

2.1. School of Transport, Transportation, Logistics and Air & Space Law

■ General Information

By integrating two programs, the School of Air transport, Transportation, Logistics, and Air & Space Law will be launched to meet the rapid development in the aviation industry and to broaden the perspective of students who will be entering Korea Aerospace University beginning in 2009. Air Transport, Transportation and Logistics is both a theoretically and practically well organized aviation department which has an advanced curriculum to train students to become experts in the designing, managing and operating of air traffic systems, transportation and logistics. In addition, the key courses in air and space law are designed to provide students with a general knowledge of law and policies which are necessary for the 21st century in the aerospace field. This integrated department is divided into 4 different majors, Air Transport, Transportation, Logistics and Air & Space law. After completing the core courses, students have the opportunity to select their favored majors among them to become a specialist in that field. The main purpose of this department is to cultivate individuals to have specific talents within the aviation industry. As well, the program aims to provide graduates with the necessary skills to communicate effectively in English so that they are able to advance on to the global stage.

■ Objectives

Air Transport Major

The Air Transport Major, a special program in Korea's institutions of higher education, offers instruction for those who want to be specialists in the fields of planning, management and operation of air transport systems. The university's Air Traffic Control Education and Training Center, which is also unique among Korea's universities, provides special certificate courses for air traffic control consistent with the standards of the International Civil Aviation Organization (ICAO). The curriculum covers courses related to acquiring certification to work as an air traffic controller or a flight scheduler, as well as courses related to the management of airports, airlines, and related businesses. Graduates are well prepared to find work as air traffic controllers and airline dispatchers for the Ministry of Construction and Transportation, or to discover careers in aviation related businesses like airport management agencies.

Logistics Management Major

The Logistics Management Major offers courses on transportation and logistics systems along with their planning, design, management, and operation. The school is proud of its excellent faculty, composed of distinguished professors with specialties in logistics,

transportation, business administration, economics, and industrial engineering. The rich research interests of the faculty offer an integrated and systematic education in the field. Many of the students go on to acquire certification to become transportation engineers and logistics managers while at the university. Graduates work in sectors such as research institutions, consulting businesses, governmental agencies, logistics businesses, transportation businesses, or in other capacities such as logistics planners and managers of various other organizations.

Transportation System Major

The Transportation Systems Major is an exciting and rapidly developing field. The Transportation Systems program has been developed as an educational program responding to the continuing changes in society, technology and the environment. The program's course work has been designed to prepare students for professional and research careers. Emphasis is on the acquisition of advanced knowledge concerning planning, design, operations, maintenance, rehabilitation, performance, and the evaluation of transportation systems, including their technical, economic and public policy aspects. The specific objective of this educational and research program is to develop professionals who are capable of analyzing the complex problems in transportation and developing comprehensive and meaningful solutions to these problems

Air & Space Law Major

The Air & Space Law Major aims to train students to as specialized and competent aerospace law experts by providing a comprehensive theoretical and practical background of the legal ramifications visible in the 21st century with respect to the aerospace field. Courses in the department are divided into two categories: general law courses and specific aerospace law courses. In the general law courses, students study basic laws such as civil law, criminal law, commercial law, and international law, all of which are necessary to prepare students for related qualification exams. In the aerospace law courses, students can develop expertise in the field by studying specialized laws such as aerospace law, aeronautical law, aerospace policies and so on. Students who major in aerospace law, the only department of its kind in the Asia-Pacific area, can acquire further specialized knowledge at McGill University in Canada and the University of Leiden in Holland, through an exchange program. After graduation, students can pursue careers in aviation related government organizations, airlines, international aviation organizations, aerospace law research centers or in various companies in the field.

■ Courses Offered

Required Courses

AT3101 Principles of Economics 3(3) 1-1

TL4101 Introduction to Air Transportation Industry 2(2) 1-1
AT3122 Principles of Management 3(3) 1-1
AT3102 Transport Economic 3(3) 1-2
AT3104 Introduction to Transportation Engineering and Science 3(3) 1-2
AL International Law 3(3) 1-2
AT3250 Introduction to Statistics 3(3) 2-1
AT3205 Introduction to Air Traffic Management 3(3) 2-1
AT4214 Logistics Management 3(3) 2-1
AT3202 O · R I 3(3) 2-1
AL4107 Principles of Law 3(3) 1-1
TL4104 Current Criminal Law 3(3) 1-2
AL Principles of Aerospace Law (3)3 2-1

Elective Courses

AT4350 Macro Economic 3(3) 1-2
AT4102 Principles of Administration 3(3) 1-2
AT4104 Computer Programming I 3(3) 1-2
AT4150 Principles of Administrative Law 3(3) 1-2

