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# INTRODUCTION

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## **AIRPORT OPERATIONS MANAGEMENT**

Welcome to the exciting world of airport operations! In a rapidly changing environment, airports have to adapt to economic downturns, technological changes, market changes, airline commercial deregulation, and the worldwide trend to convert airports from government organisations to more business-like entities. These pressures have or have had or are having significant effects on the way airports do business, not only from a financial perspective but also from an operational standpoint.

In these challenging times, and with emerging competition from other airports and other modes of transportation, it is of the utmost importance that airports recruit and provide employees and managers with the best available knowledge and skills.

This course was prepared to provide you with a solid overview of the airport operations field and with tools to apply your knowledge and skills to your airport. It is designed to be useful not only for your own benefit but also to help you make better decisions for your organisation.

For writing purposes, the text assumes the reader works in an airport environment. However, this manual is intended for all people who have an interest in airports, whether they are currently working at an airport, are planning to do so, or simply have a personal interest in this area.

## **LEARNING AIDS**

To help you successfully complete and enjoy the course in a productive fashion, we have included the following learning aids:

### **CONTENTS AND INTRODUCTION**

At the beginning of each chapter you will see a table of contents.

An introduction, highlighting the chapter's aims and objectives is also given.

### **AIRPORT OPERATIONS PRINCIPLES AND TECHNIQUES**

Airport operations principles and techniques are explained as clearly and as concisely as possible. Diagrams are used to illustrate how they work.

### **CASE STUDIES AND EXAMPLES**

These appear throughout the Course. They will provide you with the opportunity to see what you have studied in the context of "real world" situations. Where obtaining complete material from a real world case study is not possible, an imaginary case study is featured instead.

### **DISCUSSION QUESTIONS**

Each chapter includes Discussion Questions, covering the main points of the chapter. These questions enable you to assess your understanding of the concepts discussed. The answers are included in a separate section at the end of the manual.

## **KEY LEARNING POINTS**

Key Learning Points are highlighted throughout the text and are designed to emphasise particularly important issues and conclusions.

## **SUMMARY**

Each chapter ends with a summary drawing together the main points of the chapter.

## **GLOSSARY**

At the end of the Course, there is a “GLOSSARY” section, which explains the most important terms used in the manual.

## **RECOMMENDED READING**

Should you wish to further research a given topic, a list of recommended reading is included at the end of this manual.

## **EXAMINATION PROCEDURES**

The course fee covers the training material and mailing but does not include any expense incurred by students in connection with the examinations.

Examinations leading to an IATA Certificate in Airport Operations will be held in JUNE and DECEMBER of each year at IATA Examination Centres (in Geneva, Miami, Montreal, Singapore and other locations when possible).

The examination must be taken within 18 months of registering for the course. Students who are not successful at the first attempt may retake the examination once at no extra fee, within this period.

Students must notify the IATA Aviation Training and Development Institute (ATDI) of their intention to take the examination AT LEAST 2 months before the examination date.

Candidates are required to bring their identity card or passport to the examination.

Students who register for an examination and do not attend will be recorded as no-show and will automatically lose one examination attempt.

This course is designed to make the study of Modern Airport Operations and its application in the Airport Industry as enjoyable and as stimulating as possible. We hope we have succeeded. Good luck with the course.

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# UNDERSTANDING THE AIRPORT

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## MODULE PREREQUISITES

There are no prerequisites for this module except for your motivation to learn about an extremely interesting, dynamic, and fast-changing industry.

## MODULE LEARNING OUTCOMES

Upon completion of this module, you should be able to:

- Identify key data relative to world statistics on air transportation and to its purpose (unit 1).
- Summarise the history of aviation and airports, from their infancy to today's complex worldwide industries, and the main technological changes implemented over the years to make air transport safer, more secure, more efficient and economical (unit 2).
- Understand what an airport is, and what its functions are (unit 3).
- Identify the multiple customers and partners that airports have, and their complex interactions (unit 4).
- Explain the requirements for national and international standardisation in airports, and how this consistency is achieved through regulation and cooperation (unit 5).
- Describe the various airport management and ownership options and their evolution (unit 6).
- Describe the key elements of the airport business (unit 7).
- Describe the economic impacts that airports have on the area they serve (unit 8).
- Understand the importance of airport master planning as a long-term management tool (unit 9).

## MODULE OVERVIEW

Before starting to learn about the detailed functions played by airport operations, it is essential that you acquire a broad knowledge of how aviation and airports were born and how they developed. You also need to secure a good understanding of the complexity of the airport environment as well as the relationships between the various players involved.

Regardless of their size and complexity, airports operate in a highly regulated environment, they serve a wide variety of customers with sometimes conflicting needs, they receive services from many external providers, and they generate both positive and negative impacts on the community they serve. Their activities extend well beyond their property boundaries. Finally, yet importantly, they can be highly sensitive to social, economic, environmental, technological, and political influences.

In response to rapid and radical changes in the air transport industry, airports must constantly adapt and foresee these changes. Adopting a business approach allows airports to better serve their customers, in a safe, efficient and economical manner.



# 1 Overview of the Air Transport System

## 1.1 UNIT LEARNING OUTCOMES

Upon completion of this module, you should be able to:

- a) State the annual volume of passengers carried by international air carriers.
- b) State the number of international airlines.
- c) State the number of airports.
- d) State the level of employment generated by world airports.
- e) Explain the needs behind air transportation.
- f) Describe the major components of the air transport system.
- g) Describe the need for cooperation between these components.
- h) Explain why customer orientation is paramount in today's airport business environment.

## 1.2 UNIT OVERVIEW

Air transportation is a huge industry. Its services are provided by several components with a strong international dimension.

In order for the system to meet the needs of its customers, there is a strong requirement for cooperation between all organisations involved.

## 1.3 THE IMPORTANCE OF THE AIR TRANSPORTATION INDUSTRY

Every year, more than 1.8 billion people travel by air, flying more than 1.5 billion kilometres. There are approximately 270 international airlines in the world, and many more national and regional ones; there are at least 1500 major airports in the world; overall, airports generate 4.5 million jobs<sup>1</sup>. The importance of the air transportation industry: Figures 1 and 2 show a range of airports, from a very large international airport at one end of the spectrum to a small airport serving light, recreational aircraft.

## 1.4 THE NEED FOR AIR TRANSPORTATION

Air Transportation exists to respond to the need that people have to travel rapidly and safely between two points; it also serves people who need to ship goods that must arrive at destination as quickly as possible, either because they are needed urgently, or they are perishables of high value, or a combination of these factors.

## 1.5 THE PROVIDERS OF AIR TRANSPORTATION SERVICES

Air transportation is provided by the cooperation of airlines, airports, air traffic control agencies and many other support organisations. Its success depends on a coordinated approach between these players. The single most important thing that you must keep in mind in your day-to-day work is that air transport is a service activity with one focus: the customer.

## 1.6 UNIT SUMMARY

Air transportation is an important global industry made up of hundreds of service providers who must work in cooperation in order to meet the needs of its customers.

**Key Learning Point**

The air transportation industry is a global activity of considerable size (270 airlines, 1500 airports, 1.8 billion passengers, 4.5 million employees).

## **Applying Your Learning at Work**

.....

Observe the main service providers at your airport: the operator (your employer), the airlines, and the control tower. Do you see other service providers?



**Figure 1:** A Large International Airport



**Figure 2:** A Small General Aviation Airport