

# Techno-MBA Program Descriptions of Courses

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**MGT500 Probability and Statistics 3:3:3**

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 3:1:3**

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 3:1:3**

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 2:3:3**

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.

**MGT505 Management and Programming 3:1:3**

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 3:1:3**

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.

**MGT507 Energy Economics and the Environment 3:0:3**

This economics course examines energy issues that pertain to the environment. The objective is to apply economics to particular issues of energy markets, environmental impacts, investment in renewables, and other energy issues such as transportation and conservation.

**MGT508 Energy Policy and Environment 3:0:3**

Energy policy is gaining increasing recognition as a critical component of state and national public policy, especially environmental policy. This course explores the connections between energy and environment policy and politics including the connections with Climate Change.

**MGT509 Energy and Environmental Technology 3:0:3**

The purpose of this course is for students in carbon finance MBA program to understand energy and environmental technologies for climate change and explore business opportunities.

**MGT511 Strategic Management 3:1:3**

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.

**MGT514 Principles of Managerial Economics 3:0:3**

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 3:0:3**

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, complete analysis and business model development. A minimum level of mathematics, such as the first order derivatives of functions, is required.

**MGT516 International Business 3:0:3**

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 3:1:3**

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 3:0:3**

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.

**MGT519 New Governance and Public Management 3:0:3**

This course studies management theories and practices of new governance and management in the public sector. The course addresses the various issues of new public management: government reinvention, privatization, contracting, intersectoral collaboration, total quality management, public entrepreneurship, strategic planning, human resource management, organizational design, change management, and performance measurement.

**MGT520 Marketing 3:0:3**

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 3:1:3**

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.

**MGT522 High-Tech Strategy 3:0:3**

This course provides a series of frameworks for managing high-technology businesses. The emphasis throughout is on the development and application of conceptual models which clarify patterns of technological and market change and the structure and development of internal firm capabilities. This is not a course in how to manage product or process development. The main focus is on the acquisition of a set of analytical tools which are critical for the development of a technology strategy. These tools can provide the framework for insightful planning when deciding which technologies to invest in, how to structure those investments and how to anticipate and respond to the behavior of competitors, suppliers, and customers. The course should be of particular interest to those interested in managing a business for which technology is likely to play a major role, and to those interested in consulting, venture capital, analysis of high tech stocks, or fund management.

**MGT524 Design Management 3:0:3**

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

**MGT526 Brand Management 3:0:3**

This class is designed to deliver what brand equity is and how it is developed and applied in strategic marketing activities. Three substantial areas are: (1) the nature of brand equity, (2) the process by which brand marketing is undertaken, (3) the strategic management of brand equity.

**MGT527 Sustainable Society and Business Innovation 3:0:3**

This course examines the business innovations of marketing, supply chain management, innovation, and human resources management for sustainable consumption and production. Background theory and cases will be covered.

**MGT528 Carbon Markets and Corporate Strategy 3:0:3**

The objective of this course is to examine the implications of climate change and related policy and market issues upon businesses, followed by discussion on theory and cases of carbon markets, international climate change negotiations and related firms' strategy issues and new business opportunities.

**MGT529 New Business Development and Project Management 1.5:0:1.5**

This course addresses the issues faced by new business development managers and team. More specifically, the processes, strategies and organization of new business development are discussed with real cases. In addition, students learn project management principles and tools to better manage new business development projects.

**MGT531 Global Supply Chain Management 3:0:3**

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 3:0:3**

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 3:1:3**

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.

**MGT535 New Technologies and High-Tech Industries 3:1:3**

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 3:0:3**

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 Public Policy Analysis 3:0:3**

This course is designed for students to understand theories and practices of public policy and to conduct analysis in a political and administrative environment. The course addresses the issues of public economics and policy process, which include topics such as public goods, externalities, public choice, regulation, social security, decentralization, policy making and implementation procedures, and practical analysis tools.

**MGT538 China's Economic Development 3:0:3**

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.