<Air Transport major>

AT4254 Air Navigation Facility 2(2) 2-1
AT4231 International Aviation Law 3(3) 2-1
AT4205 Aviation English I 3(2) 2-1
AT4255 Municipal Aviation Law 3(3) 2-2
AT4212 Aviation Meteorology 3(3) 2-2
AT4208 Aviation English II 3(2) 2-2
AT4232 Air Traffic Management I 3(3) 2-2
AT4218 O · R II 3(3) 2-2
AT4251 Applied Statistical Analysis 3(3) 2-2
AT4301 Weather Forecast & Weather Chart Analysis 3(3) 3-1
AT4303 Air Traffic Management II 3(3) 3-1
AT4307 Aeronautical Telecommunications 3(3) 3-1
AT4341 Aerodynamics 3(3) 3-1
AT4204 Air Navigation 3(3) 3-1
AT4321 Air Traffic Control Exercise I 4(3) 3-1
AT4302 Airport Operations 3(3) 3-2
AT4377 Human Factors in Aviation 3(3) 3-2
AT4308 Flight Operation Planning and Control 3(3) 3-2
AT4357 Air Space Planning 3(3) 3-2
AT4305 Aeronautical Information Service 3(3) 3-2
AT4320 Air Traffic Control Exercise II 4(3) 3-2
AT4404 Airspace Planning and Design 4(3) 4-1
AT4407 Air Transport Management 3(3) 4-1

AT4409 Airport Business Administration 3(3) 4-1
AT4403 Flight Operation Planning & Control Exercise 4-1
AT4482 Air Transportation System Analysis 3(3) 4-1
AT4406 Airline Management 3(3) 4-2
AT4481 Aviation Policy 3(3) 4-2
AT4483 Aviation Safety and Security 3(3) 4-2
AT4471 Internship for Airline Dispatcher 2(2) 4-2
AT4477 ATS safety audit 3(3) 4-2
AT4469 Air Transportation Simulation 3(3) 4-2

<Logistics Management major>

AT4225 Computer Programming II 3(3) 2-1
AT4250 Financial and Management Accounting 3(3) 2-1
AT4251 Applied Statistical Analysis 3(3) 2-2
AT4218 O · R II 3(3) 2-2
AT4252 Marketing and Logistics 3(3) 2-2
AT4253 Financial and Financial Service 3(3) 2-2
LM4201 Air Logistics 3(3) 2-2
AT4311 Law of Business Logistics 2(2) 3-1
AT4315 Facility Planning and Warehousing 3(3)3-1
AT4319 Theory of Freight Transportation 3(3) 3-1
LM4303 Logistics Information System 3(3) 3-1
LM4304 OR Application 3(3) 3-1
LM Green Logistics (3) 3-1
AT4352 Analysis of Logistics System 3(3) 3-2
LM4305 International Logistics 3(3) 3-2
AT4318 Theory of Tariff & Trade Affaire 3(3) 3-2
AT4351 Procurement and purchasing Management 3(3) 3-2
LM4306 Logistics Accounting and Information Systems 3(3) 3-2
LM4302 Transportation Planning and Information Systems 3(3) 3-2
AT4412 Theory of Maritime Transport 3(3) 4-1
AT4465 Production and Service Management 3(3) 4-1
LM4401 Organizational Behavior and Personnel Management 3(3) 4-1
AT4466 SCM Strategy and case study 3(3) 4-1
AT4410 Theory of Air Cargo Industry 3(3) 4-1
AT4455 Ubiquitous SCM 3(3) 4-1
LM4301 Internship for Logistics I (3) 4-1
LM Technology for Ubiquitous Computing and Telecom Service 3(3) 4-1
AT4413 Theory of Intermodal Transportation 3(3) 4-2
AT4467 Internship for Logistics II (3) 4-2
AT4418 Management of Service Industry 3(3) 4-2
LM4402 E-Logistics 3(3) 4-2

<Transportation System major>

AT4225 Computer Programming II 3(3) 2-1
TS4201 Introduction to Advanced Transportation Systems 3(3) 2-1
AT4251 Applied Statistical Analysis 3(3) 2-2
AT4218 O · R II 3(3) 2-2
AT4355 Airport Planning 3(3) 3-1
AT4202 Transportation Planning & Design 3(3) 3-1
TS4301 Transportation Information and Telematics 3(3) 3-1
LM4304 OR Application 3(3) 3-1
TS Airport Planning and Engineering 3(3) 3-1
TS Traffic Engineering 3(3) 3-1
LM4303 Logistics Information System 3(3) 3-1
AT4334 Transportation Facility Capacity Analysis 3(3) 3-2
AT4354 Transportation Planning Practice 3(3) 3-2
TS Transportation Demand Forecasting 3(3) 3-2
TS Traffic System Operation and Management 3(3) 3-2
TS Ubiquitous City (u-City) 3(3) 3-2
LM4402 E-Logistics 3(3) 3-2
AT4461 Intelligent Transportation System Planning Practice 3(3) 4-1
AT4482 Air Transportation System Analysis 3(3) 4-1
AT4462 Internship for Transportation Planning 3(3) 4-1
TS Road and Airport Design using CAD 3(3) 4-1
TS Technology for Ubiquitous Computing and Telecom Service 3(3) 4-1
AT4455 Ubiquitous SCM 3(3) 4-1
TS Green Logistics (3) 4-1
AT4469 Air Transportation Simulation 3(3) 4-2
TS4401 Logistics System Analysis and Information Systems 3(3) 4-2
AT4463 Internship for Transportation Design 3(3) 4-2
AT4314 Highway Engineering 3(3) 4-2

<Air & Space Law major>

AL3101 Constitutional Law 3(3) 2-1
AL3104 General Principles of Civil Law I 3(3) 2-1
AL3201 International Politics Law 3(3) 2-1
AL3202 Commercial Law 3(3) 2-1
AL4211 Criminology 3(3) 2-1
AL4206 Municipal Aviation Law 3(3) 2-2
AL3205 Law of Property 3(3) 2-2
AL General Principles of Criminal Law 3(3) 2-2
AL Law Logic 3(3) 2-2
AL3350 Air and space policy 3(3) 2-2
AL Administrative Law 3(3) 2-2
AL3317 Corporation Law 3(3) 2-2

