

## PIANO FORMATIVO

### Master universitario di Secondo livello in

### Aviation Industry Management and Operations

|          |                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b> | <b>Anno accademico</b>                         | 2023-2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>2</b> | <b>Direttore</b>                               | Guido De Matteis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>3</b> | <b>Consiglio Didattico Scientifico</b>         | Alessandro Corsini<br>Giuliano Coppotelli<br>Tiziana D'Alfonso<br>Guido De Matteis<br>Giulio Di Gravio<br>Annalisa Fregolent<br>Paolo Gaudenzi<br>Riccardo Malpica Galassi<br>Franco Mastroddi<br>Fabio Nonino<br>Riccardo Patriarca<br>Giampaolo Romano                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>4</b> | <b>Delibera di attivazione in Dipartimento</b> | 22/02/2023                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>5</b> | <b>Data di inizio delle lezioni</b>            | 19/02/2024                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>6</b> | <b>Calendario didattico</b>                    | In via di definizione                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>7</b> | <b>Eventuali partner convenzionati</b>         | <ul style="list-style-type: none"> <li>- Ente Nazionale per l'Aviazione Civile, ENAC</li> <li>- The European Organisation for the Safety of Air Navigation, EUROCONTROL</li> </ul> <p>Ulteriori accordi in corso di attuazione con:</p> <ul style="list-style-type: none"> <li>- Aeroporti di Roma S.p.A.</li> <li>- Avio S.p.A.</li> <li>- Creasys S.p.A.</li> <li>- Ente Nazionale di Assistenza al Volo, ENAV S.p.A.</li> </ul>                                                                                                                                                                                                                                                                                        |
| <b>8</b> | <b>Requisiti di accesso</b>                    | <p>Possono partecipare al Master, senza limitazioni di età e cittadinanza:</p> <ul style="list-style-type: none"> <li>- i laureati magistrali in ingegneria aerospaziale (LM-20) o equivalente</li> <li>- i laureati magistrali in ingegneria, nelle classi (LM-21, -22, -23, -25, -27, -28, -29, -30, -31, -32, -33, -34, -35) o equivalente (Vedasi NOTA 1 di seguito)</li> <li>- coloro che sono in possesso di un titolo universitario appartenente ad una qualsiasi classe di laurea magistrale o equivalente (Vedasi NOTA 2 di seguito)</li> </ul> <p>Possono accedere al Master anche i possessori di una Laurea conseguita in Italia in base al sistema previgente alla riforma universitaria del D.M. 509/99</p> |



|           |                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           |                                                                            | <p>equiparata ad una delle classi suindicate, come da tabella ministeriale</p> <p>(NOTA 1) È raccomandata una esperienza lavorativa pregressa di almeno due anni in aziende e/o enti aeronautici, dell'aviazione o nel trasporto aereo, oppure in un settore strettamente correlato.</p> <p>(NOTA 2) È raccomandata una esperienza lavorativa pregressa di almeno tre anni in aziende e/o enti aeronautici, dell'aviazione o nel trasporto aereo, oppure in un settore strettamente correlato.</p> <p>Possono accedere al Master anche i possessori di una Laurea conseguita in Italia in base al sistema previgente alla riforma universitaria del D.M. 509/99 equiparata ad una delle classi suindicate, come da tabella ministeriale</p> <p>(<a href="https://www.cun.it/uploads/3852/par_2009_04_23.pdf">https://www.cun.it/uploads/3852/par_2009_04_23.pdf</a>)</p> |
| <b>9</b>  | <b>Prova di selezione</b>                                                  | Prevista                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>10</b> | <b>Sede attività didattica</b>                                             | <ul style="list-style-type: none"><li>- Via Eudossiana, 18 – 00184 Rome (Italy)</li><li>- Online (solo per alcune attività didattica)</li><li>- Sarà possibile erogare attività didattica o formativa in una sede diversa per necessità operative, previa approvazione del Consiglio didattico-scientifico.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>11</b> | <b>Stage</b>                                                               | Avio<br>ENAC<br>ENAV<br>EUROCONTROL<br>Aeroporti di Roma (ADR)<br>e ulteriori enti in via di definizione                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>12</b> | <b>Modalità di erogazione della didattica</b>                              | mista. Si prevedono moduli/attività formative erogate in presenza ed altre a distanza.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>13</b> | <b>Finanziamenti esterni, esenzioni, agevolazioni o riduzioni di quota</b> | Si<br><br>Sono previste esenzioni e/o riduzioni della quota di iscrizione a seguito della formalizzazione dei protocolli di intesa con le aziende e gli enti coinvolti nel Master.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>14</b> | <b>Contatti Segreteria didattica</b>                                       | <b>Indirizzo</b><br>Dipartimento di Ingegneria Meccanica e Aerospaziale, Via Eudossiana 18, 00184 Rome (Italy)<br><b>e-mail</b><br>master.avimo@uniroma1.it                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