**MGT539 Social Entrepreneurship and Nonprofit Management 3:0:3**

This course is about the opportunity and challenges of using your managerial skills and entrepreneurial talents creatively and appropriately to help solve social problems through the provision of socially important goods and services. The course studies the basic theories and methods in strategy and management of nonprofit organizations and social enterprises. The course deals with the various issues of nonprofit management: social entrepreneurship, strategic management, marketing, fund raising, strategic collaboration, service management, total quality management, human resource and volunteer management, and change management.

This course has three primary educational objectives: To examine the distinctive challenges and rewards of entrepreneurship and management in creating and developing social purpose organizations; To build the knowledge, skills, and attitudes necessary for responding creatively and successfully to the challenges; To provide an appreciation of the relative strengths and weaknesses of different organizational forms in providing social goods and services

**MGT540 Business in Society 3:03**

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 3:13**

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 System 3:13**

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 3:13**

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 3:13**

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 Strategy Use of Information Technology 3:13**

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 Blockchain and Enterprise Data Management 3:03**

Whilst data in enterprises increases enormously as the scope of business expands, it is not easy to find a novel methodology for enterprise-wide data infrastructure development. Idea of enterprise-wide

development strategy would be experimented in detail during the last half of the course.

**MGT549 Information Technology for Financial Application 3:13**

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 3:13**

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 Information Ethics and Security 3:03**

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 Digital Marketing 3:13**

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 3:13**

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.

**MGT555 Business Model & Process Innovation 3:03**

This course covers methodologies and theories for business model and process innovation that is required to strengthen organization's strategic advantages. We discuss the importance of business model innovation in today's business environment through many case discussions. Then, we cover methodologies in selecting, analyzing, and re-designing "core" business processes key to firm's strategic goals. BPM solutions and BPM consulting practices will be introduced through guest lectures, and hands-on projects for real-world problems.

Through the semester, students will sharpen their essential skill sets for effective business leaders. They include: Effective Communication(oral and written communication); Analytical Thinking from Case Studies; Creative Thinking for Innovations

**MGT559 Measuring Business Value of IT Investment 3:03**

**MGT560 Financial Accounting 3:03**

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 3:03**

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 3:03**

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 3:13**

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 3:03**

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 3:03**

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 3:03**

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 3:03**

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 3:03**

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 3:03**

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 3:13**

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 3:03**

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 3:13**

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 2:02**

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 2:02**

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 3:03**

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.

**MGT579 Humanities for Managers** **1.5:0:1.5**

In this rapidly globalizing and changing world, anybody aspiring to become a corporate manager is required to inculcate certain fundamental knowledge and gain understanding of human affairs in the educational process. This course is intended to offer such training in basic humanities, including literature, history, philosophy, arts etc.

**MGT580 Applications of Telecommunications Systems** **3:1:3**

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** **2:3:3**

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** **3:0:3**

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** **2:3:3**

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 Contents Industry Analysis** **3:0:3**

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** **3:0:3**

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 Market Analysis** **3:1:3**

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** **3:1:3**

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.

**MGT589 Business Forecasting** **1.5:1:1.5**

Forecasting models and methods are introduced to be able to analyze the effect of management strategies on the related market. Demand forecasting models and case studies for SCM are introduced and practiced with various cases.

**MGT590 Cross Cultural Management** **3:1:3**

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** **3:3:3**

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 Business** **3:3:3**

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.

**MGT593 Supply Chain Management** **3:0:3**

The primary objective of this course is to teach MBA students strategic issues in operations and supply chain management (SCM), which top managers in service as well as manufacturing industries must understand, in order to maximize value creation.

**MGT594 International Studies** **0:9:3**

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.

**MGT595 Analysis of Chinese Political Economy** **3:0:3**

This course is designed to help students understand the system of Chinese political economy and to gain insight into the Chinese economic system by studying and analyzing various components of Chinese politics, administration, economy and business environment

**MGT596 Business Practices in China** **2:0:2**

This course is designed to help students understand the unique business practices in China by providing fundamental knowledge and specific cases.