AL International Law Case 3(3) 2-2
 AL3203 General Principles of Contracts and Torts Law 3(3) 3-1
 AL3211 Civil Procedure Law 3(3) 3-1
 AL4309 Legal Philosophy 3(3) 3-1
 AL3207 Special Principles of Criminal Law 3(3) 3-1
 AL3204 International Aviation Law 3(3) 3-1
 AL4307 Commercial Papers Law 3(3) 3-1
 AL4325 Air Transportation 3(3) 3-1
 AL Air Transportation Regulations 3(3) 3-2
 AL3301 International Aviation Transaction 3(3) 3-2
 AL3305 Criminal Procedure Law 3(3) 3-2
 AL4420 Logistics & Distribution Law 3(3) 3-2
 AL3316 Special Principles of Contracts and Torts Law 3(3) 3-2
 AL4212 Public Administration 3(3) 3-2
 AL4318 Air Traffic Management 3(3) 3-2
 AL4208 Labor Law 3(3) 3-2
 AL4315 Anglo-American Law 3(3) 3-2
 AL4407 Insurance and Maritime Law 3(3) 4-1
 AL4207 Intellectual Property 3(3) 4-1
 AL3312 Family Law 3(3) 4-1
 AL Aviation Safety and Security Law 3(3) 4-1
 AL4418 Aviation Case 3(3) 4-1
 AL4415 International Business Transaction Law 3(3) 4-1
 AL4301 International Institutions 3(3) 4-2
 AL Space Law 3(3) 4-2
 AL4403 Taxation 3(3) 4-2
 AL4416 Environmental Law 3(3) 4-2
 AL4314 Antitrust Law 3(3) 4-2
 AL4421 Aviation Penal Law 3(3) 4-2
 AL4419 Aviation Tort Law/Product Liability Law 3(3) 4-2

AABI– Aviation Studies (Air Traffic Management)

The Air Traffic Management Program is composed of courses for air traffic controller

training as well as aerospace planning and management subjects, considering safety and efficiency. The curriculum provides the knowledge and foundation designated by ICAO and the Korean government for qualified air traffic controllers. The program is currently under consideration for innovation to address the next generation ATM environment.

Curriculum Plan

* All courses are required for students who take the AABI-Aviation Studies (Air Traffic Management) Program

Year	Semester	Course	Title	Credits
Freshmen	Spring	AT3103	Introduction to Air Transportation Industry	2
		RC7103	Calculus	3
		RC7105	Physics and Experiment I	3
	Fall	GS1107	Introduction to Aeronautics	2
Sophomore	Spring	AT4205	Aviation English I	3
		AT3205	Introduction to Air Traffic Management	3
		AT4254	Air Navigation Facility	2
		FO4103 (AT4231)	International Aviation Law	3
	Fall	AT4204	Air Navigation	3
		AT4255	Municipal Aviation Law	3
		AT4232	Air Traffic Management I	3
		AT4208	Aviation English II	2
Junior	Spring	AT4212	Aviation Meteorology	3
		AT4301	Weather Forecast & Weather Chart Analysis	3
		AT4307	Aeronautical Telecommunication	3
		AT4303	Air Traffic Management II	3
	Fall	AT4321	Air Traffic Control Exercise I	3
		AT4320	Air Traffic Control Exercise II	3
		AT4377	Human Factors in Aviation	3
		AT4302	Airport Operations	3
Senior	Spring	AT4305	Aeronautical Information Service	3
			Air Transportation System Analysis	3
	Fall		Aviation Environment	3
		AT4483	Aviation Safety and Security	3
			Air Transportation Simulation	
		AT4481	Aviation Policy	3

AABI– Aviation Studies (Air Transportation Systems)

This program provides courses to understand air transportation infrastructure as well as the operation and management of air transportation systems. The basic theories for quantitative analysis, modeling and simulation are taught and the students are required to apply those techniques to solve given problems regarding air transportation systems operation and management.

Curriculum Plan

* All courses are required for students who take the AABI-Aviation Studies (Air Transportation Systems) Program

Year	Semester	Course	Title	Credits
Freshmen	Spring	AT3103	Introduction to Air Transportation Industry	2
		BD3102(AT3122)	Principle of Management	3
		BD3103(AT3101)	Principle of Economics	3
		RC7103	Calculus	3
		RC7105	Physics and Experiment I	3
	Fall	GS1107	Introduction to Aeronautics	2
		AT4106	Transport Economics	3
		RC7102	Linear Algebra	3
		AT3201	Introduction to Transportation Engineering and Science	3
Sophomore	Spring	AT3203	Introduction to statistics	3
		AT3205	Introduction to Air Traffic Management	3
		AT4254	Air Navigation Facility	2
		FO4103 (AT4231)	International Aviation Law	3
	Fall	AT4212	Logistics Management	3
		AT4255	Municipal Aviation Law	3
		AT4232	Air Traffic Management I	3
Junior	Spring	AT4301	Weather Forecast & Weather chart Analysis	3
		AT4204	Air Navigation	
		AT4307	Aeronautical Telecommunication	3
	Fall	AT4302	Airport Operations	3
		AT4377	Human Factors in Aviation	3
		AT4308	Flight Operation Planning & Control	3
		AT4305	Aeronautical Information Service	3
Senior	Spring		Airline Management Practice	3
			Aviation Environment	3
			Air Transportation System Analysis	3
		AT4409	Airport Business Management	3
	Fall		Air Transportation Simulation	3
		AT4471	Internship for Airline Dispatcher	3
		AT4483	Aviation Safety and Security	3

■ Course Descriptions

AT3101 Principles of Economics 3(3)

This course teaches the domestic and global economy, emphasizing the nature and interrelationships of such groups as consumers, businesses, governments, labor, and financial institutions.

