

Course Plan

Second Level Master Degree's in

Aviation Industry Management and Operations

1	Academic year	2024-2025
2	Director	Guido De Matteis
3	Teaching- scientific board	Alessandro Corsini Giuliano Coppotelli Tiziana D'Alfonso Guido De Matteis Giulio Di Gravio Annalisa Fregolent Riccardo Malpica Galassi Franco Mastroddi Fabio Nonino Riccardo Patriarca Giampaolo Romano
4	Resolution of activation in department	21/02/2023
5	Class start date	24/02/2024
6	Teaching calendar	Approximately from February 24 to July 26, 2025, with alternating in-person (midweek activities; one week per month) and remote activities (on Thursdays, Fridays, and Saturdays; three weeks per month)
7	Partners	 Italian Civil Aviation Authority, ENAC Aeroporti di Roma S.p.A. Atitech S.p.A. Avio S.p.A. Creasys S.p.A. The European Organisation for the Safety of Air Navigation, Eurocontrol Italian Air Navigation Service Provider, ENAV S.p.A. ITA Airways Leonardo Helicopters Lufthansa Systems
8	Admission	 Participants are required to hold: Master's Degree or equivalent in aeronautical engineering (LM-20) Master's Degree or equivalent in engineering (LM-21, -22, -23, -25, -26, -27, -28, -29, -30, -31, -32, -33, -34, -35). Please see NOTE 1 below. University degree belonging to any class of master's Degree or equivalent. Please see NOTE 2 below.



		(NOTE 1) Prior work experience in aviation, aviation or
		air transportation companies and/or entities, or in a closely related field, will be a merit in admission.
		(NOTE 2) Prior work experience of at least one year in aviation, aviation, or air transportation companies and/or entities, or in a closely related field, will be valued.
		Holders of a Laurea degree obtained in Italy under the system prior to the university reform of Ministerial Decree 509/99 equated to one of the above classes, as per the ministerial table (https://www.cun.it/uploads/3852/par_2009_04_23.pdf), may also access the Master's program, given the specific requirements documented above.
9	Admission test	Yes
10	Venue of teaching activities	 Via Eudossiana, 18 – 00184 Rome (Italy) Online (for specific activities only) It will be possible to deliver teaching or training activities at a different location for operational needs, subject to approval by the Educational-scientific board.
11	Internships	Aeroporti di Roma (ADR) aiComply Atitech Avio Creasys ENAV EUROCONTROL Leonardo Helicopter Division Lufthansa Systems TMC ITA Airways
12	Mode of teaching delivery	Blended. The programme is delivered in person, but selected teaching activities will be delivered online.
13	External funding, exemptions, or fee reductions	Yes Exemptions and/or reductions of the enrollment fee are available according to the provisions of the memoranda of understanding signed with the companies and institutions involved in the master's program. To access the total exemption from the payment of the registration fee, it is necessary to be willing to carry out the internship at one of the full partner companies of the master's program.
14	Contacts Teaching secretariat	Address Dipartimento di Ingegneria Meccanica e Aerospaziale, Via Eudossiana 18, 00184 Rome (Italy)



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Plan of training activities

Name	Learning objectives	Lecturers	Scientific area (SSD)	ECTS	Туре	Assessment
Module I: Perspectives on Aviation Law (PAL)	To provide a systematic understanding of aviation national and international laws and regulations, allowing participants to define their impact on management and operations.	Prof. Mastroddi	ING-IND/04	3	Lectures, tutorials, seminars	Yes. Multiple choice test at the completion of the module.
Module II: Supply Chain Management (SCM)	To provide participants the foundational principles and business models, and business strategies for the delivery of aviation goods and services.	Prof. Di Gravio	ING-IND/17	3	Lectures, tutorials, seminars	Yes. Multiple choice test at the completion of the module, and case study analysis.
Module III: Project Management and Financial Analysis (PMF)	To demonstrate the role of Project and Portfolio Management for translating strategies into results and to equip participants with the methodologies for establishing a project, building a business case, managing portfolio risks, and analyse market requests and investments.	Prof. D'Alfonso (responsible) Other faculty members involved: prof. Nonino	ING-IND/35	8	Lectures, tutorials, seminars	Yes. Summative assessments will take place at the completion of the module based on a written report on an assignment, carried out either individually or as small group projects.

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Module IV: Analytics and Business Intelligence (ABI)	To provide principles for designing data warehouses, and for developing and deploying advanced Business Intelligence systems to facilitate data mining and knowledge discovery, including AI solutions.	Prof. Fregolent (responsible) Other faculty members involved: prof. Corsini and prof. Mecella	ING-IND/03 (2 CFU) ING-IND/08 (2 CFU) ING-IND/13 (2 CFU)	6	Lectures, tutorials, seminars	Yes. Summative assessments will take place at the completion of the module based on a written report on an assignment, carried out either individually or as small group projects.
Module V: Certification and Airworthiness (CAW)	To provide knowledge and tools for compliance management as a means for managing certification and airworthiness processes and to be capable of implementing regulations in different operational settings.	Prof. Coppotelli (responsible Other faculty members involved: prof. Malpica Galassi	ING-IND/04 (3 CFU) ING-IND/07 (3 CFU)	6	Lectures, tutorials, seminars	Yes. Summative assessments will take place at the completion of the module based on a written report on an assignment, carried out either individually or as small group projects.
Module VI: Risk and Safety Management (RSM)	To explore the structure of aviation safety management systems, equipping participants with the various methods for socio-technical	Prof. Patriarca	ING-IND/17	6	Lectures, tutorials, seminars	Yes. Summative assessments will take place

	safety and resilience assessment, including just culture programmes and human resource management.					at the completion of the module based on a written report on an assignment, carried out either individually or as small group projects.
Module VII: Aviation Operations Management (AOM)	To provide an understanding of the relationships and coordination among aviation stakeholders and to apply data-driven digital solutions for optimizing flight, ground, air traffic (including collaboration between Air Traffic Management, ATM, and Uncrewed Traffic Management, UTM) and maintenance operations to ensure safety, efficiency, and sustainability.	Prof. De Matteis (responsible Other faculty members involved: prof. Malpica Galassi	ING-IND/03 (3 CFU) ING-IND/06 (3 CFU)	6	Lectures, tutorials, seminars	Yes. Summative assessments will take place at the completion of the module based on a written report on an assignment, carried out either individually or as small group projects.
Internship	To delve into thematic aspects from an operational perspective, allowing the participants to conduct an innovation project in one of the partner companies. Each participant will apply his/her expertise to a complex challenge to generate a tangible outcome, and develop the skills acquired through the basic and advanced modules in dynamic work environments.		-	18	Participant's performance and growth during the innovation project will be assessed by the company supervisor over four areas of knowledge and skills: application/integration and building of knowledge, problem solving/decision making, initiative and self-management, and interpersonal and teamwork	

Other activities	To practice the articulation of concepts, ideas, and questions, challenging them against diverse industrial points of view.	SSD not required	1	Keynote lectures by senior figures and high level personalities in the aviation industry.
Final test	The final examination consists of the presentation and discussion of a technical report prepared by the candidate on the activities carried out during the innovation project.	SSD not required	3	Preparation of o final report on the internship project and delivery of its presentation. The final mark is obtained by the grades in the modules, and the assessment of internship activities by the company supervisor, and of the final report and presentation.
TOTAL ECTS			60	