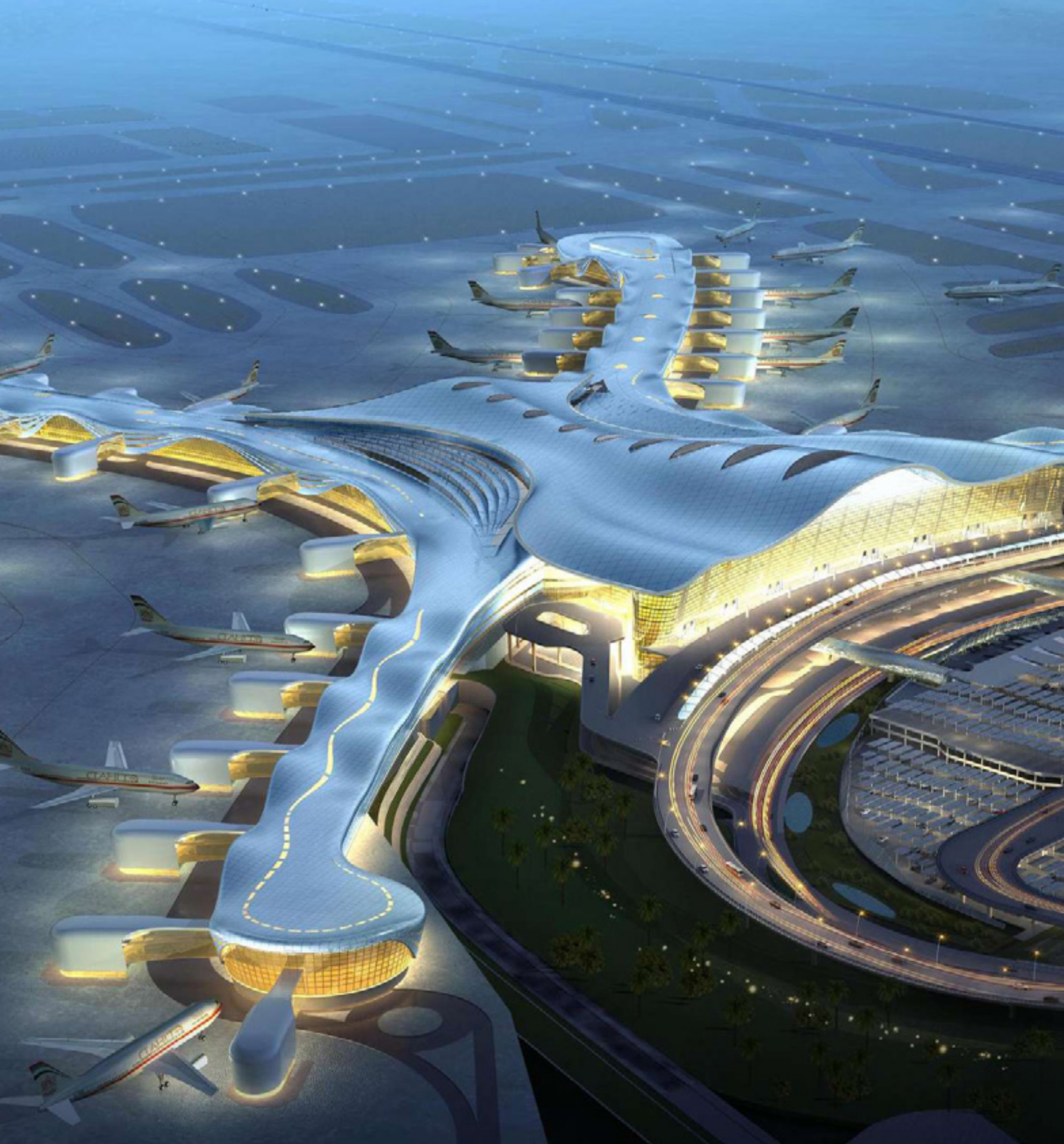




MASTER'S IN

Global BIM Management for Infrastructure Projects





BEYOND FUTURE EDUCATION

MASTER'S IN GLOBAL BIM MANAGEMENT FOR INFRASTRUCTURE PROJECTS

ZIGURAT'S ECOSYSTEM

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Bernabé Farré

GENERAL DIRECTOR
ZIGURAT GLOBAL INSTITUTE OF TECHNOLOGY

The history of engineering, architecture and technological transformation is directly linked to the advances of society, where the professionals of each area must guide the others and solve sensitive problems creating economic, intellectual, human and social value. In this context, coinciding with the turn of the century, Zigurat Global Institute of Technology was born with a clear intention to provide the industry and companies with solutions for all these new concerns that the world experts in engineering, architecture and digital transformation had expressed.