AT3122 Principles of Management 3(3)

This course provides a comprehensive view of the contemporary business environment. It gives students an introduction to areas of business administration such as accounting, marketing, production and operations management, personnel administration, financial management and international business.

TL4104 Introduction to Air Transportation Industry 2(2)

This course reviews the air transportation industry. Students learn about aircraft as well as the air industry. The course deals with professional issues, legal and labor issues, safety issues and resources management for the aviation industry.

AT3102 Transport Economics 3(3)

This course teaches how to solve problems of transportation and logistics such as demand forecasting, pricing for transport services, distribution channels, and so on.

AT3104 Introduction to Transportation Engineering and Science 3(3)

This course constitutes an overview of theories in transportation engineering and science. The fundamentals of transportation planning, traffic engineering, public transportation, transportation safety, and transportation economics are included.

AL4107 Principles of Law 3(3)

This course deals with the system which is commonly applied through all areas of civil law. It covers the concept of law, the function of law, the relationship between democracy and law, and general contents of positive laws.

TL4104 Current Criminal Law 3(3)

In particular, this course endeavors to introduce concepts of law with appropriate case studies that allow students to easily become familiar with the criminal code and understand the relationship between crimes and punishments. Moreover, this course provides students with poignant discussions on jurisprudence and the rights and obligations of citizenship.

AT4350 Macro Economic 3(3)

This course teaches the basic principles about general economic variables and the movement of macroeconomic variables such as national income, interest rate, unemployment, inflation, foreign exchange rates, current account balances and so on.

AT4104/4225 Computer Programming I , II 3(3)

This course provides students with systematic software development skills in XML, C++ and Java languages, with an emphasis on programming practices for various application domains. Main topics include object oriented programming, basic data structure, and algorithms.

AT4150 Principles of Administrative Law 3(3)

This course teaches the basic theories and norms developed through administrative systems, such as basic concepts and sources of administrative law, various administrative acts, and so on.

AL Introduction to Public Administration 3(3)

The main lines of inquiry include the study of the theory, institution, and practice of government, administrative institutions and methods used to control governmental activities and others.

AT3250 Introduction to Statistics 3(3)

This course covers fundamental concepts and methods of statistics with emphasis on the transportation and logistics area. Descriptive statistics, concepts of probability theory, sampling errors, confidence intervals, hypothesis testing, and correlation and regression analysis are covered in this course.

AT3205 Introduction to Air Traffic Management 3(3)

This course teaches the basic theories of air traffic control.

AT4214 Logistics Management 3(3)

This course teaches the management mechanisms of logistics/supply chain processes, including physical supply and distribution activities such as transportation, storage facility location, and materials handling.

AT4254 Air Navigation Facility 2(2)

This course teaches the procedures of operation and utilization of air navigation facilities in order to secure the safe and efficient operation of flights.

AT4231 International Aviation Law 3(3)

This course teaches the law and international agreements related to aviation. It covers a wide variety of the rules and regulations for the people who work in aviation fields.

AT4205/4208 Aviation English I , II 3(2)

This course teaches useful expressions of English for pilots and air traffic controllers.

AT3202/4218 Operations Research I , II 3(3)

This course teaches quantitative analysis for systematic decision making. Topics include mathematics models and stochastic models.

LM4304 OR Application 3(3)

In this course students will study how operations research (OR) theory and modeling can be applied to solve real world problems. Application areas include production systems, logistics within the airline industry, transportation, telecommunication, and so on. Modeling techniques for real world problems are emphasized. Related computer software is introduced.

AT4250 Financial and Management Accounting 3(3)

This course teaches how to develop an ability to solve various problems related with accounting.

AT4202 Transportation Planning & Design 3(3)

This course is a thorough study of transportation planning processes and models. Urban and regional studies, data survey and analysis, transportation demand modeling, implementation and system evaluation are covered. An introduction to transportation system management, administration and finance is also included.

AT4204 Air Navigation 3(3)

This course teaches the methods of measurement of the speed, direction, and altitude of aircraft in flight.

AT Domestic Aviation Law 3(3)

This course teaches Korean aviation laws and regulations, and provides a comprehensive knowledge of domestic aviation law.

AT4212 Aviation Meteorology 3(3)

This course teaches various phenomena of the atmosphere where aircraft are being operated.

AT4232/4303 Air Traffic Management I , II 3(3)

This course teaches air traffic control for VFR aircraft in an aerodrome area and discusses approach control and air route control for IFR aircraft for students who want to become air traffic controllers.

AT4251 Applied Statistical Analysis 3(3)

In Applied Statistical Analysis, multivariate analysis and SAS exercises are emphasized.