**MGT597 Laws on Investment in China** **3:0:3**

The purpose of this lecture is to help the students understand the various legal system and practice relating to investment in China, in order for them to make informed decisions in uncertain situation relating to investment in China.

**MGT598 The analysis of Chinese Industry** **3:0:3**

The objective of this course is to analyze the Chinese economic and trade structure and to map out the current conditions and possible improvement of economic cooperation between Korea and China; to improve students' work ability and to help choose the career through detailed analysis on China's main industries such as electronics, automobile, textile, etc.

**MGT599 Negotiation in China** **3:0:3**

The purpose of this lecture is to provide the students with basic knowledge necessary for negotiation with Chinese and the hands-on opportunities to exercise the measure which can be taken in various situation in the course of negotiation with Chinese.

**MGT600 Optimization Theory** **3:0:3**

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** **3:1:3**

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** **3:1:3**

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** **3:1:3**

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** **3:0:3**

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** **1:1:1**

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 Intellectual Property Management** **3:0:3**

This course is designed to provide students with key issues regarding intellectual property, whose importance today cannot be overemphasized, in terms of its strategic management for profit maximization. It will cover strategic management issues of patents, trademarks, designs, trade secrets, and copyrights through diverse classroom activities including lectures, case studies, and group discussions.

**MGT607 Basic Laws of Management** **3:0:3**

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** **3:0:3**

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.

**MGT609 Research Methods** **3:0:3**

This course provides general knowledge for writing academic thesis in the area of business. Main focus will be on quantitative research methods, though some qualitative research methods widely used in the field at the time of teaching may be covered as well.

**MGT610 Research Methods in Behavioral Science** **3:1:3**

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** **3:0:3**

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.

**MGT613 Strategic Management 3:03**

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 3:03**

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 1:6:3**

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 2:3:3**

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 3:0:3**

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 3:1:3**

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 3:0:2**

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 Promotion Management 3:0:3**

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 3:0:3**

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 3:0:3**

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 3:0:3**

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.

**MGT627 Entrepreneurship and the Entrepreneur 3:1:3**

This course deals with the essence and characteristics of entrepreneurship and the attitude, skills, and knowledge (ASK) required for entrepreneurs. In addition, the entrepreneurial management approach will be discussed compared to the traditional management approach. Students are requested to prepare the business plan to acquire practical experiences.

**MGT629 Business and Management in East Asia 3:0:3**

The course aims to upgrade students' knowledge and insight about the economy and business of the East Asian region, with special emphasis on four countries of Korea, Japan, China and Taiwan. The course focuses on the following four topics: institutional characteristics of the region's economy, ownership and governance of large corporations, strategy and management of major firms, and production and innovation networks developing in the region.

**MGT633 Venture Capital 3:1:3**

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 3:0:3**

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.

**MGT639 Theories and Strategies for Innovation 3:0:3**

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 3:1:3**

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 3:1:3**

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 3:1:3**

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 3:1:3**

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 Advanced Accounting 3:0:3**

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 3:1:3**

This course is designed to study the topics presented in the advanced 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.

**MGT647 Management of Information Systems 3:1:3**

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 3:1:3**

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 3:1:3**

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 3:1:3**

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.

**MGT653 Law and Economics 3:0:3**

This course aims to provide the students with the economic tools for analyzing the effects of various legal rules and making policy recommendation.

**MGT654 Introduction to Law 1:0:1**

Students will learn how to think like lawyers by studying basics of legal reasoning, analysis and writing.

**MGT655 Commercial Law 3:0:3**

In this era of exploding commercial transactions based on movable property type collaterals, which are already well-established in the developed countries, the learning of the governing legal require in this area is crucial for capable managers of global perspective.

