

AVIATION MANAGEMENT DEPARTMENT

COURSE CONTENT

GRADE-1

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AFC102	Principles of Flight	(3,0,0)	2	3	Core Course

In this course, basic principles of flight and general aircraft systems are introduced. The aim of this course is to provide students with information about aircraft components and systems and to understand basic flight principles. After completion of the course students will learn;

- fundamentals of physics and the concepts of standard atmosphere,
- main aircraft components,
- the basic principles of flight,
- flight instruments and display systems,
- the general principles of aircraft performance.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN103	Introduction to Airline Industry	(3,0,0)	2	3	Core Course

The aim of this course is to provide the students an historical development of aviation in Turkey and in the world, with the history and developments of civil aviation to inform about the general and amateur aviation issues, the latest developments in the world and the aviation industry in Turkey that they can evaluate the comparative sectoral capabilities to evaluate and describe possibilities and capabilities in civil aviation.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN104	Ground Operation and RAMP Services	(3,0,0)	3	5	Elective Course

The aim of this course is to provide the students an understanding for the historical development of airline operations and the growth in Turkey and around the world. Students can evaluate the comparative sectoral capabilities of an airline operations and ramp facilities. They can also learn how airlines manage the ramp and handling operations professionally. After completing the course, students will have the ability to master and manage all the data of their subjects that world air traffic conditions and growth, aerodromes, air traffic ground operations, airport ramp services, aircraft marshalling and ramp hand signals, baggage handling services and systems, air craft turnaround coordination and loading supervision, airport emergency response awareness, safety and ramp.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
EAS101	Microeconomics	(3,0,0)	3	6	Core Course
Introduction. The Scope and Method of Economics. The Economic Problem: Scarcity and Choice. Demand, Supply, and Market Equilibrium. Demand and Supply Applications, Elasticity. Household Behavior and Consumer Choice. The Production Process. Costs Functions and Output Decisions. General Equilibrium. Monopoly. Oligopoly. Monopolistic Competition. Externalities, Public Goods, and Social Choice. Uncertainty and Asymmetric Information.					

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
EAS102	Macroeconomy	(3,0,0)	3	6	Core Course
Introduction to Macroeconomics. Measuring National Output and National Income. Growth, Productivity, Unemployment and Inflation. Aggregate Expenditure and Output Determination. Government and Fiscal Policy. The Money Supply. Money Market, and Monetary Policy. Money, the Interest Rate, and Output. Aggregate Demand, Aggregate Supply, and Inflation. The Labor Market, Unemployment, and Inflation. Supply Side Economics. Balance of Payments. Macroeconomic Issues and Policy. General Review.					

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
EAS103	Introduction to Business I	(3,0,0)	3	6	Core Course
The fundamentals of business and economics. Ethics and social responsibility. Competing in global economy. Information technology and E-Commerce. Forms of Business Ownership. Entrepreneurs and Small Business Owners. Functions of management. Organization and team work. Producing quality goods and services. Employee motivation, workforce trends and labor relations. Managing human resources. The art and science of marketing.					

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
EAS104	Introduction to Business II	(3,0,0)	3	6	Core Course
Introduction to Management, Managers and Organization. Historical Roots of Management Practices. Human Resources Approach and its Effects on Management. Systems Approach and its Effects on Management. Contingency Approach and its Effects on Management. Applications of Managerial Approaches. Management Environment. Globalization and its Effects. Planning. Strategic Management. Organizational Design. Leading.					

GRADE-2

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AFC201	Aviation Safety Management Systems	(3,0,0)	3	5	Core Course

The aim of lesson is to enable students to comprehend the safety management practices in aviation organizations, to understand the safety thought, whose meaning and application form has evolved since the industrial revolution, by discussing it in the context of current scientific studies and aviation legislation, and to learn and adopt the behavioral and cultural change requirements required by aviation safety. Aviation organizations that cannot establish safety at a sufficient level cause people to die and/or lose their sustainability, damage the aviation industry, thus the country/world economy, and ultimately cause harm to the public. Therefore, employees and all stakeholders are required to fulfill their responsibilities in order to increase safety in aviation activities. Responsibilities are defined separately, starting from the individual, to the teammates he/she works with, to the organization he/she belongs to and generally to the competent authorities at the national and international level in the aviation sector.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN201	Air Traffic Rules and Services	(3,0,0)	3	5	Core Course