AT4252 Marketing and Logistics 3(3)

This course teaches major theories and crucial skills of marketing such as marketing environment analysis, marketing research, competitive advantage strategy, STP strategy, new product strategy, distribution strategy, and integral marketing communication strategy through case studies.

AT4253 Financial and Financial Service 3(3)

This course teaches valuation, risk and return concepts, capital budgeting, capital structure and working capital decisions.

TS Public Transportation and APTS 3(3)

This course teaches both theoretical and practical understandings of planning/operating fares, bus stop intervals and routes of public transportation (buses, subway lines, etc.). This class covers an overview of mass transit systems, transit system planning and design, public transportation policy, transit network management and marketing, para-transit systems, planning and design of pedestrian facilities, and future trends in mass transit.

AT4301 Weather Forecast & Weather Chart Analysis 3(3)

This course teaches the procedures and methods of weather forecast for aeronautical operation. Topic includes the techniques to translate weather maps.

AT4305 Aeronautical Information Service 3(3)

This course teaches general concepts and decoding about aeronautical information management, including search and rescue and immigration procedures.

AT4307 Aeronautical Telecommunications 3(3)

This course teaches the networks of aeronautical communication and radio communication procedures, characteristics of radio equipment and preparation for the notice to airmen (NOTAM) and the interpretation of NOTAM.

AT4341 Aerodynamics 3(3)

This course teaches incompressible flow airfoil theories, wing theories, and the calculation of stall speed, drag and basic performance criteria.

AT4311 Law of Business Logistics 2(2)

This course teaches the structure of the legal system and basic concepts of business law, administrative law and government regulation of businesses and logistics.

AT4315 Facility Planning and Warehousing 3(3)

This course deals with planning of warehouse facilities. It aims to give students an understanding of the basic function of warehouses, requirement forecast techniques, layout plan methods and material handling equipment including AS/RS.

AT4319 Theory of Freight Transportation 3(3)

This course teaches theory and practice regarding the planning and management of freight transportation.

AT4352 Analysis of Logistics System 3(3)

This course provides instruction on how to use the various analysis tools and methods for solutions related to logistics, decision making, logistics network design, construction of total logistics system, management of logistics system, and so on.

LM4303 Logistics Information System 3(3)

This course teaches the role and importance of information technology in shaping and supporting logistics management processes in a global marketplace with emphasis on the design and operation of integrated global logistics information network and intelligent logistics decision support systems

LM Green Logistics (3)

In this course, we address various issues in Green Logistics. Topics includes technologies, strategy, KPI for achieving sustainable green logistics throughout a product lifecycles-From design, procurement, manufacturing, sales.

TS Traffic System Operation and Management 3(3)

This course reviews fundamental theory about Traffic Signal Control, Traffic Flow Management. And you will get the optimum method of Traffic System Operation and Management.

TS Airport Planning and Engineering 3(3)

This course teaches concept and skill needed to Air Demand Forecast, Airport Capacity Analysis, Configuration of Airport system, Service Level Decision of passenger terminal, Competition Analysis of Airport Investment Business. And learns about Standards of Aircraft Movement Area Design and Airspace Design, Runway Length Calculation, Pavement Design Standard.

TS Ubiquitous City (u-City) 3(3)

The purpose of this course is to strengthen the ability for planning and designing of ubiquitous city (u-city). For this, the state of the art information and communication technology of the ubiquitous sensor network is instructed. The principles and theories of urban planning and design is also covered in this course.

AT4314 Highway Engineering 3(3)

This course teaches Highway Engineering such as Technical Fundamental Theory of Highway Pavement Engineering and Maintenance & Management Techniques related to an air traffic area.

AT4202 Transportation Planning and Design 3(3)

This course teaches transportation planning processes and models. Urban and regional studies, data survey and analysis, transportation demand modeling, and implementation and system evaluation are covered. Introduction to transportation system management, administration and finance is also included.

TS Traffic Engineering 3(3)

This course is an overview of the transportation engineering and science. The fundamentals of transportation planning, traffic engineering, public transportation, transportation safety, and

transportation economics are included. And teaches about planning, design, and operation of transportation safety facilities in order to improve the service level of pedestrians and drivers. It also introduces research and analysis skills of traffic accident data for those who wish to become transportation safety experts.

AT4302 Airport Operations 3(3)

This course deals with the function of airports and operational procedures of landside and airside facilities of airports. Normal procedures and emergency procedures are handled.

AT **Aeronautical Human Factors 3(3)**

This course deals with aviation physiology which handles the impact with which flight crews are damaged physically or mentally in the flight-operating circumstances such as high altitude. It covers necessary procedures and usage of the emergency first aid kit and operating procedures.

AT4308 Flight Operation Planning and Control 3(3)

The performances of air transport planes and the management of flight planning and scheduling and some other matters related to the job of the dispatcher are taught.

AT **Airspace Planning 3(3)**

This course teaches the methods of planning to utilize aerospace in a safe and efficient manner.

AT4321/4320 Air Traffic Control Exercise I, II 4(3)

This course offers training for air traffic control in the ATC Lab, and provides valuable opportunities to get accustomed to specific job circumstances.

TS4401 Logistics System Analysis and Information Systems 3(3)

This course addresses applications of optimization theory to the logistics system analysis. Topics such as network flow models and network design models are covered during the semester.

