PhD Programme Table - 39th cycle
Call for Applications for further PhD positions funded by Next Generation EU - NRRP ex M.D. 117/2023 and 118/2023 and from other sources - PhD Programmes (39th cycle) A.Y. 2023/2024

Section "Available Positions and Scholarships" integrated on 20/07/2023

PROGRAMME'S NAME	STATISTICAL SCIENCES
DURATION	3 years
PROGRAMME START DATE	01/11/2023 (DD/MM/YYYY)
LANGUAGES	Italian, English
COORDINATOR	Prof.ssa Monica Chiogna (monica.chiogna2@unibo.it)
PhD POSITIONS	2
ADMISSION PROCEDURE	Qualifications evaluation Oral examination

Available Positions and Scholarships

Pos. n.	Financial Support	Description	Positions linked to research topics
1	*PhD Scholarship PNRR ex M.D. 117/2023*	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 2, Investment 3.3 (M.D. 117/2023) and by Istituto Ortopedico Rizzoli	Development of computational medical technologies and data analysis
2	*PhD Scholarship PNRR ex M.D. 118/2023 - Public Administration*	Funded by the EU - NextGenerationEU with funds made available by the National Recovery and Resilience Plan (NRRP) Mission 4, Component 1, Investment 4.1 (M.D. 118/2023) - Public Administration	Spatial modelling approaches to climate finance and sustainable transition goals

The number of positions and scholarships may be incremented in case additional funding becomes available, notwithstanding the terms of the application process as detailed in Art. 3 of the Call for Applications. Any amendment, update or integration of the Programme Table will be published, even after the Call for Applications has expired. Any further PhD positions shall be integrated in the PhD Programme Table within ten days before the oral examination.

All PhD positions winners shall fulfill the learning and research obligations decided by the Academic Board and the obligations foreseen in the relevant regulations, funding schemes and eventual agreements, and in the Call for Applications. Moreover, applicants awarded with PhD scholarships funded by Next Generation EU shall fulfill specific obligations foreseen in the relevant funding scheme, in the relevant regulations and in the Call for Applications.

Admission Exams

	DATE AND TIME	RESULTS
Qualifications evaluation	Applicants' participation is not required	Available from **01/09/2023****
Oral examination	**Date**: starting from **04/09/2023 – 9.00 a.m. CEST*** **Place**: In presence, Department of Statistical Sciences "Paolo Fortunati", Via Belle Arti 41, Bologna. Remotely, using Microsoft Teams	Available from **08/09/2023****

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* 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 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 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	
Identity document	Valid identity document with photo (i.e. identity card, passport)
Curriculum Vitae	The Curriculum Vitae must be drawn up using exclusively the **Curriculum Vitae form**, in Attachment 1 to the present PhD programme table and downloadable in .docx from the University Website (select the PhD Programme → "*More information*", then check "*Notices*" at the bottom of the page). **A 5 points penalty on the total qualification evaluation score shall be applied to applicants not using the attached form**.
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)
SUPPORTING DOCUMENTS	
Thesis abstract	Abstract of the **second cycle degree thesis**. Graduands applicants may submit an abstract of their thesis' draft. Abstracts cannot exceed 5 pages, including references and images such as graphs, diagrams, tables etc. – if present. Applicants awarded a second cycle degree in a foreign university, where the research thesis was not part of the programme, shall submit a **research proposal** (max 5 pages, including references and images such as graphs, diagrams, tables etc. – if present).
Reference letter/s	**No more than 1 reference letter, drawn up using the Reference Letter form**, in Attachment 2 to the present PhD programme table and downloadable in .docx from the University Website (select the PhD Programme → "*More information*", then check "*Notices*" at the bottom of the page). The letter shall be signed by Italian and international academics and professionals in the research field, which do not form part of the Admission Board, and shall attest 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).
Publications	Full text publications, as listed in the Curriculum Vitae (i.e. monographs, articles on scientific journals). Publications with ISSN or ISBN only, and relevant to the PhD programme, shall be evaluated.
Other documents	Documents showing the applicant is in possession of the qualifications listed in the Curriculum Vitae: - periods of study abroad, completed by applicants outside their countries of origin (e.g. Erasmus programme or other similar mobility programmes) - tutorship activity carried out at academic level - internship in scientific institutions or Research Assistantship - research grants or postgraduate scholarship payed by a University or other research institution - relevant work activity - relevant prize awards - TOEFL/CAE/CPE/IELTS or other language proficiency certificate - other qualifications attesting the suitability of the applicants

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: 35 points, Maximum score: 50 points