The purpose of the Air Traffic Rules and Services (ATS) course is to provide the student with the basic knowledge of the services provided by States to the users of the airspace. The course spans subjects like the aviation legal framework and international organizations, airspace structure, the basic International Civil Aviation Organization Annexes relating to ATS, the description and basic obligations of States regarding air traffic services, air traffic flow and capacity management, the basics of air traffic control and an overview of air traffic controller training and licensing. The course will also span the latest technological developments in the air traffic control and the European initiatives in the evolution of the profession.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN202	Business and Economics in Aviation	(3,0,0)	3	5	Core Course

It is aimed that students have a level of knowledge to be able to interpret and criticize information about financial planning, financial statement analysis, investment projects and basic statements in aviation businesses.

Students completing the course learn the following topics in an interactive teaching environment in the classroom and can interpret the economic knowledge they have learned in the management of airline businesses and market behavior:

- Financing Structure of Airlines
- Financial Planning in Airlines
- Analysis of Financial Statements in Airlines

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
<ul style="list-style-type: none"> • Financial Values and Estimation of Financial Values in Airlines • Strategic Targets in Airline Businesses • Budgets and Control in Airlines • Receivables and Stock Management in Airlines • Capital Management in Airlines • Financial Planning Case Discussion in Airlines 					

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AFC204	Airport Operations	(3,0,0)	3	5	Core Course

It aims to enable students to explain the airport as a system, to interpret the airport activity structure and airport activities, to have the knowledge and interpretation skills to solve the management problems that may be encountered in subjects such as the airport's periodic concentration, slot allocations, delays, airport safety management system.

This course focuses on airports and airport systems. Classification of airports, organization and management of airports will be defined. Airport components, airport activities and operating services, airport international standards and practices will be learned. Airport administration and safety management system will also be examined.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
EAS203	Accounting I	(3,0,0)	3	6	Core Course

Definition of Accounting - functions and principles. Financial Statements: definitions and account classifications. Practicing classifications on balance sheet. Expanded Accounting Equation. Preparing Income Statements, Statement of Owners' Equity and Balance Sheet. The Accounting Cycle. Practicing Journalizing, Ledgering and Trial Balance.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
EAS204	Accounting II	(3,0,0)	3	6	Core Course

Uniform Systems of Organizations' accounts. Income Statements: Departmental and General. Practice for Departmental Statements. Preparing a comparative and common size financial statements. Analysis and Interpretation of Financial Statement. Ratio analysis. Problem solution of ratios with interpretation. Cost management: fixed and variable costs concepts.

GRADE-3

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AFC301	Security Systems in Aviation	(3,0,0)	3	5	Core Course

Course is planned to construct an understanding of security and security systems required in air transportation, its regulations and requirements by means of economical, organizational dimensions and role of security management in air transportation system.

Course aims to teach students the theory of security, legal requirements in aviation security as well as the law and policy in aviation security. Student will have deeply understanding about;

- Evolution of security thinking
- Role of International Organizations, Conventions, and Treaties in aviation.
- Security Concept
- Crime and Terrorism in Aviation
- Implementation, scope and legal considerations in security.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AFC302	Quantitative Analysis for Management	(3,0,0)	3	5	Core Course

The main purpose of this course is to enable students to understand and interpret scientific publications and reports based on the interpretation of quantitative data sets published by aviation authorities and international aviation organizations.

In addition, examining the scientific research process (problem identification, data collection, data analysis and interpretation of results), reviewing certain scientific research methods (experimental method, descriptive method, etc.) and finding the research question required for students to conduct research on a particular topic to learn the techniques of hypothesis building, conceptualization, operationalization, measurement, data collection, data analysis, data evaluation/interpretation and report writing.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AFC303	Sustainable Aviation and the Environment	(3,0,0)	3	5	Core Course

This course is an overview of sustainable transportation planning practices and management strategies and policies; current transportation trends; environmental and energy policies; nonmotorized modes (mainly bicycles and pedestrians); public transportation; life-cycle assessment for transportation infrastructure; alternative fuel vehicles; vehicle emission estimation models; demand management strategies (including parking policies, pricing strategies).