Becoming an online polytechnic school of worldwide reference hasn't been an easy journey. And of course, we haven't reached our final destination yet, we are still on a journey in which each year we grow hand in hand with the top-level academic partners, the most prestigious experts of each field and the most disruptive tools at a global level. To our students, we offer a tailored service that begins with the academic counseling and access to additional content months before the master's program takes off. With an exclusive approach whose central axis is the professional application of the techniques in a context of collaborative and real projects of construction and management, we strive to be trailblazers of future education. This approach will continue to generate synergies and enrichment among Zigurat Community, a community of professionals of more than 70 nationalities, as well as companies and institutions.

We want to contribute to your training so that you can design the future.

Beyond Future Education.

“Civil engineering and infrastructures are the foundation of our modern society. Our daily logistic, production, mobility, etc. are directly dependent on the environment the infrastructure provides. The level of modernization and efficiency of a city is proportional to the degree of development of its infrastructures. Governments around the world have recognized the advantages of the implementation and use of BIM (Building Information Modeling), and there are already many countries where this collaborative work methodology is a mandatory requirement. Technology experts have been promoting Building Information Modeling technology as a modern method for delivering building projects. The majority of mega projects worldwide are of infrastructural nature; AEC industry stakeholders give high value to infrastructure development due to many factors such as magnitude, criticality, effectiveness, publicity, the involvement and interaction of all sectors in receiving benefits and consequences for the success or failure of such projects. These kinds of projects affect our day-to-day life since they influence radically freight, people flow, local, regional development, society’s growth and comfort.”

Issam El-Absi

Director of the Master’s in
Global BIM Management for Infrastructure Projects



“Our program addresses the management of the latest technologies applied to building projects, from the planning and design phase throughout the construction while taking into account its subsequent connection with the maintenance of buildings. In addition, the professional will acquire the most demanded ability nowadays: the know-how to implement the BIM methodology in organizations and manage all processes, equipment and workflows involved.”

Rafael Riera,

Program Development Director
Zigurat Global Institute of Technology



Beyond Future Education

At Zigurat we look into the future. The outlook of a technology-dominated future inspires us to accelerate the potential of professionals and organizations in order to catalyze their transformation and help them lead in an increasingly demanding market.

In a more and more technological world, we can witness our surroundings and people’s relationship with technology changing on a daily basis. At Zigurat, we recognize that the right way to understand the relationship between technology and people is based on the tools that allow us to develop and empower our ability to achieve our goals and objectives. As well as to bring about a better world.

We are living a moment of reinvention in all human aspects: politics, work, society, etc. We can also observe a change of relationship between learning, methods and technology. Being one step ahead does not only mean using the best online tools for teaching or implementing the latest technological trends in our programs. It also means strengthening relationships and collaborations between people from different cultures and geographical areas. It means observing the world and knowing how to interpret where it will evolve. It is to open the mind and believe that everything is possible.

Zigurat is today a global educational institution that has managed to balance people, knowledge, industry and technology, by bringing together the experts of different sectors and the best teaching practices. Zigurat Global Institute of Technology does everything in its capacity to contribute to the progress of society with an advanced, innovative and disruptive proposal, linking our master’s programs to the in-demand skills of today’s industry, relying on the advances and refinement that the increasingly universal market brings to the table.

We are
Global



HEADQUARTERS

Barcelona, Dubai, London.

