

Call for 22 PhD Positions (17 fully granted) in Architecture, Built Environment and Construction Engineering (ABC-PhD): Some Tips for Application

The call

We call for applications to 17 funded PhD studentships and 5 places without scholarship in the *Architecture, Built Environment and Construction Engineering* (ABC) PhD Program: a three year, full time, research-based, training program that includes a complementary series of Courses and the development of a PhD thesis, to be defended in a Final Exam.

Who are we?

We are a fluid, adaptive, unique PhD Program, training more than 120 international early stage researchers, supported, reviewed and assessed by more than 150 academics, all together, in a strict connection with their stakeholders, investigating (and learning how to investigate) and answering to research questions about the Built Environment.

ABC-PhD Program has been certified as an Innovative, International, Interdisciplinary and Inter-Sectorial Doctoral Course by the Italian Ministry of Education, University and Research.

What does our students do?

More up-to-date information about us and our activities can be retrieved at:

<https://beep.metid.polimi.it/web/abcphd/home>

Desired skills and experience

We are searching for talented candidates with strong analytical and (qualitative and quantitative) methodological skills, who are eager to engage in research projects of relevance for both industry and academia.

Our Doctoral Program offers a personalized study plan to reflect the training and research needs of the student, while capitalizing on the strengths of our faculty. Candidates will have the opportunity to generate and publish research with faculty mentors and receive active support in conducting their own research.

The attainment of the PhD title in Architecture, Built Environment and Construction Engineering requires full time study and research activity of three years.

The scholarship covers tuition fees, office space, access to library, software and access to databases.

Candidates are offered their own research budget for travelling and they receive additional funds for study periods in top foreign universities.

Opportunities of teaching and tutoring MSc students are also foreseen.

Seventeen fully-granted scholarships will be available, with official start on November 2020. These scholarships are divided in two groups:

1. Twelve scholarships will be assigned according to the Department's research lines where priority will be given to the following topics:

- “Advanced Materials and Modelling for Constructions”
- “The post-breakage response of laminated glass”
- “BEPI-BOOST – Building envelope performances and innovation boost”
- “The impact of innovative industrialised technologies on the BIM-based information workflow across the life cycle of high-performance buildings”
- “Technology driving innovations towards a knowledge-based building industry and process”
- “Environmental impact mitigation, resilience and life cycle approach”

- “Adaptive Systems and Resilience of Public Space Architecture”
- “Critical Reconstruction and the City”
- “Energy Efficiency of Cultural Heritage in the Mediterranean Climate”
- “Cognitive and Behavioral Aspects related to the use of Geographic Maps in Assessment, Decision and Land Planning Processes”
- “Energy Efficiency of Hospitals”
- “Resilience of Buildings for Health during maxi-emergency scenarios. Evaluation and Decision-Support Models for Strategic Organization of Hospital Structures”
- “Built environments as incubators of 4.0 technological transformations”

When you apply to a generic Scholarship, you will not find these “oriented” topics to be selected. This list is only useful to address your research proposal to follow the main research interest of ABC Department. Of course, you are also free to propose topics in other research lines, but compliant with ABC Department (see https://beep.metid.polimi.it/web/abcphd/research_lines).

2. Five scholarships will be assigned on the following predefined topics:

- “Virtual Recontextualisation of Archaeological Remains: from Theory to Practice”
- “Activation of co-design and solution sharing processes for construction of inclusive spaces for the city of Mantua”
- “Campioni di laboratorio provenienti da opere d'arte e il loro riutilizzo per nuove analisi: verifiche metodologiche su attendibilità e georeferibilità dei dati, e loro integrazione con altre tecniche d'indagine per la gestione della conoscenza nel tempo. L'Archivio Gallone” (interdisciplinary research with PhD Programme on Physics at Politecnico di Milano)
- “Smart city approach for neighborhood social housing” (interdisciplinary research with PhD Programme on Urban Planning, Design, and Policy at Politecnico di Milano, DASTU Dept.)
- “Machine learning for the construction sector” (completely supported by Jacobs S.p.a.)

When you apply to one of these Thematic Scholarship, you will have to select one (or more) of them.

Five positions without scholarship will be assigned on research topics proposed by candidates but compliant with the research lines of ABC Department (see a description at: https://beep.metid.polimi.it/web/abcphd/research_lines)

For detailed information about the call and the application portal: (see <http://www.dottorato.polimi.it/en/looking-for-a-phd/call-for-positions-and-scholarships/>).

Some suggestions for the applicants

The following suggestions, such as everything in this document, is aimed at supporting the applicants to this Call for PhD positions. The Official Regulations of the Call published at the website mentioned above are the only lawful reference. We do not respond about any misunderstandings due to a wrong interpretation of what we report here.

1. *How can you apply?*

The application can be accomplished only by using the online portal (see above).

2. *Documents to submit in your application:*

In addition to the administrative documents and certificates required (see the official call), the Applicants will be scrutinized on the basis of the following documents:

- Personal CV: your CV should contain the whole information needed to evaluate your attitude to do research and your previous experiences and achievements. All items and activities related to these aspects should be clearly highlighted in your CV. The use of Europass format is recommended. The evaluation of your CV will take into account the time passed from your graduation up until the application: the longer is this time, the higher is the expectation in terms of scientific experiences and achievements;
- Motivation letter: please quickly explain why you have decided to apply to the ABC-PhD programme and why you have selected a specific topic. Please list your personal skills that should convince the Selection Committee to prefer you to other applicants;
- Research Project: the main aim of this document is to demonstrate your preliminary attitude to do research, to be developed and trained during the PhD. The Research Project is valid at the application-time only, and it will not constrain any future directions, to be decided together with your supervisor, once you are selected. When you apply to a Thematic Scholarship, your proposed Research Project should be driven by the specific topic of the Scholarship itself. When you apply to a Generic Scholarship, you are free to submit a Research Project on a topic compliant with the main research lines of ABC Department (see https://beep.metid.polimi.it/web/abcphd/research_lines); on the other hand the Board of Professors of ABC-PhD has defined some oriented research lines that should help the Applicants to prepare their proposals.

The difference between Generic and Thematic scholarships:

First of all, when you apply to this call, you're automatically in the list of candidates for Generic Scholarships. In addition, you may select to apply for a Thematic Scholarship. You may also apply to more than one Thematic Scholarship, but remember these two points:

- You can submit one project only! So it's difficult that the same project may fulfill the topics of multiple Thematic Scholarships...
- The Generic Scholarships (all together) and each Thematic Scholarship will have different final rankings: this means that if you are selected for a topic and you give up, you will not be allowed to transfer to another Scholarship, unless you have been ranked as first there as well.

Another important difference is that in the Thematic Scholarships the topics are constrained. In the Generic Scholarships, a list of "oriented" topics has been listed in this document to provide some preferential topics for the applicants.

Positions without scholarships:

When you apply to the Generic Scholarships, the first 12 in the list will be granted a Scholarship. The next 5 in the list will be proposed for positions without scholarship. In the case one of the candidates not selected for a scholarship gives up, her/his position will be replaced by the first one in the list of candidates without scholarship.

Consequently, positions without scholarships are not directly applicable.

Agreement with other universities:

There is the option to establish joint-PhD or double degree with other universities (see <http://www.dottorato.polimi.it/en/looking-for-a-phd/international-programmes/double-and-joint-phd/index.html>). These agreements are established by the Board and the PhD School of Politecnico Milano before you apply. In the case you would like to establish one new agreement, first you have to apply and get the position. In a second stage we will be able to work on that agreement.