PhD in BUSINESS AND LAW

Coordinator: Prof.ssa Mara Bergamaschi

Scientific Area: 12 - Law studies
13 - Economics and statistics

<table>
<thead>
<tr>
<th>Duration</th>
<th>Positions</th>
<th>Positions covered by scholarships</th>
<th>Annual amount scholarships</th>
<th>Annual amount for research activity</th>
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Scholarships:
- No. 3 financed by Ministerial Decree 351/2022 for the following Public Administration research topics:
  1. Project title: Skills, identities and achievements in the medical profession
     Affiliated Institution: ASST Bergamo Est
     Reference Professor: Prof.ssa Mara Bergamaschi
  2. Project title: Accounting and co-production: a study with mixed methods
     Affiliated Institution: Comune di Bergamo
     Reference Professor: Prof.ssa Mariafrancesca Sicilia
  3. Project title: PNRR and contrast to gender inequalities: complexity and intersectionality in the development of public policies in local authorities
     Affiliated Institution: Comune di Bergamo, Provincia di Bergamo, Ufficio della Consigliera provinciale di parità
     Reference Professor: Prof.ssa Barbara Pezzini

- No. 1 financed by Ministerial Decree 351/2022 for the following PNRR research topics:
  1. Project title: Towards a sustainable organization: combining individual well-being, collective well-being, and economic performance
     Reference Professor: Prof.ssa Viviana Meschitti

- No. 1 financed by Ministerial Decree 352/2022:
  1. Project title: Brand management and its evolution in the metaverse
     Affiliated Company: AK Informatica
     Reference Professor: Prof.ssa Daniela Andreini
Prerequisites:

- It is required a Master degree diploma (or equivalent diploma) which has been obtained within the last 5 years from the application date. The final dissertation mark should be 105/110 or above. For the students who are not graduated yet, the average exams mark should be 100/110 or above.
- International students are required to have a qualification equivalent to B2 for the Italian Language.
- International students who have graduated abroad, and who do not have the Supplement Diploma (this option is valid only for the students who have studied in the EU Universities), are required to submit a Declaration of Equivalence, which must be issued by the Italian diplomatic authority in the State where the degree was awarded.

Selection mode:
Assessment of qualifications and interview

Type of estimable qualifications:

Qualification assessments (up to 60 marks):
- curriculum studiorum: up to 20 marks;
- research project (which will be assessed on the basis of the scientific value, originality and articulation of the proposal, consistency with the research themes of the PhD program): up to 40 marks.

Interview (up to 30 marks):
- knowledge of the English language and, for foreign students, also of the Italian language: up to 5 points
- discussion of the research project (assessment of the candidate’s capacity to convincingly discuss project preconditions and goals): up to 15 marks;
- relevance of demonstrated knowledge in the subjects covered by the PhD program: up to 10 marks.

Interview date:
4 October 2022 at 16.15 hours (Italian time). The interview may be held partly in English language. The interview will be carried out in person and can only be carried out by videoconference by candidates residing or domiciled abroad.
PhD in ENGINEERING AND APPLIED SCIENCES

Coordinator: Prof.ssa Alessandra Marini

Scientific Area:  
01 - Mathematics and informatics  
03 – Chemistry  
08 – Civil engineering and architecture  
09 – Industrial and information engineering  
13 - Economics and statistics

Curricula:
- Technologies for Energy and Environment  
- Technologies for the conservation, protection, restoration and environmental sustainability  
- Technologies for computer science, automation and electronics  
- Applied mathematics and statistics

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Scholarships:

- No. 1 financed by Ministerial Decree 351/2022 for the following digital and environmental transitions research topics:

  1. Project title: Development of numerical models for the technical and economic analysis of large energy communities with different power generation technologies  
     Affiliated Institution: ENEA  
     Docente referente: Prof. Giuseppe Franchini

- No. 1 financed by Ministerial Decree 351/2022 for the following PNRR research topics:

  1. Project title: Audible sounds and vascular wall vibrations in arteriovenous fistulae for hemodialysis: A promising new tool for vascular disease surveillance?  
     Affiliated Institution: Istituto di Ricerche Farmacologiche Mario Negri IRRCS  
     Docente referente: Prof. Andrea Remuzzi

- No. 13 financed by Ministerial Decree 352/2022:

  1. Project title: Materials for Hydrogen Service  
     Affiliated Company: SNAM Rete Gas S.p.A.  
     Reference Professor: Prof.ssa Marina Cabrini

