University
Master’s Degree in
Biodigital
Architecture
The University Master’s Degree in Biodigital Architecture was set up in the year 2000 and it became the first programme to deal with architecture as understood from a biological and a digital point of view. It was a pioneering programme since it systematically brought together the founders of digital organicism, a new cutting edge concept for the 21st century. Therefore, within the context of the Genetic Architecture line of research, concepts were developed from a new cybernetic-digital and ecological-environmental perspective. These included genetic and generative concepts in the biological and digital world, emergency concepts, biomimesis, biolearning, morphogenesis, etc. It also involved experimenting with genetic motor software, evolutionary processes, emerging systems, algorithms, and scripting, etc. New technologies have brought us new production opportunities (Data-Driven Production, CNC numerical control machines, 3D printers) which lead to formulations for a new non-standard type of architecture, based on genetic principles (variation, mutation and hybridisation). It is a new type of architecture for this new era.

Academic accreditation
A University Master’s Degree, which can subsequently lead on to a doctoral programme.

Centro responsable
School of Architecture, UIC Barcelona Barcelona campus

Dates and timetable
— In November and December 2015 students can undertake a voluntary preliminary study which involves learning a specific list of books, articles and software manuals
— Between 7 January and 30 June 2016: a full-time work programme, daily face to face classes (from 9am to 9pm).
— Final presentation of the Master’s dissertation: 30 September 2016

Incoming students
University degree holders in the areas of Architecture, Engineering, Fine Arts, Design, Landscaping, Biology and Genetics (no prior specialised knowledge in cybernetics or ecology is necessary).

Facilities
A digital manufacturing laboratory and a genetics laboratory.

Job Opportunities
Architecture, Engineering, Design, Art, Teaching and Research.

The most advanced digital technology applied to architecture along with biology-based knowledge, opens up a new market that is yet to be explored. There is a wide range of job opportunities in this new market.

Academic teaching staff
Programme Directors and Coordinators
Alberto T. Estévez

Teaching Body
We have an international teaching body which has made significant contributions to this new cutting-edge field of biodigital architecture.

Teaching staff, other staff members and conference speakers from previous editions:
Ezio Blasetti
Mark Burry
Bernard Cache
Karl S. Chu
Josep Corcó
Mauro Costa
Matías del Campo
Dennis Dollens
Evan Douglis
Alberto T. Estévez
Agustí Fontarnau
Mark Goulthorpe
Maruan Halabi
Michael Hensel
Neil Leach
Pablo Lorenzo-Eiroa
Duncan Lewis
Greg Lynn
Sandra Manninger
Achim Menges
Marcos Novak
Kas Oosterhuis
Affonso Orquiodi
Ignasi Pérez Arnal
François Roche
Lars Spuybroek
Judith Urbano
Mike Weinstock
Objectives

The programme’s specific academic objectives aim to initiate students into the application of new biological and digital architectural techniques, from genetics to architecture. This is undertaken from two different perspectives: cybernetic-digital and ecological-environmental.

Specific competences which students must have acquired by the end of the programme:

— The ability to create architectural projects which simultaneously satisfy aesthetic, advanced digital technology, environmental technology, biological and genetic demands as applied to architecture.

— The ability to work with advanced software for architecture.

— The ability to reflect on the principles of research and the research methods of genetics and biology as applied to architecture, particularly using digital tools.

— The ability to incorporate knowledge and deal with interdisciplinary field-specific complexities related to IT, biology, genetics and architecture.

Introduction to Genetics and Biodigital Architecture

Seminars and conferences on:

— Metaphysics and Computation
— Theories of Emergence
— The Fundamental Principles of Genetics
— The Emerging Nature of Life
— Eco-manipulation

Practical training courses in digital tools (i.e. generative software, associative parametric software, scripting, mechanised CAD-CAM production tools, all linked to project development).

Genetic and Biodigital Architectural Design

Studios and workshops in which personalised tutorials are provided. These tutorials provide guidance to students about their projects and research.

Master’s Thesis

Final presentation of the research project: 30 September 2016

Language: English and/or Spanish

1 academic year, 9 months, 1,800 hours

Curriculum: 60 ECTS

UIC Barcelona. Masters and Postgraduates.
Studying in Barcelona

Start the most important learning experience of your life in one of the main European cities. Barcelona is a cultural and financial role model and a city where your knowledge can adapt to multiple professional opportunities.

UIC Barcelona, our campuses

Classes are held on our Barcelona campus and also our Sant Cugat campus, which has a total area of more than 35,000 m². Each Faculty has the best facilities and latest generation equipment for both theoretical and practical classes.

Find out more about the admissions procedure, reserving a place and enrolment here uic.es/masters. Click on uic.es/becas-masters to find out more about funding programmes, discounts and grants.