LM4305 International Logistics 3(3)

This course includes the design and operation of international transportation and logistics systems, airport and seaport planning, and the management global logistics information systems.

AT4318 Theory of Tariff & Trade Affaire 3(3)

This course teaches the theory of customs systems, customs law and trade affairs.

AT4351 Procurement and Purchasing Management 3(3)

Strategic issues in procurement and supply management are covered. Issues include purchasing processes, procurement cycles, purchasing research, relationships with suppliers, negotiation, commodity planning, and cost, price and value analyses.

LM4306 Logistics Accounting and Information Systems 3(3)

This course covers management uses of accounting data for analysis, decision making, financial planning and the control of logistical activities.

AT4334 Transportation Facility Capacity Analysis 3(3)

This course teaches basic theories for the analysis of capacity and the service level of the transportation system.

TS Transportation Demand Forecasting 3(3)

This course teaches the application of Transportation Planning's theory and skills to real conditions by using EMME/2 Package, which is advanced software in this field.

AT4404 Airspace Planning and Design 4(3)

This course offers practice for designing ILS approach procedures, air route procedures and standard instrument take-off procedures

TS Airline Management Practice I 3(3)

This is first part of capstone course for the Air Transportation Systems program. The instructor delivers lecture on economics of airline industry, and airlines operation and management. The students also learn optimization skill at computer lab such as linear programming or simulation technique. After having learned the essential theory about airline management and optimization skill, the students practice to solve problems concerned on decision making issues of airline planning, operation and management.

AT4409 Airport Business Administration 3(3)

This course handles mainly the financial aspects of airport management. The costs and revenues of airports, the financing of airport capital development, privatization, and the pricing of airport charges are major issues in the course.

AT Flight Operation Planning and Control Exercise 4(3)

This course teaches the performances of air transport planes and the management of flight planning and scheduling and some other matters related to the job of a dispatcher.

AT4482 Air Transportation System Analysis 3(3)

This course reviews air demand models, economical air transportation system models, and air transportation network models through cases.

TS4201 Introduction to Advanced Transportation Systems 3(3)

This course teaches system structures and functional features of advanced transportation systems such as ubiquitous technology, telematics, and intelligent transportation systems. It also teaches about advanced transportation systems through on-the-job training.

LM4201 Air Logistics 3(3)

This course teaches the role of air transportation in integrated logistics and supply chain management, planning, and operation. It includes air transportation, inter-modal transportation, air cargo terminal management, air cargo information systems, and management strategies for airlines and airports.

AT4413 Theory of Intermodal Transportation 3(3)

This course teaches the role and importance of intermodal transportation systems in economic activity with an emphasis on the coordination of multiple modes of transportation and the management of integrated transportation and logistics facilities.

AT4465 Production and Service Management 3(3)

This course teaches quality management related to production logistics, supply chain management, and JIT production systems based on the production management theory.

LM4401 Organizational Behavior and Personnel Management 3(3)

This course enables students to become familiar with designing organizations to effectively manage new technologies, structures, and people in a changing global context.

AT4466 SCM Strategy and Case Study 3(3)

This course includes analyses and problem solving techniques related to supply chain management cases. Purchasing, manufacturing, logistics, and transportation as an integrated supply chain are studied.

AT4410 Theory of Air Cargo Industry 3(3)

The characteristics of the air cargo industry are analyzed. Demand and supply sides of the air cargo industry are reviewed.

TS Road and Airport Design using CAD 3(3)

This course focuses on the design of highways and airports through various design standards learned from Highway Engineering and Airport Engineering.

TS Design Practice for Intelligent Transportation System 3(3)

This course teaches concepts and applied skills of ITS, and introduces the constituent of applied systems such as advanced transportation information, advanced transportation management, and so on.

AT4462 Internship for Transportation Planning 3(3)

This course introduces how to apply transportation planning theory and the EMME/2 Package to practice. It also offers on-the-job training during the semester break.

AT Aviation Environment 3(3)

This is the course to teach aviation industry's efforts for environmental protection. Especially the international trends and global activities concerned on aviation environment are emphasized. So, UN's policies and strategies for the issue of climate change, and some ICAO documents related to environmental problems are introduced. The global emission trading scheme (ETS) is also discussed with handling airlines strategies in response to ETS.

AT4481 Aviation Policy 3(3)

The basic theories and procedures of aviation policy establishments are discussed. Aviation policies of advanced countries such as the United States, the United Kingdom, Japan, and Russia are analyzed.

AT4483 Aviation Safety and Security 3(3)

Initially, an overall review of aviation safety is conducted. The security aspects are then discussed in more detail considering the current situations of the war against terror.

AT4471 Internship for Airline Dispatcher (2)

This is an internship course for students who want to be dispatchers. It covers the practical methodologies of dispatching.

AT Airline Management Practice II 3(3)

This is a consecutive course to Airline Management Practice (I), as the second half of capstone course for the Air Transportation Systems program. Students make several groups and they conduct group project handling airlines management problems. The instructors provide comprehensive case problems which require mathematical, statistical and other data analysis techniques to get optimal solutions. The students are asked to present their results of research projects. This course can evaluate the knowledge on aviation industry, mathematics, statistics and operations research, and the skills on data analysis, communication and teamwork.

AT4477 ATS safety Audit 3(3)

This course teaches a variety of methods and procedures related to the ATS safety audit prescribed in annex II(ATS) to the Chicago Convention.