Università degli studi di Bergamo  
Scuola di alta formazione dottorale - PhD School  
Via dei Caniana 2, 24127 Bergamo  
bando.dottorati@unibg.it
| Project | Project title: Technologies and methodologies for the continuous improvement of CAD-CAM software  
| 2 | Affiliated Company: DDX S.r.l.  
| 3 | Reference Professor: Prof. Angelo Gargantini |
| Project | Project title: Engineering and validation of systems based on machine learning for causal inferences  
| 3 | Affiliated Company: AlSent Srl  
| 4 | Reference Professor: Prof. Angelo Gargantini |
| Project | Project title: Agile methods for the development of certified medical software  
| 4 | Affiliated Company: W&H Sterilization S.r.l.  
| 5 | Reference Professor: Prof. Angelo Gargantini |
| Project | Project title: Extraction of information using automatic algorithms from patent documentation  
| 5 | Affiliated Company: Trix S.r.l.  
| 6 | Reference Professor: Prof. Angelo Gargantini |
| Project | Project title: Clinical decision support system  
| 6 | Affiliated Company: MediClinics S.r.l.  
| 7 | Reference Professor: Prof. Andrea Remuzzi |
| Project | Project title: Development and validation of a "digital twin" model of reciprocating compressors for the study of the effect on pulsations of different design solutions  
| 7 | Affiliated Company: SIAD Macchine Impianti S.p.A.  
| 8 | Reference Professor: Prof.ssa Giovanna Barigozzi |
| Project | Project title: Innovative cranes with minimal carbon footprint  
| 8 | Affiliated Company: O.ME.FA S.p.A.  
| 9 | Reference Professor: Prof. Valerio Re e Prof. Paolo Righettini |
| Project | Project title: Fault diagnosis and Health Assessment with application to advanced industrial automation  
| 9 | Affiliated Company: Scaglia Indeva S.p.A.  
| 10 | Reference Professor: Prof. Fabio Previdi |
| Project | Project title: Methods for analyzing electricity consumption data and their implementation in multi-platform architectures  
| 10 | Affiliated Company: ABB S.p.A.  
| 11 | Reference Professor: Prof. Giuseppe Franchini |
| Project | Project title: Assembly system management and design criteria based on Industry 4.0 and 5.0 paradigms  
| 11 | Affiliated Company: Cosberg S.p.A.  
| 12 | Reference Professor: Prof. Valerio Re e Prof. Paolo Righettini |
12 **Project title:** Robotic technologies for the production of blood components  
**Affiliated Company:** Delcon S.r.l  
**Reference Professor:** Prof. Davide Brugali

13 **Project title:** Study of innovative configurations of power markets to support the integration of distributed resources and flexible demand into the electricity system  
**Affiliated Company:** RSE S.p.A.  
**Reference Professor:** Prof.ssa Maria Teresa Vespucci

**Selection mode:**  
Assessment of qualifications and interview

**Type of estimable qualifications:**

*Qualification assessments (up to 60 marks):*
- curriculum studiorum: up to 30 marks;
- research project (which will be assessed on the basis of the scientific value, originality and articulation of the proposal, consistency with the research themes of the PhD program): up to 20 marks.
- other qualifications, publications, reference letters from Italian or foreign academics: up to 10 points.

*Interview (up to 30 marks):*
- knowledge of the English language and, for foreign students, also of the Italian language: up to 5 points
- discussion of the research project (assessment of the candidate’s capacity to convincingly discuss project preconditions and goals): up to 25 marks;

**Interview date:**  
3 October 2022 at 09.00 hours (Italian time) possibly continuing on 4 October 2022, depending on the number of candidates participating to the interview.  
The interview may be carried out via videoconference, depending on the Commission judgement, and in Italian.
PhD in HUMAN SCIENCES AND WELFARE INNOVATION

Coordinator: Professor Marco Lazzari

Scientific Area: 11 - History, philosophy, pedagogy and psychology
14 – Political and social sciences

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Scholarships:
- No. 1 financed by Ministerial Decree 351/2022 for the following Public Administration research topics:
  1. **Project title:** Bridging social capital: hybridization processes in socio-health integration
     **Affiliated Institution:** Polis Lombardia – Istituto regionale per il supporto alle politiche della Lombardia
     **Reference Professor:** Prof. Stefano Tomelleri

