BUILDING &
ARCHITECTURE
INSTITUTE

BAI PROGRAM OF ACTIVITIES
SEPTEMBER–DECEMBER 2025

BUILDING & ARCHITECTURE INSTITUTE

BAI program of activities

September–December 2025

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Schedule
September–December 2025

SEPTEMBER

FRIDAY 19

ETSAUN MASTERCLASS

OCTOBER

TUESDAY 21 - FRIDAY 24

M-ZERO BAI I WORKSHOP

NOVEMBER

TUESDAY 4 - THURSDAY 6

M-ZERO BAI II WORKSHOP

TUESDAY 18 - THURSDAY 20

1ST BAI SYMPOSIUM

THURSDAY 20

M-INDUSTRY

ETSAUN MASTERCLASS

The aim of the masterclasses at ETSAUN is to present BAI and its Postgraduate Program to the academic community of Navarra and to promote its training and research opportunities among potential interested students. The potential audience at ETSAUN is primarily recent graduates who intend to begin their studies in the Master's Degree in Architecture.

DATE & LOCATION

September 19th
Escuela Técnica Superior de Arquitectura de la Universidad de Navarra

PROFESSORS

Francisco Mangado
Extraordinary Professor at ETSAUN and Academic Director of the BAI Program

M-ZERO BAI WORKSHOPS

M-Zero is BAI's first workshop aimed at architects, industrial engineers, and other professionals in related fields, who believe that technology is not an end in itself, but a means to promote architectural excellence. During M-Zero, a large team of internationally renowned professors, lecturers, and engineers will train participants to program a robot that collaborates with designers to create a living space defined by criteria of innovation and robotization but endowed with recognizable and largely replicable environmental qualities.

M-Zero will serve as an introductory course to Workshop 1 of the BAI Postgraduate Program, which aims to create a research and praxis environment that fosters creative interaction between architecture and industry through design. This module will provide students with intensive and specific training in the use of systems and instruments linked to the new paradigm of 'digital craftsmanship', from 3D printers to robotic arms, including computational design software and other methods of industrialization, prefabrication, and execution control. The relationship with technology will not be approached from the perspective of simple adaptation or even submission to technology, but rather from the pragmatic and ethical control of technology through architecture. The fundamental question would be, how can we harness the potential of new technologies from and for design, that is, to improve people's lives?

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M-ZERO BAI WORKSHOPS

Professor Andrea Deplazes of ETH Zurich and the BAI Academic Director will mentor students' projects in the workshop. Through direct and fruitful dialogue with Professor Deplazes, participants will become familiar with the process of installing, programming, commissioning, and operating robotic arms. They will also understand the potential of new technologies for developing high-quality, contemporary projects.

In the first edition of M-Zero, wood is the primary working material. Its performance, formal and geometric possibilities, constructive capabilities, and environmental behavior will be studied. Based on these characteristics and new technologies in computational design and digital manufacturing, spatial prototypes will be developed in two intensive, four-day sessions.

The workshop will take place in the unique historical setting of the Arms Room at the Citadel of Pamplona. Built in the 19th century, this venue will serve as the backdrop for discussing the innovative, transformative, and social ideas underlying the BAI project. Workshop participants' work will subsequently be exhibited at the First BAI Symposium, which will be held from November 19 to 21 in Pamplona.

Attending M-Zero and the First BAI Symposium will officially recognize participants as students of the BAI Postgraduate Program and grant them credit for Workshop 1, which focuses on design, innovation, and new technologies.

KEY FACTS ABOUT THE M-ZERO BAI WORKSHOPS

DATE, LOCATION & PROGRAM

M-Zero/Workshop 1

October 21st-24th
Arms Room of the Citadel of Pamplona
Professor Andrea Deplazes will introduce participants to computational design and robotic manufacturing through an architectural exercise.

M-Zero/Workshop 2

November 4th-6th
Arms Room of the Citadel of Pamplona
The best designs from the first phase will be developed and manufactured on a large scale with the help of a robotic arm. These projects will then be exhibited at the 1st BAI Symposium.

PROFESSORS

Andrea Deplazes
Extraordinary professor at ETH Zurich and Research Director of the BAI Program
Jonathan Benhamu
BAI Research Assistant
Jesús Medina
Architect-specialist in robotic construction at ETH Zurich & professor of BAI

MAXIMUM NUMBER OF PLACES

20

ENROLLMENT

Full scholarships covering the cost of the course will be awarded. Interested individuals should apply for enrollment at **programabai@bai-institute.es** before September 30.

RECOGNITION OF CREDITS

Participation in the course will result in the recognition of credits for the first semester of Workshop 1 (Design-Innovation-New Technologies) of the BAI Postgraduate Program, and the official recognition of participants as official BAI students.

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1ST BAI SYMPOSIUM

The BAI Institute, funded by the Government of Navarra, the Ministry of Housing and Urban Agenda, the Ministry of Industry and Tourism, and other institutions, is a National Reference Center for Industrialization, Robotization, and Innovation in Construction and Architecture. The BAI Institute's main objective is to conduct research on innovative technological systems applied to architecture and engineering and to provide training to architects, engineers, and construction professionals through cutting-edge design and construction methods. This effort aims to prepare companies and technicians at all levels, from vocational training to postgraduate studies, to respond to contemporary societal demands.

The BAI Institute conducts research in two complementary ways: first, by developing innovative solutions in partnership with qualified companies in the sector, and second, by designing real, innovative buildings or interventions on an architectural and urban scale within an "Advanced Projects Laboratory." Both approaches aim to leverage new technologies in innovative, critical, and humanistic ways to construct the best possible buildings, infrastructures, and cities within contemporary societies, which are more changeable than ever before.

