate that argument in an oral format. Debating is the art of oral persuasion.

#### MGT930 Business Chinese I

This is a beginner's level course. In this course students will study pronunciation, Pinyin and basic communicative skills for daily business life. This course covers various basic topics and business situations.

#### MGT931 Business Chinese II

This course is for intermediate to advanced students. In this course students will improve their communication skills for business. The subjects covered in this course include communications in diverse business settings, Chinese words and sentences essential in business.

#### MGT960 Thesis for Graduate Students

#### MGT965 Independent Study for Graduate Students

#### MGT966 Seminar for Graduate Students

#### MGT980 Thesis for Doctoral Students

#### MGT985 Individual Study

#### MGT986 Seminar for Doctoral Students

#### MGT997 Project Study (Management Consulting Project)

This is the capstone course for the KAIST MBA program. It enables second-year MBA students to integrate what they have learned from the courses taken for the last three semesters, which include diverse management disciplines from marketing, strategy, finance, accounting, to supply chain management and IT. From this course, the students should endeavor to understand how to solve real managerial problems that involve complex

cause-and-effect relationships associated with all of the value-creating activities a firm must perform to be competitive in the global market. In this course, students work as teams of 4~5 second-year MBA candidates, preferably with diverse professional and academic backgrounds so that teammates complement each other's abilities and experience.

#### MGT998 Internship Program

This course is designed to provide students with realistic field experience in the management area. Students will participate in special projects or in daily operation tasks in the consulting, manufacturing or service industries. They are expected to apply management theories, and practice what they have learned from other courses, to have hands-on experiences, and to build a personal network with other industrial experts during the course.

#### MGT999 International Internship

This course was created to provide MBA students with an improved understanding of global issues and equip them with professional and international competence. This internship program will develop practical skills that integrate a student's academic learning into real life situations. In addition, this internship program will allow students to experience collaborative and multicultural work, as students work side by side with non-Korean employees and within different work and management contexts.

#### EMB510 Leadership & Organizational Change

This course provides the basic frameworks and theories of organizational behavior and management of organizations. The main course subjects include personality, motivation, and human relationships at the individual level, management of conflicts and teams, leadership, organizational structures and cultures for managing efficient and effective organizational change in a turbulent environment.

#### EMB511 Strategic Management

Why do some firms perform so much better than others? The answer, in great part, lies in their strategies, which are the focus of this course. This course will provide for the development of managerial skills and in developing winning strategies for the evolving and sometimes turbulent business environment a firm competes in. This course will help executive managers understand their corporate capabilities and to learn how to leverage them to create competitive advantages. Managers will learn that strategy must follow the firm's long-term goals; it encompasses choices of products and markets, how the firm will serve customers better than competitors, what vehicles will be used to grow or shift the mix of businesses, decisions about the sequencing of initiatives, and a clear, compelling economic logic. This course is designed to provide personalized learning through the individual participation of executive members and various case studies.

#### EMB513 Global Strategic Management

The main objective of this course is to understand the strategic management of multinational firms (MNCs) (i.e. firms that operate in more than two countries). Executive members will study how firms decide whether and how to develop operations in foreign countries and how firms can become successful once their operations cross national boundaries. In particular, this course focuses on both the forces of globalization and their impact upon the modern firm and its appropriate organizational and strategic response to global challenges. Most of the information in this course is presented through in-class readings, participation, discussions, and case studies.

#### EMB514 Managerial Economics

This course provides an economic foundation for competitive advantage, competition, market analysis and business model development. Topics include a concise economics review followed by horizontal and vertical boundaries of the firm, transaction costs of market exchange, industry and market analysis, diversification, strategic commitment, pricing rivalry, entry and exit, strategic positioning for and sustaining of competitive advantage. This course also discusses these topics from the digital economics point of view. This course tries to help students gain an analytic base, and generalizable and robust insights of business strategy by studying various case studies and thesis research in such areas as core competence, competitive analysis and business model development. A minimum level of mathematics, such as the first order derivatives of functions, is required.

#### EMB520 Marketing Management

This course takes an analytical approach to the study of marketing problems of firms. Attention focuses on the influence of the marketplace and the marketing environment on marketing decision making; focus is also given to the determination of the organization's products, prices, channels, and communication strategies; and the organization's system for planning and controlling its marketing effort.

#### EMB530 Operation Managements & SCM

This course deals with the strategy, design and diagnosis, development, operations and improvement of supply chains, on which business information and physical goods flow. Success of a business is determined by the competition among supply networks rather than the competition among individual firms. Competitiveness of a supply network depends on how the value creation activities of constituent firms are integrated and provide the values the market needs (price, speed, quality, variety, etc.). In order for a network to be successful, the product and process developments, information management (demand forecasting, order management, production planning), procurements, operations, logistics, and service activities of individual firms should be coordinated and/or integrated. This course prepares students to be able to approach the supply chain integration issues by providing strategic and analytic tools that can be used to evaluate the value creation and value transfer processes over a supply chain.

#### EMB531 Management of Technology & Innovation

This course covers current issues, theories and practices on technology strategy, management of technology, R&D management, new product development, and entrepreneurial management. The major issues covered include principles of technology management, analysis of core technological competences, formulating and implementing technology strategy, R&D project and professional management, new product development, and entrepreneurship. Some emerging issues will also be discussed.

#### EMB541 E-Business and E-Commerce

Electronic Commerce (EC) and E-Business were born with the propagation of the Internet. EC and E-Business have drastically changed retailing, manufacturer's direct marketing, banking and services. EC deals with the corporate relations with external customers, suppliers and other partners, while E-Business deals with the E-Transformation of internal parts of businesses including the manufacturing and procurement process. This course studies the key trends, principle technologies for EC and E-Business, and business strategies by reading texts, practicing sites, and discussing cases. Role playing is

performed under real case scenarios.