- No. 3 financed by Ministerial Decree 352/2022:
  1. **Project title:** Augmented reality and use of meta-verse in school-work alternation processes and insertion in productive organizations
     **Affiliated Company:** Associazione Formazione Professionale del Patronato San Vincenzo
     **Reference Professor:** Prof. Giuseppe Scaratti
  2. **Project title:** New profiling tools and new paths of Talent Acquisition and Talent Development
     **Affiliated Company:** Ecolab S.r.l.
     **Reference Professor:** Prof. Andrea Greco
  3. **Project title:** Towards an innovative HRM: generative managerial practices to face new and emerging working and organizational scenarios
     **Affiliated Company:** Fonderie Ariotti SpA
     **Reference Professor:** Giuseppe Scaratti

Prerequisites:
International students are required to have a qualification equivalent to B2 for the Italian Language

Selection mode:
Assessment of qualifications and interview
Type of estimable qualifications:

Qualification assessments (up to 60 marks):
  - curriculum studiorum: up to 20 marks;
  - research project (which will be assessed on the basis of the scientific value, originality and articulation of the proposal, consistency with the research themes of the PhD program): up to 40 marks.

Interview (up to 30 marks):
  - knowledge of the English language and, for foreign students, also of the Italian language: up to 5 points
  - discussion of the research project (assessment of the candidate's capacity to convincingly discuss project preconditions and goals): up to 15 marks;
  - relevance of demonstrated knowledge in the subjects covered by the PhD program: up to 10 marks.

Interview date:
Wednesday 5 October 2022 at 10.00 am (Italian time), by videoconference, eventually continuing on 6 October, depending on the number of candidates participating to the interview.
Platform and address will be communicated by the Commission together with the results of the evaluation of the qualifications.
The interview will be carried out in Italian.
PhD in LINGUISTIC SCIENCES

Coordinator: Prof.ssa Maria Grazia Cammarota

Scientific Area: 10 - Antiquities, philology, literary studies, art history

Curricula:
- General, typological and historical linguistics, philological traditions
- Applied and computational linguistics and linguistics of modern languages;
- Sociolinguistic and pragmatics

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Scholarships:

- No. 1 financed by Ministerial Decree 351/2022 for the following cultural heritage research topics:

  1. **Project title:** Digitization and enhancement of written sources relating to the monastery of Astino
     **Affiliated Institution:** Fondazione Mia
     **Reference Professor:** Prof.ssa Piera Molinelli

- No. 1 financed by Ministerial Decree 351/2022 for the following PNRR research topics:

  1. **Project title:** Enhancement of linguistic and cultural diversity
     **Reference Professor:** Prof. Barbara Turchetta

Selection mode:
Assessment of qualifications and interview

Type of estimable qualifications:

Qualification assessments (up to 60 marks):
- curriculum studiorum: up to 20 marks;
- research project (which will be assessed on the basis of the scientific value, originality and articulation of the proposal, consistency with the research themes of the PhD program): up to 40 marks.

Interview (up to 30 marks):
- knowledge of the English language and, for foreign students, also of the Italian language: up to 5 points
• discussion of the research project (assessment of the candidate’s capacity to convincingly discuss project preconditions and goals): up to 15 marks;
• relevance of demonstrated knowledge in the subjects covered by the PhD program: up to 10 marks.

**Interview date:**
5 October 2022 at 9.00 hours (Italian time). The interview will be carried out in person and in Italian.
PhD in TRANSCULTURAL STUDIES IN HUMANITIES

Coordinator: Prof. Franco Giudice

Scientific Area: 10 - Antiquities, philology, literary studies, art history
11 - History, philosophy, pedagogy and psychology

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Scholarships:
- No. 1 financed by Ministerial Decree 351/2022 for the following Public Administration research topics:
  1. **Project title:** Historical-territorial analysis of the Cultural Heritage of Lombardy’s mountain areas and their sustainable enhancement to overcome the structural criticalities of the territories in a reticular perspective
     **Affiliated Institution:** Consiglio Regionale della Lombardia
     **Reference Professor:** Prof.ssa Federica Burini

- No. 1 financed by Ministerial Decree 351/2022 for the following PNRR research topics:
  1. **Project title:** Visual ecologies: contemporary biodiversity and sustainability
     **Reference Professor:** Prof.ssa Franca Franchi

Additional access requirements:
- For candidates with a qualification obtained abroad, the obligation to submit a certified translation of the degree certificate with the correspondence of the degree mark in cents;
- present a B2 level certification of English, French, Spanish or German or have obtained a degree in Foreign Languages, Literatures and Cultures;
- reference letters presented on headed paper with the autograph signature of the teacher who cannot belong to this PhD college.

