

Teaching Course	AIRCRAFT FLIGHT OPERATIONS AND MAINTENANCE (10595984)
Module	AIRCRAFT FLIGHT OPERATIONS
SSD	ING-IND/03
CDL	Aeronautical engineering
CFU	3
Lessons hours	30
Teacher	Prof. Marco ROSATI

This course as a whole introduces the basic principles of aircraft flight operations and maintenance. It provides aspiring aviation leaders with the basic elements of management of the aviation industry; the students will gain skills to understand the means to make the organizational structures compliant with applicable regulation but also the importance to reach a right balance with Best Practices to achieve safe and profitable operations and to cope with future management challenges.

The key topics of the module **Aircraft Flight Operations** are:

- introduction to the Civil Aviation sector and different types of operator;
- evaluation of effects of aviation regulation on the organization: Compliance Based Environment vs. Performance Based Environment;
- air operator organization: roles and processes; optimization of system performance to gain as safe and affordable operations for customers as profitable for the operator;
- Quality System and Safety Management System implementation;
- flight planning: flight dispatch issues, route and profile planning, time, speed and fuel calculations applied to current aircraft models. Weather considerations, aircraft technical status considerations, operational Flight Plan, alternate airports selection, fuel saving methodologies, fuel/energy scheme; practical flight planning exercises will be performed at the end of the theoretical part.
- Accountability in aircraft dispatch.

Learning objectives

General

After completing this course, the student will be able to understand all the aspects of the flight operations and the key factors of an air operator organization.

Detailed

Upon completion of this course, the student will be able to:

- Identify key factors in flight operations
- Optimize flight operations by means appropriate tools and methods
- describe the typical airline flight operations department
- Perform a weight and balance calculation
- Prepare a flight plan
- Describe the Flight efficiency principles
- Use the fuel optimization methodologies