

## **Subject outline**

### **□ Undergraduate program (Major)**

#### **BAT100 Calculus**

Differentiation and integration of functions with applications. Concepts of function, limits, and continuity. Differentiation rules with application to graphing, rates, approximations, and extremum problems. Infinite series. Definite and indefinite integration. Fundamental theorem of calculus. Elementary functions. Techniques of integration. Approximation of definite integrals, improper integrals, and l'Hôpital's rule. Some treatments of analytic geometry.

#### **BAT101 Mathematics for Business and Economics**

Mathematics is essential for analysis and modeling in such fields as finance, business strategy, economics, and so on. By taking this course students are able to build firm foundation in calculus, linear algebra, optimization, and differential equations.

#### **BAT103 Probability and Statistics**

This course includes the basic probability theory, random variables, expectation, estimation, hypothesis testing, correlation, descriptive statistics, sample spaces, compound events, discrete and continuous probability distributions, and simple linear regression. Computer statistical packages will be used.

#### **BAT113 Principles of Business Administration(I)**

This course introduces basic principles of management to students and shows how management techniques are used in firms. The topics of the course includes such principles and practices of management as the nature of management and firm, authority and delegation, coordination and motivation, and the structure and evolution of the firm.

#### **BAT115 Fundamentals of Economics**

This course teaches basic principles of economics. Economics is the study of how society manages its scarce resources; it is about how economic agents such as individuals, households, firms, and governments, make decisions for efficient use of scarce resources. Traditionally, economics is divided into two subfields: microeconomics and macroeconomics. This course spends about two thirds of this semester on microeconomics and the remaining goes to macroeconomics. Microeconomics deals with the decision-making of individuals and firms. All beings including human beings and legal beings like firms exist in an environment where resources are scarce. Human beings try to maximize their well being by allocating limited time and money wisely to many activities such as watching movies, shopping, studying, dating, traveling, etc, etc, etc. Firms are trying to maximize their profits or size or economic value of their stocks traded in the market by allocating a limited budget to many alternative business activities. Macroeconomics is the study of economy-wide phenomena, including inflation, unemployment, and economic growth.

#### **BAT130 Principle of Accounting**

The purpose of this course is two-fold. First, it is intended to provide the student with basic knowledge regarding the preparation of financial statements that convey information on the firms performance (Income Statement) and financial position (Balance Sheet). Second, the course also provides an introduction to the use of accounting information in making decisions. These objectives are complementary in that the intelligent use of accounting information in business decisions requires an understanding of how the financial statements are prepared. Hence, the course places considerable emphasis on tracing the effects of transactions from their initial entry into a firms accounting system through their ultimate impact on the financial statements.

#### **BAT201 Statistical Analysis**

This course is an introductory course of statistical analysis for management. We discuss the basic theory of statistical analysis to analyze real data. Topics include distribution, sampling, estimation, hypothesis testing, regression, analysis of variance, and chi-square test and some multivariate analysis tools. The course involves hands-on work with the software such as SPSS. After completing this course, students are expected to make practical use of basic data analysis techniques. [Prerequisite: Probability and Statistics]

#### BAT235 Financial Management

Finance is about money and markets. Corporations raise money from the markets(financing decisions) and invest it to create value (investment decisions). The objective of this course is to understand how these financial decisions are made by corporations. Focussing on information and telecommunications industry, the course covers financial analysis and planning, valuation of securities, capital budgeting, risk and return relationship and opportunity cost of capital, alternative corporate financing and capital structure, etc.

#### BAT236 Marketing Management

This course is designed to recapitulate the basic principles of Marketing, and apply these to real life business situations, particularly the information communication services. Students will be exposed to the basic issues of marketing ranging from macro-level market estimation to micro-level consumer behavior. The use of the case method is intended to provide students with a feeling for the kinds of problems faced by marketing managers, and to develop problem solving skills. Additionally, this course also emphasizes the development of both written and verbal communication skills in business.