**MGT656 Intellectual Property 3:0:3**

The aim of this course is to provide a grounding in the US trade secrets, copyright, patent, and trademark law.

**MGT657 International Tax 3:0:3**

The addresses in a detailed fashion the international tax consequences, from a US perspective, of transactions carried out by individuals and corporations.

**MGT658 Commercial Sales 3:0:3**

This course is designed to provide students with laws and cases of commercial transactions based upon the Uniform Commercial Code which plays a prototype role in international transactions. It will emphasize on diverse commercial transaction issues including the differences between Common Law principles and the UCC rules, remedies to breach, secured transaction, and bankruptcy.

**MGT659 Advanced Seminar in Strategy 3:0:3**



This course explores the special topics in strategy management. The main objective of this course is to expose students to the advanced contemporary strategy research. By discussing the assigned readings, students should be prepared to address the advanced issues in strategic management in a more analytical and theoretically well-grounded way.

**MGT660 Advanced Financial Management 3:0:3**

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 3:0:3**

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 3:1:3**

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 2:0:2**

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 3:0:3**

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 3:1:3**

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 3:1:3**

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.

**MGT667 Finance and Society 3:0:3**

This course studies management theories and practices of socially responsible business in the finance sector. The courses addresses the political, social, and environmental issues which the finance sector currently faces and deals with socially responsible investment (SRI), social purpose financing, and corporate social responsibility (CSR) of finance firms.

**MGT668 Microeconomic Theory 3:0:3**

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 3:0:3**

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 3:1:3**

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 3:0:3**

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 2:0:2**

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 3:0:3**

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 2:0:2**

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 Telecommunications Business Strategy 3:1:3**

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 3:1:3**

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 3:1:3**

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 3:0:3**

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 3:0:3**

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.

**MGT685 Broadband Communications 3:0:3**

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 3:1:3**

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 3:0:3**

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.

**MGT688 Special Topics in Technology Management I 1.5:0:1.5**

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

potential for regular course development.

**MGT689 Special Topics in Technology Management II 3:0:3**

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

**MGT692 Service Management 3:0:3**

The focus of this course is on the management of service operations and how to design successful service models to achieve a competitive advantage in the service sector. This course will cover theories and tools to design service process and facility location, to develop new service, to achieve better service quality, and to forecast demand for services. Their real-world applications will also be discussed using business cases.

**MGT693 Quantitative Analysis for Management 3:0:3**

This course enables MBA students to understand quantitative analysis methods for management. The quantitative techniques that are covered include optimization and decision tree analysis under uncertainty. These techniques are applied to business cases with excel.

**MGT694 Operations Management for MBA 3:0:3**

In this course, the students study the problems evolving in the management of firms' operations system. In particular, the students are expected to practice issues that MBA students must understand, including how firms determine their production and ordering decisions under customers' demand uncertainty and how firms would incorporate their forecasting results into their production planning.

**MGT696 Corporate Entrepreneurship and New Business Development 3:1:3**

Corporate entrepreneurship is the practice of employing entrepreneurial skills and approaches within an organization. The purpose of this course is to develop and enhance corporate entrepreneurship in the established companies. In addition, strategies and processes of new business development are discussed. Students will have chances to get required capabilities, techniques, and lessons needed for the recognition, evaluation, and realization of opportunities throughout the class discussion and the team project.

**MGT697 Managing Venture Growth 3:0:3**

This course deals with central issues associated with managing sustainable growth as start-ups grow over time. A specific emphasis in this course is placed upon how start-ups manage financial, human and social capital and how they identify opportunities and challenges within a given industry and formulate a successful entry strategy. In doing so, this course will help students to understand how to develop organizational practices, systems and culture, and thus ultimately achieve competitive advantage.

**MGT700 Probability Models with Applications 3:1:3**

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 3:1:3**

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 1:1:1**

**MGT706 Special Topics in Management Engineering II 2:1:2**

**MGT707 Special Topics in Management Engineering III 3:1:3**

**MGT710 Organization Change & Innovation 3:1:3**

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 3:0:3**

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.