PARTNERS

Autodesk Training Center, Bentley Institute Training Partner, International Council for Open & Distance Education (ICDE), Cype Ingenieros, Canada BIM Council (CanBIM), BIM Forum Chile, BRE Academy, CIAT, BuildingSMART, Institut d'Estudis Estructurals, Associació Catalana d'Enginyers, Knowurbannet,

Apogea, Sabis. Sabadell, DUOC UC, BIM ACADEMY, Istram, BIM Freelance, Nosso BIM, Colegio de Ingenieros Técnicos de Obras Públicas, Urbiótica, Unhabitat, Orange, InesaTech, Sísmica Adiestramiento, Shaping Work, Setesca, GTEC, Blasea.

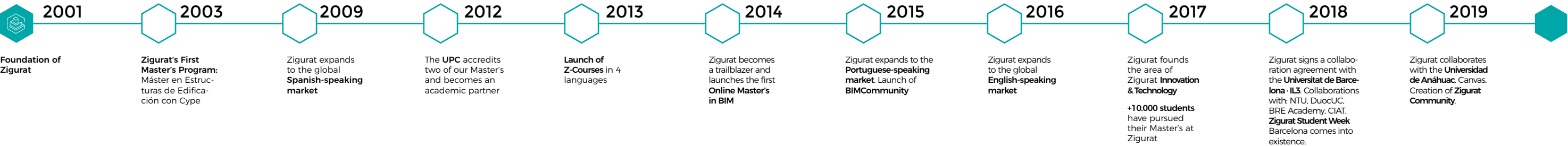
PARTNER
UNIVERSITIES

Universitat de Barcelona - IL3, Universitat Politècnica de Catalunya (UPC) , UNIFEBE, National University of Taiwan, DUOCUC Chile and Universidad de Anáhuac (Mexico) .

EVENTS

Zigurat Student Week Barcelona, InfraBIM Madrid, InfraBIM London, InfraBIM Tampere, India BIM Summit, Smart City 4.0, BIM 4.0 Brasil, ExpoBIM Chile, Digital Enterprise Show - DES, MWC - Mobile World Congress Barcelona, Business for Smart Cities Expocongress Kiev, Web Summit Lisbon, The Year in Infrastructure London, Congreso

Internacional VDC/BIM/LEAN Bolivia, InfraBIM Latam, BIM India, BIMExpo, Construmat, The BIM Conference Dubai, EUBIM, IT Construction Johannesburg, GeoBIM Amsterdam, BIM Fadu Argentina, CanBIM Event Canadá, Blockchain Expo Europe, Hello Tomorrow Summit, Global Innovation Summit Dubai.



The Global Institute of Technology

2001 - Zigurat Consultoría de Formación Técnica —a consultancy focused primarily on presential training in the Spanish territory— is born. Cype becomes an academic partner. **2003** - The **Máster en Estructuras de Edificación** comes to the market in collaboration with CYPE Spain on a LMS platform of in-house EDB design. **2005** - **Máster en Cimentaciones y Estructuras de Contención**. **2006** - **Máster en Estructuras Metálicas y Mixtas de Edificación**. **2007** - **Máster en Instalaciones de Edificación**. **2009** - With the **Máster de Ingeniería para la Arquitectura** in collaboration with the Universidad Camilo José Cela, Zigurat covers Spanish and Latin-American market. **2010** - Zigurat and Ingeniería FHECOR launch a course on EHE08 with more than 5.000 enrolled students. **2012** - Zigurat signs a collaboration agreement with the Asociación de Consultores de Estructuras (ACE) and the Instituto de Estudios Estructurales (IEE). Moreover, a new master's program, the **Máster en Rehabilitación de Estructuras**, that together with the Máster

en Estructuras Metálicas y Mixtas de Edificación, are accredited by the Universitat Politècnica de Catalunya (UPC), is launched. **2013** - Under the new name, Zigurat e-Learning for Architects & Engineers, the **platform of Z-Courses**, with more than 40 courses in 4 languages, is launched. Since then, the course of BIM-A0 has had over 20.000 students. **2014** - Zigurat becomes the first educational institution to launch a **Máster BIM Manager** online course for the Spanish-speaking market. **2015** - Zigurat collaborates with the Universidad de Carabobo (Venezuela) who becomes an academic partner. Repsol collaborates with Zigurat to provide online training to its installation technicians. First **Máster BIM Manager en portugués**. The **Máster en Proyecto y Construcción de Puentes** and the **Máster en Estructuras de Concreto Armado** are launched. BIMCommunity, the world's first social network of BIM professionals is born. **2016** - Zigurat e-Learning for Architects & Engineers changes its name to Zigurat Global Institute of Technology, and the