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AFC306	Supply Chain Management	(3,0,0)	3	5	Core Course

A supply chain is comprised of all the parties involved in fulfilling a customer request.

The integrated management of this network is a critical determinant of success in today's competitive environment. Companies like Nokia, Toyota, Dell, Procter & Gamble, and a relatively new comer like Tata Motors are proof that excellence in supply chain management is a must for financial strength and industry leadership.

With increasing competition around the globe, supply chain management is both a challenge and an opportunity for companies. Hence a strong understanding of supply chain management concepts and the ability to recommend improvements should be in the toolbox of all managers. The objective of this course is to introduce you to the key concepts and techniques that will allow you to analyze, manage and improve supply chain processes for different industries and markets. At completion of this course, you will have the skills to assess supply chain performance and make recommendations to increase supply chain competitiveness.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN312	Aircraft Maintenance and Airworthiness	(3,0,0)	3	5	Elective Course

This course will expose you to maintenance, avionics and the operation of aircraft systems, blending theoretical approach. Maintenance Managers oversee and lead maintenance procedures in a company. They manage activities such as tracking expenses and report progress updates to owners or higher-ups. They also handle specific tasks assigned to them along the way. The course is designed to teach the relevant regulations and basic procedures for maintenance operations to students.

Additionally, management responsibilities regarding the airworthiness of the aircraft which refers to "The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation."

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN315	Airline Revenue Management	(3,0,0)	3	5	Elective Course

The aim of this course is to inform students about the historical development of airline revenue management in Turkey and in the world, the history and development of airline revenue management, general and amateur airline revenue management issues, and the latest developments in the aviation industry.

Students participating in the course will be able to assess comparative industry capabilities to assess and identify possibilities and capabilities in the management of airline revenues, and learn how airlines can optimize revenue management opportunities, apply financial analysis and modeling techniques, and solve common problems they face. They will understand the situations faced by financial decision makers in these processes. They will also examine why airlines are launching multi-brand products to compete more cost-effectively in the marketplace, and how the development of profitable network fleet plans and an effective flight program benefits an airline's revenue.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core Course /Elective
EAS301	Financial Management I	(3,0,0)	3	6	Core Course

Introduction to Financial Management. Financial Planning and Analysis. Sources of Financing. Capitalization. Valuation. Working Capital. Working Capital Management. Accounts Receivable and Inventory Management. Capital Budgeting and Estimated Cash Flow. Long-term Financing. Dividend Policy. Leverage and business risk. Special Financing. Financial System.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
EAS304	Principles of Marketing	(3,0,0)	3	6	Core Course
Company and Marketing Strategy Partnering to Build Customer Engagement, Value, and Relationships. Marketing Creating Customer Value and Engagement. Analyzing the Marketing Environment. Understanding Consumer and Business Buyer Behavior. Customer Value-Driven Marketing Strategy Creating Value for Target Customers. Product, Services, and Brands Building Customer Value. Developing New Products and Managing the Product Life Cycle. Pricing Understanding and Capturing Customer Value.					

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
EAS308	Operations Management	(3,0,0)	3	6	Core Course
Introducing the Operations Management. The Service/Manufacturing Concept. Customer Relationship. Customer Satisfaction. Managing Supply Relationships. Operational Processes. Organizational People. Resource Utilization. Performance Management					

Cours e Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course

EAS310	Organisational Behaviour and Social Psychology	(3,0,0)	3	6	Core Course
Introduction to Organizational Behavior. Individual Differences: Personality and Ability. Values, Attitudes, and Moods and Emotions. Perception, Attribution, and the Management of Diversity. Learning and Creativity. The Nature of Work Motivation. Creating a Motivating Work Setting. Leaders and Leadership					

