

PHD PROGRAMME TABLE 38TH CYCLE

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| PROGRAMME'S NAME | AEROSPACE SCIENCE AND TECHNOLOGY |
| DURATION | 3 years |
| PROGRAMME START DATE | 01/11/2022 (DD/MM/YYYY) |
| LANGUAGES | Italian, English |
| MANDATORY STAY ABROAD | 3 months |
| COORDINATOR | Prof. Alessandro Talamelli (alessandro.talamelli@unibo.it) |
| CURRICULA | N/A |
| RESEARCH TOPICS | Detailed list at the bottom of the present document |
| PhD POSITIONS | 3 |
| ADMISSION PROCEDURE | Qualifications and research proposal evaluation Oral examination |

Available Positions and Scholarships

| Pos. n. | Financial Support | Description | Positions linked to research topics |
|---------|-------------------|--|--|
| 1 | PhD Scholarship | Totally funded by the University of Bologna general budget | |
| 2 | PhD Scholarship | Co-funded by the University of Bologna general budget and the Department of Industrial Engineering | |
| 3 | PhD Scholarship | Funded by the Department of Industrial Engineering | Radio science experiments for Europa Clipper mission |

Admission Exams

| | DATE AND TIME | RESULTS |
|---|---|------------------------------------|
| Qualifications and research proposal evaluation | Applicants' participation is not required | Available from 01/07/2022** |
| Oral examination | Date: starting from 04/07/2022 – 9.00 a.m. CEST* Place: In presence Sala Riunioni – Ground Floor, Department of Industrial Engineering – UOS Forlì, Via Fontanelle 40, Forlì. Remotely, using Microsoft Teams | Available from 11/07/2022** |

* In case that the oral examination cannot be completed in one day due to the large number of applicants, the oral examination detailed schedule shall be made available on the webpage [Studenti Online](#) together with the results of the qualifications and research proposal evaluation. **During the oral examination, applicants may express their interest in one or more positions linked to specific research topics.**

** The **results of the admission exams** will be available on the webpage [Studenti Online](#) (select “summary of the requests in progress” > “see detail” and open the .pdf file at the bottom of the page). **No personal written communication will be sent to applicants concerning the examinations results.**

Required and Supporting Documents to be attached to the application

All the documents listed below **shall be drawn up in English or in Italian**. In case of documents originally issued in any other language (e.g. identity document, qualifications), an official English translation is required. Only qualifications obtained **during the last 5 calendar years** shall be taken into consideration, except for the University Degree. The Admission Board will assess the relevance of the supporting documents to the PhD Programme.

| REQUIRED DOCUMENTS | |
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| Identity document | Valid identity document with photo (i.e. identity card, passport) |

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| Curriculum Vitae | No specific CV format is required |
| Degrees | Documents attesting the awarding of the first and second cycle degrees, the exams taken and the marks obtained (see Art. 3 of the Call for Applications) |
| Research proposal | Multi-annual research proposal, with special emphasis on the activities to be completed during the first-year course. The proposal must meet the following requirements: it must mention on the cover page the main research topic/s the applicant is interested to and the proposal is about; it cannot exceed 20,000 characters , including spaces and formula possibly used. This figure does not include: the title of proposal, the outline, references and images (such as graphs, diagrams, tables, etc. - if present); it must include : the state of the art; description of the proposal; expected results; references. The research proposal that successful applicants shall carry out during their PhD career may possibly differ from the one proposed at the application stage. This shall be defined together with the supervisor and approved by the Academic Board. |
| SUPPORTING DOCUMENTS | |
| Thesis abstract | Abstract of the second cycle degree thesis . Graduands applicants may submit the draft of the thesis. Abstracts cannot exceed 5,000 characters, including spaces and formula possibly used. The above figure does not include: the title of the thesis, the outline, references, and images such as graphs, diagrams, tables etc. |
| Reference letter/s | No more than 2 reference letters signed by Italian and international academics and professionals in the research field, which do not form part of the Admission Board, attesting the suitability of the applicant and his/her interest in the scientific research. Letters shall be uploaded following the procedure detailed in the Call for Applications (Art. 3.2). |
| Personal Statement | The statement shall include the reasons prompting the applicant to attend the PhD Programme and those relevant experiences and research interests , that make the applicant suitable for the specific PhD Programme (3000 characters maximum, including spaces). |
| Publications | Lists of publications (i.e. monographs, articles on scientific journals) |
| Other documents | <ul style="list-style-type: none"> - Research activity of any kind - whether basic, applied, translational, etc. - carried out in any capacity, including when covered by research grants, and as a staff member of research projects - Study periods completed by applicants outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes) - Other qualifications attesting the suitability of the applicants (scholarships, prizes, etc.) |

Evaluation criteria*

Scores will be expressed in points out of 100, as follows.

1. Qualifications and research proposal evaluation

Minimum score for admission to the oral examination: 30 points, Maximum score: 50 points

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| Qualifications evaluation | Second cycle degree (Master's) final mark. Graduands shall be evaluated according to the Weighted Average Mark (WAM) | 20 points max |
| | Publications and other evaluable documents | 5 points max |
| Research proposal evaluation | Scientific value and ground-breaking nature of the proposal | 15 points max |
| | Structure of the proposal | 5 points max |
| | Proposal feasibility | 5 points max |

2. Oral examination

Minimum score for eligibility: 30 points, Maximum score 50 points

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| English language proficiency | 5 points max |
| Research proposal presentation | 30 points max |
| General knowledge of issues encompassed by the PhD Programme | 15 points max |

Oral examination aims to assess the suitability of the applicant for scientific research as well as the general knowledge of issues encompassed by the PhD Programme (see the list of [research topics](#) at the bottom of the present document).

The oral examination is carried out in English.

* Possible further evaluation criteria will be available on the [University website](#), selecting the relevant PhD Programme > “More information”, at the bottom of the page in the section “Notices”.

Research Topics

The PhD programme pursues the education of researchers and high-qualified engineers, operating in the typical fields of Aerospace Engineering and able to address issues related to design and research activities in disciplines such as:

- Aerodynamics and fluid dynamics
- Mechanical and aerospace design and structures
- Astronautics, Space Systems, and Exploration
- High performance metallic materials, composites and coatings
- Flight mechanics and control systems
- Experimental stress analysis, characterization and development of constitutive models
- Design and Methods of Industrial Engineering applied to the Aerospace sector
- Mechanical and aerospace technologies
- Mechanical and thermal measurements applied to the aerospace sector
- Aeronautical and Space Propulsion