

# Course Plan – IT-200 Aeronautical Infrastructure

Aeronautics Institute of Technology

Semester 2026.1

Revision Date: Monday 2<sup>nd</sup> March, 2026

## 1 Identification

- Course: IT-200 Aeronautical Infrastructure.
- Postgraduate Programme: Aeronautical Infrastructure Engineering PG/EIA.
- Mandatory Course. Exemption applicable for TRA-39 students.
- Professors: Evandro José da Silva (prof.evandrojs@gmail.com); Mauro Caetano (mauro.caetano@gp.ita.br).
- Schedule: Mondays from 09:00 to 12:00.
- Venue: Armel Picquenard Auditorium.
- Classroom link: LINK

### 1.1 Objectives

This is a foundational course for those who intend to progress within the PG-EIA programme. By the end of the activities, the student should:

- Understand the airport and other components of aeronautical infrastructure as fundamental requirements for the operation of air transport.
- Be familiar with the history, current status, and future prospects of airports.
- Acquire a basic understanding of air traffic and appreciate the influence of aircraft on the planning, design, and operation of airports.
- Identify the limitations that an airport site imposes on its neighbourhood and assess the impacts generated by aeronautical infrastructure.

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## 1.2 Approved Syllabus

**Recommended prerequisite:** None.

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**Weekly contact hours:** 3 hours (3-0-0-5).

**Academic Credits:** Up to 3, depending on the grade obtained.

- National and International Aviation System: history and prospects.
- Aircraft: operational aspects and their relationship with the airport: categories and prospects.
- Take-off and Landing Procedures.
- Runway Length and Orientation.
- Airspace Obstacle Evaluation.
- Airport and Aircraft Noise.
- Airport Configuration and Layout.
- Airport Site Selection.
- Airport-Related Impacts.
- Airport Safety.

**Bibliography:** HORONJEFF, R. et al., *Planning and Design of Airports*, 5th ed., McGraw-Hill, 2010; ASHFORD, N.; WRIGHT, P., *Airport Engineering*, 4th ed., Wiley, 2011; ANAC, *Aerodrome Project*, RBAC 154, 2021.



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## 2 Schedule

The detailed schedule will be updated throughout the semester at the following link: [LINK](#)

Table 1: Planned Activities

Date	Activity
02/03/2026	Course Introduction. Lecture on Safety-II
09/03/2026	Introduction to Aeronautical Infrastructure: A Network View
16/03/2026	Runway Configurations and Airside Facilities
23/03/2026	Runway Orientation and Anemometric Analysis
30/03/2026	In-Class Exercises
06/04/2026	Aircraft–Infrastructure Interaction. Runway Length Determination
13/04/2026	Declared Distances. Runway Monitoring
20/04/2026	Individual Assessment
	<i>Semester Break (Semaninha)</i>
04/05/2026	Obstacle Limitation Surfaces
11/05/2026	In-Class Exercises
18/05/2026	Navigation Aids and Air Traffic System Organisation
25/05/2026	Airport Noise and Emissions
01/06/2026	Airport Catchment Area
08/06/2026	Airport Risk Management
15/06/2026	Airport Siting I
22/06/2026	Airport Siting II

## 3 Assessment

### 3.1 Grades

$$\text{Final Grade} = \frac{N_1 + N_2 + N_3}{3}$$

- $N_1$ : Individual assessment.
- $N_2$ : Average of in-class activities and exercises, dropping the lowest score.
- $N_3$  (or Exam): Development of a Research Article.

*Regarding  $N_1$ , late submission will receive a weight of 8.5/10.0, except in cases of a medical certificate or equivalent.*



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### 3.1.1 N3 Statement

LINK

### 3.2 Attendance

A minimum attendance of 85% is required.

### 3.3 Declaration of the Use of Generative AI and AI-Assisted Technologies in the Writing Process

In all activities, it is mandatory to declare every generative AI tool used.

EXAMPLE OF DECLARATION:

The author used [tool name and version] to refine the grammar and enhance the overall readability of the text. Following the use of these AI tools, the author reviewed and edited the content as necessary to maintain complete authorial control over the substance of the work.