AT4412 Theory of Maritime Transport 3(3)

This course teaches comparative analyses of transport modes and the characteristics of maritime transport.

LM4301 Internship for Logistics (3)

This course is a professional and guided work experience in transportation and/or logistics in a private or public organization.

LM Technology for Ubiquitous Computing and Telecom Service 3(3)

In this course, we introduce various topics for ubiquitous computing and telecom

technologies such as hardware, software, relevant services with some cases.

AT4418 Management of Service Industry 3(3)

This course reviews administrative features, administrative strategies, operational strategies, and service administrative structures based on the business administration theory.

LM4402 E-Logistics 3(3)

This course introduces the role of the Internet and information technology in integrated logistics and supply chain management, planning and operations. It covers the requirements, capabilities, and considerations for using information and ubiquitous technologies applications in logistics including ERP, SCM, and e-fulfillment.

AT4455 Ubiquitous SCM 3(3)

This class basically deals with the issue of supply chain management with different application areas. This class also introduces various ubiquitous approaches in order to maximize the efficiency of the supply chain.

AT4469 Air Transportation Simulation 3(3)

This course teaches basic theories in air transportation simulation and simulation skills through practical training.

AT4463 Internship for Transportation Design 3(3)

On-the-job training is offered during the semester break in order to teach about concept design and practical design processes of transportation systems.

AL **Principles of Aerospace Law (3)3**

This course teaches the basic international treaties in which form the basic sources of international space law, as well as recent developments in the field of space activities.

AL3101 Constitutional Law 3(3)

This course delivers comprehensive knowledge and understanding of constitutional law as a nation's fundamental law. It deals with the general and fundamental problems of constitutional law and the fundamental rights of people.

AL3104 General Principles of Civil Law I 3(3)

This course teaches the general principles and the basic rules of civil law, including the definition, subject, object and the change of rights.

AL **International Politics 3(3)**

This course teaches political science with respect to the international relations for the purpose of understanding and having analysis capacity about various international relations between states.

AT3202 Commercial Law 3(3)

This course provides a survey of the general provisions of the commercial code, including the definition and capacity of a merchant, commercial registry, trade name, and merchants between merchants, account current merchant's agents, brokerage, commission agencies, forwarding agencies, inland carriages, and warehousing.

AL4211 Criminology 3(3)

This course is a study of the theory of crime, its causes and prevention, countermeasures and punishment, and other methods of handling offenders.

AL Domestic Aviation Law 3(3)

This course teaches Korean aviation laws and regulations, and offers a comprehensive knowledge of domestic aviation law.

AL3205 Law of Property 3(3)

This course teaches the law of real rights, ownership rights, possessory rights and other real rights in connection with land use and security devices.

AL General Principles of Criminal Law 3(3)

This course teaches the intensive study of the general theories and logic of current criminal law, including various basic principles and cases. It is designed to promote students' comprehensive understanding about the criminal law system.

AL Law Logic 3(3)

This is a scientific course, also nourishing logical abilities which makes a just legal interpretation possible.

AL3350 Air and Space Policy 3(3)

This course teaches the general and specific features of the aviation policies of the national government with respect to the domestic aviation industry and international aviation relations. Historical and theoretical approaches will be taken to foster an analysis capacity about aviation policies.

AL International Law 3(3)

This course teaches the international law theories about the various topics related to judicial issues in international law, including international economics, and dispute settlement, and so on.

AL Administrative Law 3(3)

This course teaches the basic theories and norms developed through the administrative systems, such as basic concepts and sources of administrative law, various administrative acts, and so on.

AL3317 Corporation Law 3(3)

This course offers general lectures on business corporations, stock trading, transactions in

corporate control, and so on. It aims to cultivate enough capabilities to work out real problems and difficulties in the business world.

AL3203 General Principles of Contracts and Torts Law 3(3)

This course provides a general introduction to the basic principles of the law of obligations, which comprises the law of contract, the law of tort, and the law of unjust enrichment (Civil Law, Vol. 3., ch. 1).

AL3211 Civil Procedure Law 3(3)

This course teaches a case-settlement procedure when one's civil rights are in jeopardy. It covers legal procedures for the embodiment of rights on private law.

AL4309 Legal Philosophy 3(3)

This course constitutes a study of the topics considered in an examination of law from a philosophic standpoint or by the application of philosophic methods to legal problems, such as (1) the definition of law (2) the nature of law (3) the validity of law (4) the system of law (5) the ends to be attained by law, especially justice problems concerning natural law (6) the function of law in society (7) the relation of law and morality (8) the relation of law and custom (9) the relation of law and politics (10) the relation of law and religion (11) the analysis of legal concepts and words, and (12) legal methods.

AL3207 Special Principles of Criminal Law 3(3)

This course teaches students how to analyze the elements of crimes and how to settle criminal cases reasonably on the basis of criminal law. It covers theories of liability, criminal attempt, complicity, punishment, and so on.

AL3204 International Aviation Law 3(3)

This course aims to cultivate airline industry professionals who can meet numerous demands and handle various international civil airline-involved problems. It covers rules and regulations based on the international treaties between sovereign states, aerial sovereignty, air transportation and international organizations.

AL4307 Commercial Papers Law 3(3)

This course teaches the current domestic commercial law, especially related to commercial papers.