Based on these premises, the First BAI Symposium aims to raise awareness of the principles that structure the National Center for Robotization and Innovation in Architecture. The symposium also aims to promote debate on the relationship between technological innovation, architecture, and the city. It will raise open questions that require open, holistic, critical, and transversal approaches. The symposium will provide a platform for architects, engineers, technologists, sociologists, economists, politicians, and other civil society representatives to raise critical questions within five interrelated fields of debate. These fields will shape the structure of the symposium and reproduce the formative structure of the BAI Program, which is based on five teaching and research modules: Design-Innovation-New Technologies; Environment-Construction-History; Thought-Criticism-Project; City-Economy-Society; and Advanced Projects Laboratory.

The First BAI Symposium, held over three days in Pamplona, will also feature the presentation of innovation projects developed by the inaugural cohort of students from the National Robotics Center during the M-Zero workshops (October–November 2025).

KEY FACTS ABOUT THE 1ST BAI SYMPOSIUM

DATE & LOCATION

November 18th-20th
Arms Room of the Citadel of Pamplona

DIRECTORS

Francisco Mangado
Extraordinary Professor at ETSAUN and Academic Director of the BAI Program
Eduardo Prieto
Professor at ETSAM-UPM and Technical Director of BAI

REGISTRATION

Admission is free until the venue reaches full capacity.

RECOGNITION OF CREDITS

Those enrolled in the BAI Program who participate in the symposium will receive proportional credit for Modules 2, 3, and 4.

PROGRAM

TABLE 'Thought-Criticism-Project'
At the BAI Institute, technology is critically studied to understand the architect's role and its relationship with thought and technique.

TABLE 'City-Economy-Society'
The BAI Institute promotes critical training to address the social, urban, and economic challenges shaping contemporary architecture.

TABLE 'Design-Innovation-New technologies'
BAI seeks to integrate ethics and technology to enhance architectural design and improve people's lives.

TABLE 'Environment-Construction-History'
The roundtable will examine how environment and innovation have guided architecture's evolution through history.

TABLE 'An Atlas of Contemporary Architecture'
The BAI project integrates knowledge to promote architectural innovation and industrialization through collaborative, real-scale experimentation.

more information on the following page >>

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TABLE 'Thought-Criticism-Project'

At the BAI Institute, technology will be critically evaluated from cross-disciplinary and humanistic perspectives. This broad temporal approach allows for a better understanding of the architect's role today, past and present architectural thought, the fundamentals of architectural criticism, the relationship between thought and action, and the relationship between architecture and technology.

TABLE 'City-Economy-Society'

What are the demands of contemporary society? What about today's cities? What are their economic principles? How can architectural projects be approached from the perspective of social challenges? From the perspective of management? These are questions that require knowledge that is currently lacking in architectural training. That is why the BAI Institute has given them special importance in its program, and why they will also be addressed at the fourth roundtable of the First BAI Symposium. The symposium will present the complex and changing reality surrounding architects today. This reality must be understood in detail to accurately shape responses and give meaning to formal and technical work. Otherwise, it risks falling into a vacuum or becoming diluted into uncritical positions.

TABLE 'Design-Innovation-New Technologies'

One of the BAI Institute's fundamental objectives is to create an environment that fosters creative interaction between architecture and industry. The first panel of the First BAI Symposium will critically evaluate new tools associated with the "digital craftsmanship" paradigm, including 3D printers, robotic arms, computational design software, and other methods of industrialization, prefabrication, and execution control. Rather than approaching the relationship with technology from the perspective of simple adaptation or submission, the symposium will explore the pragmatic and ethical control of technology through architecture. The fundamental question is: How can we harness the potential of new technologies for design to improve people's lives?

TABLE 'Environment-Construction-History'

This roundtable discussion will focus on how construction methods, systems, and materials have evolved over time to enable the creation of exceptional architecture. Special attention will be given to environmental and energy considerations, not merely as concepts linked to economic sustainability, but as ideas that have led to valuable design solutions. We will critically analyze aspects of the environmental and construction history of architecture, as well as the avant-garde trends currently shaping architecture from environmental and construction perspectives. Our goal is to establish a fruitful dialogue between different solutions and historical moments, and to pursue a deep understanding of construction innovations.

TABLE 'An Atlas of Contemporary Architecture'

The architecture project at BAI will synthesize all imparted knowledge and function as an open, cross-disciplinary workshop. Students will participate in ongoing projects, working alongside architects, engineers, technicians, and industrialists. Through 1:1 scale models, students will work as if in a testing laboratory for innovative solutions inspired by the Institute. These solutions will seek constructive, environmental, economic, and social endorsement in reality. Based on this premise, the final panel of the first BAI symposium will discuss valuable experiences in architectural innovation and industrialization from the perspective of those involved.

M-INDUSTRY

M-INDUSTRY is a meeting where architects and industrial engineers discuss the implementation of robotics in design. They also assess the technical and specialized suitability of proposals developed during the M-ZERO workshop and presented at the 1st BAI Symposium. The meeting consists of two parts. The first part is dedicated to the exchange of knowledge and experiences among leading figures and companies in architecture and industrial engineering. The second part is dedicated to analyzing the prototype built during the M-ZERO workshop to assess how it could be further developed from an industrial and detailed perspective.

DATE & LOCATION

Thursday afternoon, November 20
Arms Room of the Citadel of Pamplona

PARTICIPANTS

Jesús Medina
Architect-specialist in robotic construction at ETH Zurich & professor of BAI
Phenomenon Robotics representative
Representative of the Department of Industrial Engineering, Computer Science, and Telecommunications at the University of Navarra (UPNA)

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