GRADE-4

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN402	Airport Management and Marketing	(3,0,0)	3	4	Core Course
<p>The course aims to enable students to explain the airport as a system, to interpret the airport activity structure and airport activities, to have the knowledge and interpretation skills to solve the management problems that may be encountered in subjects such as the airport's periodic concentration, slot allocations, delays, airport safety management system.</p> <p>This course focuses first on airports and airport systems. Classification of airports, organization and management of airports will be defined. Airport components, airport activities and operating services, airport international standards and practices will be learned. Airport administration and safety management system will also be examined. Then, airport products will be defined and how these products are marketed and the market conditions will be revealed on a global scale. Finally, the privatization of airports and the changing market conditions will be discussed through current examples.</p>					

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN403	Airline Management	(3,0,0)	3	5	Core Course

This course presents an overall introduction to the field of airline operations and management. The course will cover such topics as airline industry and history, airline finance and economics, airline organization, airline business and low-cost carriers' strategy, management structure, pricing strategy, revenue management technology, financial analysis, demand forecasting models, aircraft fleet selection, marketing strategy, sales and distribution, capacity planning, routing network, cost analysis, business alliance, international business, labor relationship, cargo business, safety and security measure, public relations, aviation law, government regulations, daily operations, emerging and future development.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN404	Air Law and Policy	(3,0,0)	3	5	Core Course

International Aviation Law, in principle, is the set of rules applied to aviation activities within the framework of the international legal order. The sources of aviation law are international treaties and, rarely, customary law. In this course, the international civil aviation order, with its historical and economic dimensions, will be discussed within the framework of international treaties and their development.

This course enables students to recognize the international convention system, which is the basis of international air transportation, and the international agreements necessary for commercial activities operating in this system, and to understand and interpret how multidimensional aviation policies are determined. Upon completion of the course, students learn all dynamics of the global air transport, know how States determine their role in global and regional aviation, interpret the factors affecting air transport plans, understand and interpret official reports on production and market conditions in aviation.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN408	Term Homework	(3,0,0)	3	6	Core Course

This course aims to teach research question development, literature review, research method and theoretical framework determination and practice. It enables students to adopt scientific thinking and teaches them to use scientific research methods in order to prepare for academic research and thesis writing process.

Students who successfully complete this course;

- will be able to build up knowledge related to their research topic;
- will be able to analyze theoretical and methodological approaches and terminology;
- will be able to apply the necessary research and writing skills;
- will be able to fulfill the principles of research ethics and labor theft;
- will be able to adequately evaluate their own work;
- will be able to present their research topic orally;
- will be able to produce an academic study at the expected standards.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AFC411	Crisis Management in Aviation	(3,0,0)	3	5	Elective Course

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
<p>In this course, we first will examine the crisis aviation industry has experienced throughout the history. Then, will examine the entire crisis management lifecycle – from prevention and preparedness through response, recovery, and mitigation – and consider the lifecycle’s principles and practices. Thereafter, we will identify and use the entire crisis management toolkit to address challenges faced by managers when organizations face any crisis, due to either external factors outside the organization’s control or internal control or strategic management failures. Finally, we will develop a complete crisis management plan for an aviation organization, including tools and methods to identify potential crises, implement response and mitigation strategies to limit exposure, manage crisis response teams, and create communications to address stakeholder and public relation issues. Besides, different cases for crisis in aviation operations will be discussed all semester long.</p>					

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN411	Airline Business Models	(3,0,0)	3	4	Elective Course
<p>The Airline Business Models course provides an academic approach to knowledge transfer in which concepts such as strategic marketing, current issues, data-based strategies, and sustainability management are handled as an integral whole in airline transportation, which is rapidly developing in a highly competitive environment in our country. In addition, it is aimed to strengthen the related course with case studies.</p> <p>On successfully completing this course unit, students will be able to:</p> <ul style="list-style-type: none"> • Comprehend strategic management; • Be able to discuss sustainability in air transport; • Utilize marketing methods in air transport; • Comprehend Statistical data in air transport economics; • Recognize and distinguish the characteristics of different Business Models in Airlines; • Be able to picture and comprehend today and the future of air transport business models. 					