AL4325 Air Transportation 3(3)

This course teaches the basic theories of air traffic control.

AL Air Transport Law 3(3)

This course discusses international and domestic law to be applied to compensation in case of air transport accidents resulting in the bodily injury or death of passengers and/or damage to shipments of air cargo and luggage.

AL3301 International Aviation Transaction 3(3)

This course teaches the liability regime of international air transportation, including the Warsaw system, as well as the recent development of international organizations and airlines.

AL3305 Criminal Procedure Law 3(3)

This course discusses research for the general principles and structures of criminal procedures, especially with emphasis on the parties in the procedures, investigation, trial and evidence, and an analysis of the theories about the appeal and other forms of legal redress, as well as the execution of judgment.

AL4420 Logistics & Distribution Law 3(3) 3-2

This course is intended to survey the characteristics of laws regarding logistical regulations. Theories are discussed to help students understand the legal implications of logistics, particularly with respect to cargo and the distribution of cargo.

AL3316 Special Principles of Contracts and Torts Law 3(3)

This course provides an introduction to the contract law with particular application to consumer transactions, including the formation of contracts, express and implied terms, misrepresentation, exclusion clauses, remedies for breach of contract, and the regulation of consumer transactions. It includes an introduction to the principles of the law of unjust enrichment or restitution, liability in tort for personal injuries, including negligence, and special statutory regimes such as occupiers liability, employers liability, and product liability as well as remedies for torts, including alternative compensation systems (Civil Law, Vol. 3., ch. 2 or 5).

AL____ Science of Public Administration 3(3)

This course teaches a comprehensive view of the contemporary environment of business, introduction to areas of business administration such as accounting, marketing, production and operations management, personnel administration, financial management and international business.

AL4318 Air Traffic Management 3(3)

This course teaches air traffic control for VFR aircraft in an aerodrome area and discusses approach control and air route control for IFR aircraft for students who want to become air traffic controllers.

AL4208 Labor Law 3(3)

This course deals with the characteristics of labor law and the collective labor law. The main topics are the fundamental rights of workers, trade unions, collective bargaining, industrial actions, settlement of trade disputes, and unfair labor practices.

AL4315 Anglo-American Law 3(3)

The purpose of this class is to study various theories about the purpose and function of law in the Anglo-American legal tradition.

AL4407 Insurance and Maritime Law 3(3)

This class provides a thorough discussion of insurance and marine laws. Topics are centered on important legislation and international conventions either supplementing or modifying provisions of the commercial code, such as the Law on International Carriage of Goods by Sea, the Law on Limitation Ship Owner's Liability, and so on.

AL4207 Intellectual Property 3(3)

This course focuses on current policy making concerning intellectual property. The course will provide a comprehensive introduction to the principal theories of trademark law and unfair competition, patent law, copyright law, and related state and federal doctrines.

AL3312 Family Law 3(3)

The course is designed to give students an overview of family, domestic relations law (The Civil Law, Vol. 4.) and inheritance law (The Civil Law, Vol. 5.). This course will emphasize the ways in which culture impacts law relating to the family and provide an in-depth study of the ways in which native Korean family issues have been and are today treated differently by the courts because of perceived and recognized cultural differences.

AL **Aviation Safety and Security Law 3(3)**

This course discusses aviation safety which is related to flight services, airport services and security matters, and which is also related to protection against aviation crimes.

AL4418 Aviation Case 3(3)

This course endeavors to help students understand international and domestic aviation law by analyzing case studies from the perception of both public law and private law.

AL4415 International Business Transaction Law 3(3)

This course examines the legal framework of international sales transactions including the commercial terms of the sales agreement (CISG), shipping contracts, insurance, financing arrangements, and customs documentation. This course will also examine the foreign direct investment transaction, international franchise and distribution agreements, and contracts for the transfer of technology. Finally, dispute resolution will be considered with emphasis on choice of law and forum, arbitration, and enforcement of arbitral awards and foreign judgments.

AL4301 International Institutions 3(3)

This course examines the characteristics, structure, activities and relevant legal issues of international organizations. In addition to that, international organizations such as the UN and WTO will be discussed.

AL **Space Law 3(3)**

This course teaches and analyzes the public law system which contains national rights and duties related to space activities.

AL4403 Taxation 3(3)

This course teaches the basic principles and provisions of tax laws. Students learn how to apply these principles to real issues which can be commonly found.

AL4416 Environmental Law 3(3)

This course provides a general introduction to international environmental law and policies. After reviewing the rise of the international (or domestic) environment agenda, the course concentrates on legal and policy responses to environmental challenges, including deforestation, biodiversity loss, climate change, ozone depletion, hazardous substances, and the loss of living marine resources. The course focuses principally on the dynamics of treaties, negotiations, and non-state actors as well as domestic legislation.

AL **Economic Law 3(3)**

This course constitutes a study of the basic principles of economic law and the laws of economic areas such as public enterprise, regulations on economic activities and public aid.

AL4421 Aviation Penal Law 3(3)

The lectures in this course put an emphasis on understanding crimes in the field of aviation. Students are introduced to key contents of the criminal code and their implications for justice.

AL4419 Aviation Tort Law / Product Liability Law 3(3)

This course centers on the responsibilities incurred when entering into a legal contract and the compensation which must be paid out in cases of aviation accidents. Included in classroom discussions are legal aspects of aviation related products.