Selection mode:
Assessment of qualifications and interview

Type of estimable qualifications:
Qualification assessments (up to 60 marks):
- **curriculum studiorum:** up to 20 marks;
- research project (which will be assessed on the basis of the scientific value, originality and articulation of the proposal, consistency with the research themes of the PhD program): up to 40 marks.
Interview (up to 30 marks):

- knowledge of the English language and, for foreign students, also of the Italian language: up to 5 points
- discussion of the research project (assessment of the candidate’s capacity to convincingly discuss project preconditions and goals): up to 15 marks;
- relevance of demonstrated knowledge in the subjects covered by the PhD program: up to 10 marks.

Interview date:
4 October 2022 at 10.00 hours (Italian time) eventually continuing on 5 October 2022 at 10.00 hours (Italian in time) depending on the number of candidates participating to the interview.
The interview may take place by videoconference based on the commission’s decision. The interview may be held also in the English or French language.
PhD in TECHNOLOGY, INNOVATION AND MANAGEMENT (TIM)

Coordinator: Prof. Renato Redondi

Scientific Area: 09 - Industrial and information engineering

<table>
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Scholarships:

- No. 1 financed by Ministerial Decree 351/2022 for the following PNRR research topics:

  1. **Project title:** Change and sustainability in family businesses: analysis of business strategies and practices  
     **Affiliated Company:** Minelli S.p.A.  
     **Reference Professor:** Prof.ssa Giovanna Campopiano

- No. 10 financed by Ministerial Decree 352/2022:

  1. **Project title:** Numerical modeling of the dynamic behavior of a machine tool  
     **Affiliated Company:** C.M.S. S.p.A.  
     **Reference Professor:** Prof. Gianluca D'Urso

  2. **Project title:** Quantitative methodologies to support decisions in the Product-Service System (PSS)  
     **Affiliated Company:** SMI S.p.A.  
     **Reference Professor:** Prof.ssa Giuditta Pezzotta

  3. **Project title:** Digital Twin and Metaverse  
     **Affiliated Company:** Consorzio Intellimech  
     **Reference Professor:** Prof. Gianluca D'Urso

  4. **Project title:** Intelligent welding systems  
     **Affiliated Company:** COES S.r.l.  
     **Reference Professor:** Prof. Gianluca D’Urso

  5. **Project title:** Development of digital tools for machine configuration and optimization of manufacturing processes  
     **Affiliated Company:** Gildemeister Italiana S.r.l.  
     **Reference Professor:** Prof. Gianluca D’Urso
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<th>Project title:</th>
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<td>6</td>
<td>Definition of an organizational information management system to support product development and innovation processes</td>
<td>Itema S.p.A.</td>
<td>Prof. Matteo Kalchschmidt</td>
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<td>7</td>
<td>New models of technology transfer and Open Innovation for the development of an innovation ecosystem in Bergamo</td>
<td>Confindustria Bergamo</td>
<td>Prof. Matteo Kalchschmidt</td>
</tr>
<tr>
<td>8</td>
<td>Development of “intelligent” manufacturing systems for the automation of control / measurement and real-time correction of production parameters</td>
<td>AcciaiTubi S.p.A.</td>
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<td>9</td>
<td>Definition of a business intelligence system to support strategic decisions</td>
<td>Radici Yarn S.p.A.</td>
<td>Prof. Matteo Kalchschmidt</td>
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<td>10</td>
<td>Methods and tools for the digitization of operations in SMEs</td>
<td>Pinetti S.r.l.</td>
<td>Prof. Roberto Pinto</td>
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</table>

**Contracted structures:** University of Naples “Federico II”

**Selection mode:**
Assessment of qualifications and interview

**Type of estimable qualifications:**

*Qualification assessments (up to 60 marks):*
- *curriculum studiorum:* up to 20 marks;
- research project (which will be assessed on the basis of the scientific value, originality and articulation of the proposal, consistency with the research themes of the PhD program): up to 40 marks.

*Interview (up to 30 marks):*
- knowledge of the English language and, for foreign students, also of the Italian language: up to 5 points
- discussion of the research project (assessment of the candidate’s capacity to convincingly discuss project preconditions and goals; evaluation of the candidate’s aptitude for scientific research): up to 25 marks;

**Interview date:**
6 October 2022 at 9.00 hours (Italian time) eventually continuing on 7 October 2022, depending on the number of candidates participating to the interview.
The interview may take place by videoconference, based on the decision of the commission. The interview will be held in English.
THE CHANCELLOR
(Professor Sergio Cavalieri)
Documento firmato digitalmente ai sensi dell’art. 24 del D. Lgs. 82/2005