### Piano delle Attività Formative

| Denominazione attività formativa                            | Obiettivi formativi                                                                                                                                                                                                                                                               | Docente                                                            | Settore scientifico disciplinare (SSD)   | CFU | Tipologia                        | Verifica di profitto (Se prevista, e modalità)                                                                                                               |
|-------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------|-----|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modulo 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 (resp.)<br>Altri docenti coinvolti: prof. Gaudenzi | ING-IND/04 (2 CFU)<br>ING-IND/06 (1 CFU) | 3   | Lezioni, Esercitazioni, Seminari | Yes.<br><br>Multiple choice test at the completion of the module.                                                                                            |
| Modulo 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   | Lezioni, Esercitazioni, Seminari | Yes.<br>Multiple choice test at the completion of the module, and case study analysis.                                                                       |
| Modulo 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 (resp.)<br>Altri docenti coinvolti: prof. Nonino   | ING-IND/35                               | 8   | Lezioni, Esercitazioni, Seminari | Yes.<br>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.                                                                                                                                                                  |
| Modulo 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 (resp.)<br>Altri docenti coinvolti:<br>prof. Corsini          | ING-IND/03 (2 CFU)<br>ING-IND/08 (2 CFU)<br>ING-IND/13 (2 CFU) | 6 | Lezioni,<br>Esercitazioni,<br>Seminari | Yes.<br><br>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. |
| Modulo 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 (resp.)<br>Altri docenti coinvolti:<br>prof. Malpica Galassi | ING-IND/04 (3 CFU)<br>ING-IND/07 (3 CFU)                       | 6 | Lezioni,<br>Esercitazioni,<br>Seminari | Yes.<br><br>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. |

|                                                  |                                                                                                                                                                                                                                                                                                                                                                      |                                                                   |                                          |    |                                                                                                                                                        |                                                                                                                                                                                           |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------|----|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Modulo VI: Risk and Safety Management (RSM)      | To explore the structure of aviation safety management systems, equipping participants with the various methods for socio-technical safety and resilience assessment, including just culture programmes and human resource management.                                                                                                                               | Prof. Patriarca                                                   | ING-IND/17                               | 6  | Lezioni, Esercitazioni, Seminari                                                                                                                       | Yes.<br><br>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. |
| Modulo 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 (resp.)<br>Altri docenti coinvolti: prof. Romano | ING-IND/03 (3 CFU)<br>ING-IND/17 (3 CFU) | 6  | Lezioni, Esercitazioni, Seminari                                                                                                                       | Yes.<br><br>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. |
| <b>Tirocinio/Stage</b>                           | 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                                                                                                                                                                              |                                                                   | -                                        | 18 | Participant's performance and growth during the innovation project will be assessed by the company supervisor over four areas of knowledge and skills: |                                                                                                                                                                                           |

|                       |                                                                                                                                                                                |                      |           |                                                                                                                                                                                                                                                                            |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                       | 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.  |                      |           | application/integration and building of knowledge, problem solving/decision making, initiative and self-management, and interpersonal and teamwork.                                                                                                                        |
| <b>Altre attività</b> | To practice the articulation of concepts, ideas, and questions, challenging them against diverse industrial points of view.                                                    | SSD<br>non richiesto | 1         | Keynote lectures by senior figures and high-level personalities in the aviation industry.                                                                                                                                                                                  |
| <b>Prova finale</b>   | 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<br>non richiesto | 3         | Preparation of a final report on the internship project and delivery of its presentation.<br><br>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. |
| <b>TOTALE CFU</b>     |                                                                                                                                                                                |                      | <b>60</b> |                                                                                                                                                                                                                                                                            |