#### BAT237 Introduction to MIS

This course is designed to provide a broad overview of the fundamental concepts of information systems for students. The course includes the basic concepts of computer hardware, software, database, data communication networks, Internet, various information systems and other emerging technologies. It also covers the history of computing and different scientific views towards IT to understand the interrelationships between technologies and society.

#### BAT238 Organizational Behavior

This course is to provide fundamental theories and practices of organization and its people. The main contents will be composed of two parts. One part is mainly for the issues related to human resources management including motivation(recruitment, learning, evaluation, rewards), job design, job adaptation, and group behavior. The other one covers the issues of organizational management such as structure, process(communication, decision-making), leadership, and development. The class will also analyze the application of those organizational theories in the current information society.

#### BAT311 Business Database Design and Management

This course is designed to provide an overview of business database from the perspective of the manager and system analyst. The focus of the course is on the use of relational database management systems (DBMS) to support the data management function of an organization. Topics include data modeling, database design, SQL, data management and database administration. This business-oriented course does not require advanced computer skills, including programming, but logical thinking skills are emphasized for business systems analysis. Diverse business case tutorials will be used to train students' analysis skills. After completing this course successfully, students will be able to design and manage business database.

#### BAT313 Industrial Organization

This course studies the application of microeconomic theory to market and industries. It analyzes market and industries in the paradigm of market structure-conduct-performance and further studies regulatory issues toward the efficient and optimal market performance. It introduces various concepts of market structure and conduct; (natural) monopoly, contestable market, entry barrier, economies of scale and scope, firms integration(M&A), price discrimination, restraints on transactions, and so on. Regarding regulatory issues, it will study not only the conventional regulatory policies in the natural monopoly, but also new regulatory transformation in the new economy sectors including information and communication industry.

#### BAT314 Econometrics

This course will provide students with an opportunity to learn various methods of statistical analysis. Estimation and testing hypotheses are the primary concerns of this course. Topics covered in this course are multiple regression, structural change, time series analysis, and limited dependent variable analysis. Also, various estimation models such as fixed effect regression, random effect regression, and SUR will be introduced in this course.

#### BAT315 Development Strategy for E-Business

Korea's IT industry is at the crossroad of manufacturing capabilities due to emergence of Internet paradigm. This course looks at the issues associated with Korea's IT development strategy to adopt into rapidly changing

environment E-biz paradigm. The focus of learning in this course is to provide students with an appreciation 1) of the past development of IT strategy and its characteristics, 2) of the opportunities and threat within Internet revolution, 3) of institutional, organizational capability analysis, 4) of the new IT development strategies for e-biz environment.

#### BAT316 Macroeconomics

Macroeconomics is concerned with the big economic issues that determine economic well-being of a country. This course will introduce central macroeconomic concepts and related policies. Major topics of macroeconomics are inflation, unemployment, productivity, interest rate determination, public finance, and foreign trade.

#### BAT321 International Business Management

In this course students will have an opportunity to learn various topics related with international finance, international trade and so on. Many cases will be introduced in class as well. Furthermore, positive and normative approaches of international business and economics will be taught in class.

#### BAT331 Investment Theory

The main purpose of this course is to analyze portfolio theory and the pricing model of securities in the financial markets. In addition to the valuation model

such as Capital Asset Pricing Model, Arbitrage Pricing Model, financial derivatives such as options and futures are introduced. Focussing on information and telecommunications industry, issues related to market efficiency, M&A, venture capital, and IPO are also covered in the class.

#### BAT338 Strategic Management

The main purpose of this course is to make students understand the general feature of business strategy. It is, in particular, a critical factor to the success of any organization in this fast-changing and volatile environment. The class will cover lots of strategic issues that business managers should face in reality. There will be discussions about what strategies are, how strategies can be formulated, what kind of strategies can be used for sustainable competitive advantage, and how strategies can be implemented and executed, etc.