Academic path, assessed according to the relevance to the PhD programme's main topics	**5 points max** distributed as follows: - 0 points: no relevance - up to 3 points: partial relevance - up to 5 points: full relevance
Main topics exams (see point 3, in the Curriculum Vitae form)	**24 points max** distributed as follows: - up to 2 points for each relevant exam listed in the CV - up to 14 points for the average mark for the selected exams
Publications	**2 points max**
Other documents	**6 points max** distributed as follows - up to 2 points for vocational activity (study periods abroad, tutoring activity) - up to 2 points for internship in scientific institutions or Research Assistantship - up to 2 points for research grants or postgraduate scholarship payed by a University or other research institution - up to 2 points for relevant work activity - up to 2 points for relevant prize awards - up to 2 points for TOEFL/CAE/CPE/IELTS or other language proficiency certificate - up to 1 point for other study or research qualification
Further evaluation elements	**13 points max** distributed as follows: - up to 3 points for the reference letter - up to 10 points for the thesis abstract (or research proposal)

2. Oral examination
Minimum score for eligibility: 30 points, Maximum score 50 points

General knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions	40 points max
Personal statement	10 points max

Oral examination aims to assess the suitability of the applicant for scientific research as well as the general knowledge of the PhD programme's main research topics and of the research topics linked to the available PhD positions.
The oral examination is carried out in English.

Suggested readings for the interview:
- Casella, G., & Berger, R. L. (2002), *Statistical inference (Vol. 2)*. Pacific Grove, CA: Duxbury.
- Mood A. Graybill F.A., Boes D.C. (1974), *Introduction to the Theory of Statistics*, McGraw Hill College.
For further details, see https://phd.unibo.it/statistics/en/admissions

* Possible further evaluation criteria will be available on the University website, selecting the relevant PhD Programme > "More information".

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Allegato 1

CURRICULUM FOR APPLICATION TO THE PHD COURSE IN STATISTICS
UNIVERSITY OF BOLOGNA – A.Y. 2023/24

NAME:

_____   _____
Surname   *Name*

1. IDENTIFY YOUR CURRENT POSITION

Write the position which best describes the activity in which you are currently involved.

_____

_____

2. LIST EDUCATIONAL INSTITUTIONS ATTENDED, IN REVERSE CHRONOLOGICAL ORDER, INCLUDING THE ONE(S) WHERE YOU ARE CURRENTLY ENROLLED.

INSTITUTION AND LOCATION *(List in reverse order. Write name in full. Do not abbreviate)*	MAIN FIELD(S) OF STUDY	DATES (Monthly/Year) From	To	NAME OF QUALIFICATION, TITLE CONFERRED and GRADE	DATE OF ATTAINMENT (or expected date if not attained yet)

Instructions for foreign students:
Do not try a conversion of your university grading scale. Indicate the grades as granted by your school and give us a brief explanation of your school's grading system. Please describe the grading system(s) used at all colleges and universities you have attended.
Explain the specific meaning of any numeric values, letter grades, and rankings.

3. RECORD OF COURSES TAKEN IN PREPARATION FOR GRADUATE STUDY

*Based on your transcript(s), please complete the following summary of your college and university classes. In particular, you are required to list the **five courses** that you consider most relevant to certify basic knowledge in Mathematics, Probability and Statistics.*

Instructions for foreign students:

Do not try a conversion of your university grading scale or GPA. Indicate the grades/GPA as granted by your school and give us a brief explanation of your school's grading system. Please describe the grading system(s) used at all colleges and universities you have attended. Explain the specific meaning of any numeric values, letter grades, and rankings.

Course name (and number, if available)	Principal teaching material used (if any book indicate author and title)	Year taken	Credits	Official course grade (if applicable)

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4. LIST ANY PUBLICATIOS AUTHORED BY YOU, ESPECIALLY IN YOUR PROPOSED FIELD OF STUDY

Give title, place, date, and all authors of publication (Only publications with ISSN or ISBN a relevant for the PhD course will be evaluated).

5. LIST SCHOLARSHIPS OR FELLOWSHIPS HELD AT PRESENT OR IN THE PAST FOR STUDY

Give source or sponsor, amount, place and duration, for instance: ERASMUS Scholarship, 6 months, University of Aarhus.

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6. TEACHING OR TUTORING EXPERIENCE

Indicate any teaching qualification, teaching or tutor position you have hold or you are currently holding.

7. RESEARCH ASSISTANTSHIPS OR INTERNSHIP AT SCIENTIFIC INSTITUTIONS

Indicate place, duration and a brief description of the research activity developed during the internship.

8. RESEARCH GRANTS OR SCHOLARSHIPS FOR RESEARCH

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Indicate any grants, scholarships for research you have completed or in which you are currently involved. Give source or sponsor, amount, place and duration.

9. WORK EXPERIENCE

List the positions held, beginning with the most recent employment.