Master's are opened for the global market with the launch of the **Master's in Global BIM Management**. The **Master's in Construction Project Management y el BIM for Owners & Developers**. Can-BIM of Canada becomes a partner. **2017** - Zigurat takes another chance on digital transformation creating the area of Innovation & Technology and launches the **Global MBA in Digital Business**. The **Máster BIM Manager en Ingeniería Civil** is also launched. The UNIFEBE, a Brazilian university, validates the master's in Portuguese with Ministério da Educação (MEC) at postgraduate level Lato Sensu EAD and becomes an academic partner. **2018** - Zigurat and the Universitat de Barcelona - IL3 sign a collaboration agreement and this institution becomes an academic partner of Zigurat in order to award a dual degree to our students. The first edition of **Zigurat Student Week Barcelona (Student Summit Barcelona)**, —the annual event where students can participate in optional face-to-face training in the company of students from different Masters and the

on-site methodology which is adapted to their program— is instituted. The **Master's in Global BIM Management for Infrastructures** is launched. Collaboration with the National Taiwan University, the DuocUC de Chile, BRE Academy and CIAT, who also become partners. **2019** - The Universidad de Anáhuac (Mexico) becomes an academic partner. Implementation of Canvas as the only learning management platform. The second Master's in the area of Innovation & Technology is launched: the **Global Master's in Blockchain Technologies**. The **Máster en Climatización (HVAC) con Eficiencia Energética**, the **Máster en Proyectos de Estructuras**, **Master's in Structural Projects** and the **Master's in global Smart City Manager and Master Internacional Smart City Manager** are also launched. Introduction and implementation of international weeks program in Barcelona, Taipei and Abu Dhabi. **Zigurat Community**, the Community for Alumni of Zigurat, is created.

Master's Presentation

METHODOLOGY:

- 100% Online
- Live virtual Classes
- International Weeks

DURATION:

1 Academic Year

NUMBER OF CREDITS:

60 ECTS

ACADEMIC DIRECTOR:

Issam El-Absi

DUAL DEGREE



Institut de Formació Contínua-IL3
UNIVERSITAT DE BARCELONA



ZIGURAT

SOFTWARE:



Bentley

IN COLLABORATION WITH:

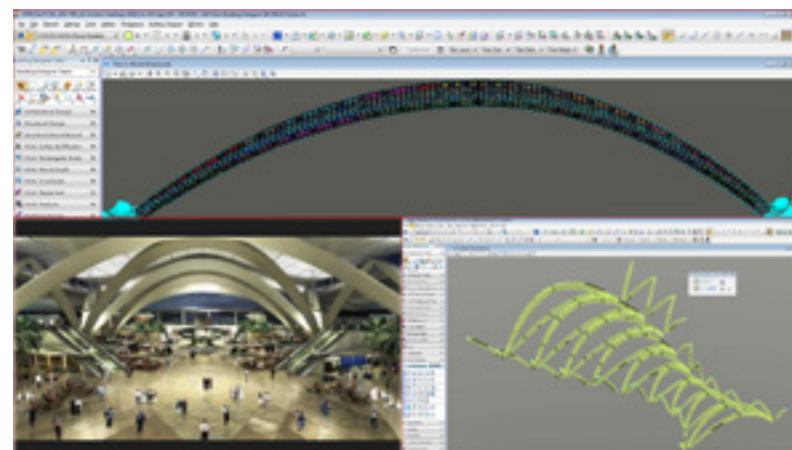


This master's program has been designed to provide civil engineering professionals with the skills that the sector currently demands, and to cover the quintessential to keep up with the digital transition. Civil engineering has a significant impact on our lives: it underpins our surroundings and structures us as a society.

Citizens demand more and more efficiency and transparency in the projects, as well as greater respect for the environment. If we take into account the processes of digital transformation implemented to the construction sector and the advances of industrialization, it becomes clear that civil engineering has one of its biggest challenges ahead. In order to respond to the needs of the sector, we must generate change through innovative work methodologies, collaborative processes and cutting-edge tools.