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN415	Crew Resource Management	(3,0,0)	3	4	Elective Course
<p>CRM applies to all areas of flying operations, from commercial air transport to corporate and to private operations. However, formal accreditation of CRM Instruction is only required for commercial air transport, but best aviation practice is that all Instructors (including single pilot operations) should study and implement CRM procedures. This course introduces the students the fundamentals of CRM.</p> <p>It aims to provide necessary information about developing strategy to manage threats and errors and minimize their consequences in the aviation industry through describing the importance of crew resource management for all areas of the organization.</p>					

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN417	Total Quality Management in Aviation	(3,0,0)	3	5	Elective Course

The aim of this course is to provide students with;

- Gain knowledge and skills that will enable him to manage quality by using systematic and process-centered approaches,
- Quality culture that will allow to increase customer satisfaction,
- The basic processes of the quality system and its applications,
- The relationship between ISO 9001:2015 and aviation standards,
- Best practices on quality in civil aviation,
- To enable them to reach the level of knowledge that can define and interpret techniques for reducing costs and increasing efficiency by using quality principles.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN418	Human Factors in Aviation	(3,0,0)	3	5	Elective Course

This course introduces Human Factors concerned with the application of what we know about human beings, their abilities, characteristics, and limitations, to the design of equipment they use, environments in which they function, and jobs they perform.

Course aims to teach students Human Factors science, or human factors technologies, is a multidisciplinary field incorporating contributions from psychology, engineering, industrial design, statistics, operations research, and physiology. It is a term that covers the science of understanding the properties of human capability, the application of this understanding to the design, development, and deployment of systems and services, and the art of ensuring successful application of human factor principles into all aspects of aviation to include pilots, ATC, and aviation maintenance.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN420	Aircraft Maintenance Management	(3,0,0)	3	5	Elective Course

The course aims to explain the basic concepts of aircraft maintenance activities, and to establish the relationship between aircraft maintenance activities and safety. Students attending the course will learn; general concepts related to aircraft maintenance, technical regulations regarding aircraft maintenance, classification of aircraft maintenance activities, activities constituting aircraft maintenance, basic maintenance methods, development of basic maintenance program, examination of aircraft maintenance department in a typical airline business, aircraft maintenance and also learn about their costs.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
AVN424	Airline Fleet and Network Planning	(3,0,0)	3	5	Elective Course

This course provides a survey of the processes of airline fleet planning as well as an overview of the airline scheduling process. During this course, we will follow the typical steps to assessing the right aircraft for the airline and understand how scheduling the aircraft is accomplished. As a survey course, we will not spend in-depth analysis on particular aircraft, but better understand the overall impact of sound fleet planning techniques and the complexity of airline scheduling as it pertains to management decisions.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
EAS401	International Business Management	(3,0,0)	3	6	Core Course

Regional And Global Strategy. The Multinational Enterprise. The Triad and International Business. International Politics. International Culture. International Trade. Multinational Strategy. Organizing Strategy. Production Strategy. Marketing Strategy. Human resource management strategy

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
EAS408	International Economics	(3,0,0)	3	6	Elective Course

International Economic Institutions. Absolute Advantage, Comparative Advantage and the Gains from Trade. Tariffs, Quotas and Arguments for Protection. International Trade and Labour. Balance of Payments. International Trade and Environmental Standards. The Global Pattern of Maritime Trade. International Financial Crises. The United States in the Global Economy. The European Union: Many Markets into One. Export-Oriented Growth in East Asia.

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
EAS409	Management Informations Systems	(3,0,0)	3	6	Core Course
Introduction to MIS. Fundamentals of MIS. Information system technology. Computing: algorithms and data structures. Database management. Developing information systems. Application of MIS. Simulation of MIS.					

Course Code	Course Name	(T,U,L)	Credit	ECTS	Core/Elective Course
MTH281	Statistics I	(3,0,0)	3	5	Core Course
Frequency distributions and graphs, measures of central tendency, measures of distribution and skewness, basic concepts and rules of probability, probability distributions: Binomial, poisson, normal and Chi-Square distributions, sampling concepts, sampling distributions.					

T: Lecture Hour (hrs/week)

U: Tutorial Hour (hrs/week)

L: Lab Hour (hrs/week)