#### EMB542 IT Management

This course is designed to provide a managerial perspective on the strategic and economic impact behind an organization's investment in information technologies. Students will learn major IS management issues such as IS strategic planning, IS architecture, IS organization, end user computing, IS implementation, and the evaluation of IS impact.

#### EMB543 Social Responsibility Management

This course will focus on the frameworks and concepts of responsible and sustainable management. The approaches used are those of multi-stakeholder approaches – integrating ethics issues, transparency, governance, social responsibility, environmental responsibility and the economic responsibility of firms. This is an emerging paradigm of business management both as a comprehensive corporate risk management framework and also as a sustainable value creation framework. Substantiality reporting (SR), ranking and evaluation models and socially responsible investment (SRI) will also be discussed.

#### EMB561 Corporate Finance

In a drastically changing business environment, students will learn the knowledge and judgement necessary for adequate financial decision making. They will examine the basic issues related to capital budgeting, risk and capital, capital structure, cost of capital, dividend policy, valuation and merger & acquisitions.

#### EMB562 Accounting & Financial Statement Analysis

This course examines the usage of financial statements in evaluation of the firm and its prospects.

#### EMB571 International Field Trip I

This course offers KAIST graduate business students an engaging experience on how business operates in the United States, China, or Europe in comparison to South Korea. Emphasis is placed on the economic, regulatory and managerial issues faced by multinational organizations—including ethical issues, intra-organizational relationships. The business outlook and opportunities for the entire region as governmental and economic structures change are also focused on.

#### EMB572 International Field Trip II

This course offers the students an engaging experience on how business operates in foreign countries, in comparison to South Korea, through an intensive education at an overseas business school and visits to the foreign corporate sites. The students will have an opportunity to understand the cultural, economic and social issues of the country they visit and learn the critical success factors for Korean firms to compete in foreign markets.

#### EMB601 Decision Analysis & Statistics

Various probability models and statistical analysis are introduced to be able to reduce uncertainty. Decision models and methods for a quality decision are also introduced under uncertainty. Statistical and decision analysis are practiced for solving the related problems from industry as case studies.

#### EMB604 Managerial Quantitative Analysis

This course explores analytical theories and models to help managers make optimal decisions. Based on the "bounded rationality" as suggested by decision theorists, the course focuses



on understanding and solving diverse and complex management problems by taking into account management environment uncertainties and learning theories. Some of the key issues will include decision making under uncertainty, definition and value assessment of management information, and resource allocation through mathematical programming.

#### EMB631 Business Forecasting and Strategies

Forecasting models and methods are introduced for analyzing the effect of management strategies in the related markets. Case studies on forecasting and marketing strategies on major products over various industries are practiced, including forecasting systems related to SCM and CRM.

#### EMB632 Negotiation & Conflict Management

This course reviews the strategies and tactics of distributive and integrative bargaining approaches in the theory and practice of business and international negotiation. Students also practice, through various simulations and case studies, skills to achieve the best available objectives in various business and international negotiation settings.

#### EMB633 Enterprise Risk Management

The course provides various schemes of risk management to future entrepreneurial managers rather than academicians. The main course subjects include basic mathematical skills of finance (valuation of assets, portfolio theory, options, etc.), foreign exchange risk, operational risk, market & competition risk for increasing value of enterprises by effectively managing various risks in a corporate environment.

#### EMB641 Strategic Customer Relationship Management (CRM)

This course provides an overview of CRM from the strategic marketing perspective and explains how new information technologies can be deployed and managed to optimize interactive relationships between a firm and its customers. The main issues are economics of customer relationships, customer investment allocation, measurement of service quality, concepts of CRM, architecture and tools of CRM, customer optimization and practical applications.

#### EMB642 Knowledge Management (KM)

Based on the understanding of knowledge management concepts, concrete implementation methodologies and cases, this course provides a vision, system, process, and organizational culture for effectively establishing the corporate knowledge management strategies critical for achieving competitiveness in the 21st century knowledge-based competitive environment.

#### EMB643 6 Sigma Management

This course promotes understanding of the six-sigma technique globally regarded as the new paradigm for the enterprise-wide quality management and deals with issues on six-sigma implementation and performance evaluation.

#### EMB670 Management of Cross Culture & Diversity

This course is designed to provide participants with an intellectual and experiential forum for developing the interpersonal, inter-cultural communications and interaction skills necessary for international managers. As we move into the 21st century, where globalization is dramatically shifting and demographics are changing, it is vital that our workforce have a solid and practical understanding of the interrelationships between

the self and the world economy.

EMB671 Global Business Communication

The primary objective of this courses is to help MBA students grow as global managers through global / international experiences. This courses consists of subjects such as global leadership, international negotiation, global management principles, community services and so on that encourage students to experience and practice what they have learned in classroom lectures.

EMB690 Special Topic in EMBA I

This is a special course reserved for new topics in the MBA area of current interest or with potential for development as a regular course.

EMB691 Special Topic in EMBA II

This is a special course reserved for new topics in the MBA area of current interest or with potential for development as a regular course.

EMB964 Field Application Project

This course is designed to provide students with realistic field experience in the management area. Students will participate in special projects or in daily operating in the consulting, manufacturing or service industries. They are expected to apply management theories, and practice what they have learned from other courses, to have hands-on experiences, and to build a personal network with other industry experts during the course.

EMB965 Independent Subject Study