#### BAT342 Operations Research

This course provides the Operations Research (OR) based design, analysis, modeling and algorithms for solving key problems arising in engineering and non-engineering (business) areas. The course will cover fundamental items such as Linear Programming, Network Analysis, Dynamic Programming, Game Theory, Integer Programming and Nonlinear Programming. In particular, application of OR techniques to telecommunications network design (including both wireline- and wireless systems) will be presented and illustrated.

#### BAT345 Advanced in MIS

Management information, generated from manufacturing and management data, becomes more important to make decision on management issues. This course will provide the basic theory and practice for implementing management information system. Introduction of basic system analysis theory, implementation of information system with database, application of enterprise resource planning (ERP), and the trend of information technology based management are to be introduced.

#### BAT352 Telecommunications Market and Management

The management issues related to information and telecommunications (IT) industry are discussed in this course. Some example issues are market characteristics of IT service industry, trends of global IT market environments, demand forecasting methodology, marketing strategies, diversification and vertical integration, strategic alliances, M&A strategies, interconnection, economic analysis and R&D strategies, and some emerging issues related to the e-business. For all the issues, both theoretical and practical aspects through case studies will be emphasized.

#### BAT354 Operations Management

Operations management is the first theory of modern management and try to find the optimal solution to the basic problems of the manufacturing floor. In this course, the introduction of manufacturing system, design of production capacity and inventory system, scheduling of aggregate production, and application of information technology to the manufacturing operation will be included.

#### BAT356 Information Society

This course focuses on the introduction and analysis of information and knowledge society. Internet-based socio-economic paradigm displays various issues, such as digital divide, privacy, intellectual property right and cyber ethics. The main purpose of this course resides in the enhancement of critical analysis of the social, economic and ethical issues in the internet-based socio-economic environment.

#### BAT411 Information Systems Planning & Analysis

This course is designed to provide an overview of information system developments from the perspective of the manager and system analyst. This course is composed of two subsections: 1) Fundamentals of information systems developments, and 2) Business systems analysis skills. After completing this course successfully, students will be able to conduct business system analysis. Also, students will have a good understanding of IS development processes and basic knowledge of Information systems

#### BAT415 Game Theory

"Game theory" can be defined as multiperson decision theory or as an approach to understanding interdependent choices. This course introduces the student to game theory and to game theoretic modeling. Emphasis is placed on developing a substantive understanding of the uses of game theory in business management and strategies. The goal of this course is to prepare the student to read, understand, and critique game-theoretic literature. A related goal is to provide a foundation upon which the student can undertake further study and conduct research in game theory.

#### BAT420 Human Resource Management

This course is a broad introduction to Human Resources Management (HRM) which is a major tool to implement organizational behavioral knowledge to effectively manage people at work. The major topics covered include HR planning, recruitment/selection, evaluation/compensation, and training/development. This course is designed not for students who are trying to be HRM specialists, but for students who will be working as general managers at a variety of organizations as most of students' future positions will inevitably require dealing with human resources at one point or another.

#### BAT430 Managerial Accounting

This course provides students with an understanding of how an accounting system within an organization is both a source of information for making planning decisions as well as part of the organizations control mechanism. The instructional material focuses on enabling students to become an intelligent user of the information generated from the accounting system. It also very clearly demonstrates to students that the practice of managerial accounting is an integral part of the firms organizational infrastructure.

#### BAT433 Market Research

This course covers the issues of market research on consumer behaviors which is critical to the establishment of marketing strategy. The class covers the issues of the experimental design which includes research plan, data collection and sampling method, and the application of research results to marketing problems and strategies which include product design, specialization, market segmentation, and measuring tools of advertisement effectiveness.

#### BAT437 Venture Management

This course provides the overview of new business creation. Entrepreneurial process is the one which requires lots of complex knowledge and know-how. They are especially important to the success of corporate venturing in fast-changing environments, as the uncertainty enhances the possibility of failure. Besides the comprehensive understanding of venture, the class will cover the managerial problems which an entrepreneur should cope with in the process of venture creation. For example, entrepreneurship, business opportunity, business planning including vision and strategy, organization management, capital financing, sales and marketing, intellectual property rights, and other managerial problems will be discussed.