NAME AND ADDRESS OF THE EMPLOYER	TITLE/TYPE OF WORK	DATES (Month/Year)	
		From	To

10. INDICATE ANY ACADEMIC HONOR OR PRIZE WHICH YOU HAVE RECEIVED, WITH TITLES AND DATES

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11. LANGUAGE SKILLS

Rate yourself Excellent, Good, Fair or Poor. Include all languages in which you have some competence.

Mother Tongue_____

LANGUAGE	READING	WRITING	SPEAKING
English			
Italian			

Language certifications

TOEFL: Date taken: _____ Scores: _____

IELTS: Date taken: _____ Scores: _____

_____   Date taken: _____ Scores: _____

_____   Date taken: _____ Scores: _____

12. FURTHER TITLES OR RESEARCH ACTIVITIES

Include any further significant activity or research stage experience you have completed or in which you are currently involved.

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13. SCHOLARSHIPS - Expression of interest

*Should the Course advertise special topics grants, candidates must indicate whether they intend to compete exclusively for scholarships that are not linked to any special topic. Candidates intending to compete for special topics positions should indicate their order of preference - limited to the topics of interest. Preferences expressed in this section will provide an indication of the candidate's interests and **will not be binding**.*

Do you intend to compete exclusively for scholarships that are not linked to any special topic?

[   ] Yes   [   ] No

Please, express your order of preference for the special topics you intend to consider (see the call for titles).

1.

2.

3.

4.

…

SIGNATURE:_____ DATE: _____

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Allegato 2

CONFIDENTIAL LETTER OF REFERENCE
FOR APPLICATION TO THE PHD COURSE IN STATISTICS
UNIVERSITY OF BOLOGNA – A.Y. 2023/24

(to be filled either in English or in Italian)

This letter of reference must be written by an instructor under whom the applicant has studied or pursued research in the proposed field of study or by someone who has supervised the applicant in work related to the proposed field of study. This letter must be signed, and uploaded.

NAME OF APPLICANT _____

NAME OF REFEREE _____

TITLE _____

INSTITUTION OR COMPANY _____

CITY AND COUNTRY _____

1. HOW LONG HAVE YOU KNOWN THE APPLICANT? _____

2. IN WHAT CAPACITY HAVE YOU KNOWN THE APPLICANT?

   [ ] Instructor or Professor   [ ] Employer or Job Supervisor

   [ ] Research Advisor   [ ] Other (Please specify) _____

3. IN THIS RATING CHART, PLEASE EVALUATE THE APPLICANT COMPARED TO OTHER STUDENTS THAT YOU HAVE KNOWN DURING YOUR PROFESSIONAL CAREER

	Excellent	Very Good	Average	Below Average	Not Applicable
Intellectual ability					
Knowledge of field					
Work habits					
Motivation to pursue graduate study					
Seriousness of study					
Potential for significant future contribution in field					
Resourcefulness and initiative					
Emotional maturity					
Adaptability to new situations					
Leadership qualities					
Teaching potential					

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4. HOW DOES THIS APPLICANT COMPARE WITH HIS OR HER PEER GROUP IN ACADEMIC ABILITY?

[ ] Truly exceptional
Equivalent to the very best you have known – a person who, in your experience, appears only every few years

[ ] Outstanding
Comparable to the best student in a current class

[ ] Well above average
Top 25%

[ ] Above average
Demonstrated high ability

[ ] Average
Able to complete work to the PhD

[ ] Below average
Lower 50%

[ ] Inadequate
Opportunity to observe

5. IN YOUR OPINION, HOW WOULD THIS STUDENT COMPARE TO OTHER STUDENTS IN THE GRADUATE PROGRAMME IN STATISTICS?

[ ] Truly exceptional

[ ] Outstanding

[ ] Well above average

[ ] Above average

[ ] Average

[ ] Below average

[ ] Inadequate

6. PERSONAL EVALUATION OF THE APPLICANT. WHAT PARTICULARLY QUALIFIES THIS STUDENT FOR A PHD IN STATISTICS? INFORMATION ABOUT ACCOMPLISHMENTS IN RESEARCH OR INDEPENDENT PROJECTS WILL BE PARTICULARLY HELPFUL. IF YOU KNOW OF OTHER STUDENTS WHO HAVE ENTERED THE BOLOGNA PhD PROGRAMME, A COMPARISON WILL BE ESPECIALLY VALUABLE.

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7. EXPERT'S DATA
   We would be most grateful if you could provide us some information on your cv.

   PERSONAL WEB PAGE_____

   EDUCATION _____
   _____
   _____

   CURRENT POSITION _____
   _____
   _____

   FIELD OF EXPERTISE _____
   _____
   _____

   ADVISED PHD STUDENTS (NUMBER OF)_____
   _____
   _____

   RESEARCH PAPERS (MAX 5) IN ISI REFEREED JOURNALS

   SIGNATURE:_____ DATE: _____

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