**MGT712 Energy and Environmental Law 3:0:3**

The purpose of this course is for students in Green and Carbon Finance MBA program to provides an overview of energy and environmental law and study the intersection among energy and environmental law, trade law, and competition law.

**MGT713 Strategic Sustainability Consulting 3:0:3**

The purpose of this course is for students in Green and Carbon Finance MBA program to understand consulting methodology related to strategic sustainability in the context of climate change.

**MGT714 Climate Change R&D Strategy 3:0:3**

The purpose of this course is for students in Green and Carbon Finance MBA program to provides an overview of strategic management of technology and innovation in the context of climate change.

**MGT715 Climate Change Science 3:0:3**

The purpose of this course is for students in Green and Carbon Finance MBA program to understand backgrounds and theories on climate change science and explore business opportunities.

**MGT716 International Negotiation 3:0:3**

The purpose of this course is for students in Green and Carbon Finance MBA program to provides an overview of negotiation theories and practices of international importance - bilateral, regional and multilateral.

**MGT720 Marketing Data Analysis 3:1:3**

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.

**MGT722 Empirical Methods in Financial Accounting 3:0:3**

Empirical methods in Financial accounting Deals with statistics, math and econometrics needed in empirical studies in financial accounting. This course cover numerous academic papers in financial accounting related to empirical methods.

**MGT724 Seminar in Financial Accounting 3:0:3**

**MGT730 Operations Strategy 3:0:3**

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 3:0:3**

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 3:0:3**

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 3:1:3**

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 3:1:3**

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 3:0:3**

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 Market Theory 3:0:3**

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 4:1:4**

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

**MGT762 Special Topics in Financial Engineering 3:1:3**

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

other courses.

**MGT763 Financial Engineering** 1:1:1  
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** 3:0:3  
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** 1:0:1

**MGT776 Special Topics in Management II** 2:0:2

**MGT777 Special Topics in Management III** 3:0:3

**MGT779 Special Topics in Management Information System** 3:1:3

**MGT780 Special Topics in Telecommunication Management** 3:1:3  
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.

**MGT788 Special Topics in Technology Management I** 1.5:0:1.5  
This is a special course reserved for new topics in the techno management area of current interest or of potential for regular course development.

**MGT789 Special Topics in Technology Management II** 3:0:3  
This is a special course reserved for new topics in the techno management area of current interest or of potential for regular course development.

**MGT800 Multiple Criteria Decision Analysis** 3:1:3  
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** 3:0:3  
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** 3:0:3  
The course deals with recent theoretical and practical issues in Marketing for Ph.D. students.

**MGT843 Distributed Information System in Internet Environment** 3:1:3  
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** 3:0:3  
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** 3:0:3  
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This course deals with advanced special topics in finance. The purpose is to introduce fore-front financial theories, developments, and applications.

**MGT862 Applied Econometrics** 3:0:3  
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** 3:0:3  
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** 3:1:3  
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.

**MGT900 Korean Business and Culture** 3:2:3  
This course is offered for incoming exchange students and foreign students who need and desire a basic understanding of Korean society, the Korean business environment and Korean language. Classroom lectures will cover the areas of politics (domestic and Asia region), society, business, mass media, and the characteristics of the Korean Economy. Field trips to the industry area will be planned to help enhance understanding. With this basic understanding, students will acquire skills for doing business in Korea.

**MGT960 Thesis for Graduate Students** 0:0:0

**MGT965 Independent Study for Graduate Students** 0:0:0

**MGT966 Seminar for Graduate Students** 1:0:1

**MGT980 Thesis for Doctoral Students** 0:0:0

**MGT985 Individual Study** 0:0:0

**MGT986 Seminar for Doctoral Students** 1:0:1

**MGT997 Project Study(Management Consulting Project)** 0:9:3  
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** 0:6:1

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**

**0:6:1**

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.