#### BAT444 Supply Chain Management

The basic theory of supply chain management will be introduced from a knowledge management viewpoint. Main topics of the lecture will be focused on the management of supply chain which is the infrastructure of off-line manufacturing and the introduction of various cases in order to analyze the strategic cooperation of on-off line industry. Inventory control, distribution method, and Toyota production system will be covered as fundamental theories of SCM and the role of information technology in SCM will be explained.

#### BAT452 M-Commerce

The 3rd generation (3G) systems are currently being developed and are scheduled for deployment within the next few years to meet the challenge of providing "wide-band on the move." The 3G systems will have features and requirements that are quite distinct from current 2G systems, mostly designed for telephony. Furthermore, merging two systems into one, "Wireless/Mobile Internet," we will have new protocols and services such as WAP or iMode. As a more extensive sense, mobile computing is coming to our business world. The mobile computing covers topics on mobility, security, multimedia, VoIP, wireless web, etc. This leads to an explosion of new commerce applications and services generally referred to as "Mobile e-Commerce" or "M-Commerce." The course is divided into two parts; of which the first part will cover engineering/economic issues in wireless systems. More advanced issues on M-commerce will be covered at the second part mostly based on latest publication. The course is basically project-oriented (or with prototyping); Two or three students will work on a project as a team, submit a project report and make an oral presentation at the end of the course. Each team should discuss the topic with the course leader before launching the project.

#### BAT453 Internet Business Management

The trend of technology and Internet business is introduced and Internet-related new businesses utilizing current and next-generation Internet are analyzed. The characterizations of digital economy and virtual society are studied and the basic knowledge of e-commerce is introduced. Management theories and skills for B-to-C, B-to-B e-commerce are covered in this course. Specifically, replacements of legacy telecommunication services with new services such as Internet phone, Virtual Private Network are analyzed and investment opportunity analysis for new Internet business are included.

#### BAT455 Information Policy

This course focuses on the impact of informatization to socio-economic environment and organizational restructuring in business arena and the historical consideration of government informatization policies. In particular, this course introduces the change of informatization policies of advanced countries and the other contender countries in the newly emerging trends of internet paradigm, centered on electronic commerce.

#### BAT456 Technology Management

This course aims to provide students with an introduction of the key technology and innovation management challenges that students will face as an engineer working in business. As a decision maker in technology related business, it is essential to understand the notion of science and technology, patterns and sources of technological innovation, and mechanism of technological innovation. In addition, there will be an emphasis on concept learning for technological management such as Product development process, R&D project management, Intellectual property management, outsourcing management, and role of CTO.

#### BAT457 International Economics

This course will provide analytical tools to understand important international economic phenomena such as fluctuations in national income, balance of payments, exchange rate, inflation, unemployment, interest rate, etc. The limitations, relevance, and policy implications of the models are going to be then discussed.

#### BAT459 Corporate Law

This course deals with understanding of legal issues in corporate management, and compares local and international corporate laws. Firstly, fundamental concepts of law are explained as they are the basis of understanding of corporate law. Major subjects include understanding of human and material resources based on corporations, corporate financial structure and governance related legal systems and future developments. In addition, financial payments, credit tools including note and check will be discussed.

#### BAT495 Independent Study for Undergraduate Project(A)

Internship program or research practice related to thesis. Must have consent from advisor.

#### BAT496 Independent Study for Undergraduate Project(B)

Students either select research topics or take advanced courses, including graduate level courses. Must have consent from advisor.

#### BAT497 Undergraduate Project

Internship program or research practice related to thesis. Must have consent from advisor.

BAT498 Internship Research for Bachelor

On-the-job training at a private or a public organization applying business knowledges acquired during business education. Must have consent from advisor.

### □ Graduate Program (Major)

BAT500 Advanced Statistics for Management

This course covers various probability density functions and basic statistical theory, including probability theory, probability distribution, confidence interval, hypothesis testing, no-parametric test and regression analysis.

BAT502 Linear Programming

Linear programming has been extensively applied in different areas such as economics, management and various engineering issues. This course covers fundamental properties of linear programming techniques, including Simplex method, duality, ellipsoid method, etc. In particular, application of linear programming to various telecommunication network designs will be discussed.

BAT504 Microeconomics

This course is about microeconomic principles and how those principles are applied in the real world. This course aims to help students focus on the basic economic principles such as in theory of consumer choice and production, various market models as well as on the important special topics such as in game theory, decision making under uncertainty, information economics, external economics, etc. This course is one of core courses for the students in the School of Management, so students are required to take the course unless they are exempted.

BAT511 Game Theory

"Game theory" can be defined as multi-person decision theory or as an approach to understanding interdependent choices. This course introduces the student to game theory and to game theoretic modeling. Emphasis is placed on developing a substantive understanding of the uses of game theory in business management and strategies. The goal of this course is to prepare the student to read, understand, and critique game-theoretic literature. A related goal is to provide a foundation upon which the student can undertake further study and conduct research in game theory. This course overlaps in many aspects with undergraduate game theory course (BAT415), so those who took already BAT415 are advised not to take this.

BAT512 M-Commerce

The 3rd generation (3G) systems are currently being developed and are scheduled for deployment within the next few years to meet the challenge of providing "wide-band on the move." The 3G systems will have features and requirements that are quite distinct from current 2G systems, mostly designed for telephony. Furthermore, merging two systems into one, "Wireless/Mobile Internet," we will have new protocols and services such as WAP or iMode. As a more extensive sense, mobile computing is coming to our business world. The mobile computing covers topics on mobility, security, multimedia, VoIP, wireless web, etc. This leads to an explosion of new commerce applications and services generally referred to as "Mobile e-Commerce" or "M-Commerce." The course is divided into two parts; of which the first part will cover engineering/economic issues in wireless systems. More advanced issues on M-commerce will be covered at the second part mostly based on latest publication. The course is basically project-oriented (or with prototyping); Two or three students will work on a project as a team, submit a project report and make an oral presentation at the end of the course. Each team should discuss the topic with the course leader before launching the project.

BAT514 Venture Management

This course provides the overview of new business creation. Business management is a process of evolution to the coming opportunities and risks. In particular, the rationale may be more truly applied to venture management as long as an entrepreneur pursues high risk and high return with limited resources. Besides the comprehensive understanding of entrepreneurial process, the class will cover the issues of entrepreneur's role and entrepreneurial management including business opportunity, business planning, entrepreneurial financing, and other managerial issues

#### BAT522 Basic Marketing

This course will provide engineering students with a systematic framework for understanding marketing management and strategy. Through the framework, the students can learn the development, evaluation, and implementation of marketing management and strategy to survive in the complex and high competitive business environments. This class is concerned with the analysis of concepts, theories, and cases in order to make the engineering students understand marketing in the easier way. By taking this course, the engineering students will be able to apply marketing concept to their own research fields.

#### BAT525 Economics of Financial Markets in ICT

This course is designed to investigate (i) the role of money on business cycle and inflation, (ii) the structure of financial system and the foreign exchange market, and (iii) conduct of monetary policy and budget deficit. This considers in some detail the major dimensions of international commercial and investment banking, including money and foreign exchange market, debt capital markets, international bank lending, derivatives, asset-based and project financing, and equity capital markets. This next considers the various advisory businesses such as mergers and acquisitions, privatization, institutional asset management, and private banking

#### BAT526 Financial Modeling

Mathematical models applied specifically to financial problems, including those models suitable for representation and solutions on excel spread sheet. The course provides an overview of how financial models may be practically applied to financially phrased decisions.

#### BAT550 Management Science

Main purpose of this course is to provide fundamentals in management science. The course will cover introductory levels of linear programming, network theory, game theory, decision analysis, queueing theory and inventory analysis.

#### BAT551 Wireless Network Theory I

Network models with deterministic activities. Network design to minimize costs or to maximize flow capacity. Topics include maximal flow problem, minimal cost network flows, transportation, assignment, shortest path, and multicommodity transshipment problems.

#### BAT556 Management Information System

This course will cover fundamentals on design and analysis of the business information system. To analyse the relationships among the key elements of the information system, computer hardware, software, database management system, etc will be discussed. Further, latest issues and research trends will be studied from a viewpoint of strategic decision making.

#### BAT570 Introduction to Information Law

#### BAT600 Network Economics

This course aims to understand basic principles of network economics and study applications of the principles to real economies and business issues. We introduce network concept, structure, and principles including network externalities, excess inertia and excess momentum, positive feedback, path dependent process, and so on. We apply those principles to various economic, business, and policy issues; technology adoption, standardization, spatial pattern, network trade, discrepancy and instability, synchronization, self-organizing, complexity, etc. Further we search a new paradigm (e.g. Econophysics, Agent-based Model) in network economics throughout discussion on the issues like micro behavior and macro order, network structure and diffusion pattern, epidemiological process, phase transition, and so on that are conventional issues in the field of physics, neural network, and other sciences.

#### BAT602 Theory of Telecommunications Industry

This course is designed to understand basic principles of telecommunications industry and study applications of Microeconomics and Industrial Organization to telecommunications industry: market structure, demand structure, pricing, interconnection, competition, and regulation, etc. This course also studies current market structure and policy issues network neutrality, asymmetric regulation, facility-based and service-based competition, MVNO, bundling service, market foreclosure, convergence services, etc., and further discusses the perspectives of telecommunications industry.

#### BAT604 Strategic Human Resources Management

This course deals with human resources management related topics based on perspectives of business strategies. Major topics include HR planning, recruiting/selection, performance evaluation/compensation, training/development with application of organizational missions and corporate/business strategies.

#### BAT605 Research Methodology I

This course provides basic knowledge of academic research for graduate students. This course covers diverse topics associated with academic research, including conceptualizing a research design, literature review, identifying variables, constructing hypotheses, data collection, instrument development, sampling, empirical analysis, etc. At the end of this semester, each student will complete a piece of his/her own international-conference-level paper in his/her field

#### BAT614 Innovation and R&D Policy in Information Technology

This course aims at understanding processes of innovation and R&D technology in the IT industry and studying R&D policies in IT. Main topics of this lecture include the origin and patterns of innovation and R&D policies in the IT industry including firm size and innovation, Sectoral systems of Innovation, National Systems of Innovation, Complex Product Systems, technology policy design, measurement of innovation.

#### BAT617 Theory of Information Policy

This course provides the overview of the governments policies aimed at changing the nation and society by means of informatization. This course is designed to help students understand how the relation between globalization and informatization transform the world and its economic structure. This lecture also aims to help students equip the knowledge and perspective required to be a CEO in the near future. Related studies are political economics, theory of policy, theory of information society, and theory of information industry.

#### BAT650 Information and Telecommunication Management

The management issues related to IT industry are discussed in this course. Some example issues are market characteristics of IT service industry, trends of global market environments, demand forecasting methodology, marketing strategies, diversification and vertical integration, strategic alliances, M&A strategies, interconnection, economic analysis and R&D strategies, and some emerging issues related to the e-business. For all the issues, both theoretical and practical aspects through case studies will be emphasized.

#### BAT651 Business Marketing Management

This course is designed to recapitulate the basic principles of Marketing, and apply these to real life business situations, particularly the information communication services. Students will be exposed to the basic issues of marketing ranging from macro-level market estimation to micro-level consumer behavior. The use of the case method is intended to provide students with a feeling for the kinds of problems faced by marketing managers, and to develop problem solving skills. Additionally, this course also emphasizes the development of both written and verbal communication skills in business.

#### BAT661 IT Strategic Management

This is a seminar-course covering latest issues related to IT industry. In particular, strategy analysis, market structure, environment analysis, and strategic M&A will be discussed.

#### BAT663 Internet Business Management

The trend of technology and Internet business is introduced and Internet-related new businesses utilizing current and next-generation Internet are analyzed. The characterizations of digital economy and virtual society are studied and the basic knowledge of e-commerce is introduced. Management theories and skills for B-to-C, B-to-B e-commerce are covered in this course. Specifically, replacements of legacy telecommunication services with new services such as Internet phone, Virtual Private Network are analyzed and investment opportunity analysis for new Internet business are included.

#### BAT664 Information & Telecommunication Accounting System

Understanding the numbers-it's the essence of business. The purpose of this course is three-fold. First, it is intended to provide the student with basic knowledge regarding the preparation of financial statements that convey information on the firm's performance (Income Statement) and financial position (Balance Sheet). Second, the course provides an introduction to the use of accounting information in making decisions: expand, merge, close, launch,

subcontract, downsize, invest, reposition, lease, replace. Third, it also designed to introduce some emerging accounting issues in IT industry.

#### BAT665 Strategic Performance Management

This course offers analysis for corporate performance management suggested as an effective tool for implementing enterprise strategies. Course involves two aspects of study on (1) current field practices of corporate performance management, and (2) effective factors for successful and sustainable implementations of performance management. Study involves case studies for initial implementation of performance management using a BSC tool and research paper analyses to identify critical and effective factors for successful and sustainable performance management systems or practices.

#### BAT670 Valuation of IT Firms

Due to its rapid and world-wide impact on business and communications, the IT industry (including Internet) is seen by many as a revolution. It has been argued that the traditional financial information of firm in IT industry is of limited value to investors. This course is intended to provide the student with some answers to following important questions:

1. What is the value-relevance, if any, of reported financial information of fast-changing, high-tech based IT firms?
2. What is the value-relevance of nonfinancial information over that of financial information?

#### BAT671 Supply Chain Management

The basic theory of supply chain management(SCM), enterprise resource planning(ERP), and customer relationship management(CRM) will be introduced from a knowledge management viewpoint. Main topics of the lecture will be focused on the management of supply chain which is the infrastructure of off-line manufacturing and the introduction of various cases in order to analyze the strategic cooperation of on-off line technology.

#### BAT673 Investment

The main purpose of this course is to analyze portfolio theory and the pricing model of securities in the financial markets. In addition to the valuation model such as Capital Asset Pricing Model, Arbitrage Pricing model, financial derivatives such as options and futures are introduced. Focussing on information and telecommunications industry, issues related to market efficiency, M&A, venture capital, and IPO are also covered in the class.

#### BAT676 Corporate Finance

This course covers fundamental concepts on financial management, and discusses the problems related to supply and operation of funds/capitals. In particular, the course will deal with financial structure, apportionment, M&A and investment strategy. Further, some practical financial/investment problems that occurred to IT firms will be analysed.

#### BAT701 Advanced Econometric Analysis

This lecture deals with variable coefficient models, non-linear models, distributed-lag models, and nonparametric models in addition to the classical econometric models on the basis of understanding of probability theory and linear algebra. This lecture also introduces simultaneous equations model, time-series analysis, and causality analysis, etc., and focuses on the recent econometric theories of unit root test and cointegration.

#### BAT704 Information Policy Seminar

#### BAT803 Seminar in Organization and Management Theories

This course analyzes the structural and behavioral aspects of organizations. Macro issues covers organizational life cycle, organizational communication, organizational culture, and planned change, while micro issues include group dynamics, management ethics, power, motivation, and decision making. Emphasis will be placed on understanding the methodological strengths and weaknesses of the perspectives presented.

#### BAT810 Advanced Technology and Innovation Theory

#### BAT895 Research Methodology II

BAT911 Internship Research for Master

Master research to be familiar with real world problems. Consent of advisor.

BAT912 Internship Research for Ph.D.

Doctoral research to be familiar with real world problems. Consent of advisor.

BAT931 Supervised Research for Masters

Master thesis research. Consent of advisor.

BAT932 Supervised Research for Ph.D.

Ph.D. Dissertation research. Consent of advisor.