With the growth of the global construction industry, the BIM market is undergoing considerable expansion. The main factors to drive the expansion are the need to increase productivity and cost control of a construction project, and to manage the assets in a more efficient way.

The government agencies responsible for regulating activities in the construction sector worldwide are launching initiatives to increase the adoption of BIM in their respective countries.



Why to study the Master's

1

BECOME A NEW BIM MANAGER OF INFRASTRUCTURES

This new profile of engineer is set to shape the present and the future of the construction sector. In order to gain access to a large number of opportunities in the very competitive construction industry and optimize the resources of a project, it is necessary to keep yourself professionally updated.

2

INTERNATIONAL DEMAND

The profiles of the BIM Manager and the Civil BIM Engineer are today two of the most demanded and highly valued professional figures in the sector. It is estimated that between 2020 and 2030 it will be the profile with the greatest projection in the construction industry, due to the high economic impact of civil engineering projects.

3

INTERNATIONAL LEADERSHIP IN CIVIL ENGINEERING PROJECTS

The main objective of the program is to provide the student with the necessary tools to become a leader in the international application of BIM in the field of civil engineering and to promote the leadership of high-performance teams in infrastructure construction projects.

4

GAIN EXPERIENCE IN BIM MANAGEMENT WHILE WORKING ON THE MOST ADVANCED MEGA PROJECT IN THE WORLD

The participants of this master's program will have the unique opportunity to visit one of the most complex BIM construction projects of the world, the Abu Dhabi International Airport. During two days, participants will be able to take part in guided tours of the site and get to know its specific characteristics.

5

GLOBAL COLLABORATION

The variety of professional profiles and nationalities of the participants in the program provides an exemplary framework to develop a real global collaboration, where workflows in the cloud become the main tool for communication and lead to successful results.

6

CONTROL AND QUALITY

BIM models allow the user to reach a higher level of development and detail while performing faster. The interoperability between software allows us to link our BIM models with specific tools in the areas of calculation and management, measurements and budgets, structural design and MEP design.

7

EFFICIENT PROJECTS

According to a recent study by McGraw-Hill Smart Market (United States), BIM provides an increase of between 25-35% in the productivity of a project during the execution phase, but even more during the useful life of the built asset.

1.

Encourage teamwork:

Given the current complexity of civil engineering projects, the first goal will be to promote teamwork as the only way to achieve complex objectives. In this sense, we aim to discover and favor leadership, but also promote the use of new technologies that provide us with the tools to manage and coordinate teams.

3.

Select the relevant information:

In this new paradigm, the amount of information that a model can contain multiplies, therefore, defining the amount of necessary data and the level of detail. Understanding the concept of uses of the BIM and exchange formats will be from now on, fundamental.

5.

Know and control the most innovative BIM tools:

Knowledge of state-of-the-art software will be promoted, not only from the perspective of the user but also from a more critical point of view that allows the professional to decide at each moment which are the most appropriate tools in complex and multidisciplinary contexts.

Objectives

2.


Become an expert in interoperability:

Due to a large number of elements that intervene in the development of infrastructure, it is necessary to understand the concept of interoperability that will guide our performances. Therefore, learning to design new optimized work schemes becomes a priority objective.

4.

Manage information and project documentation:

Being able to manage the data of a project and guaranteeing its integrity and availability to all interested parties grows essential. The irruption of new technologies in the cloud and common development environments (CDEs) become requirements for a BIM project.

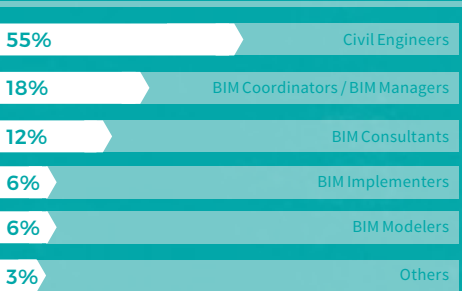


*A new profile of
engineer set to
shape the present
and the future of
the construction
sector*

Who is studying in the Master's program?

The participants of the Master's in Global BIM Management for Infrastructure Projects are professionals of the engineering, architecture and construction sector who need to expand their professional skills, both at the technical level, as well as, at operational and management levels.

PROFILES



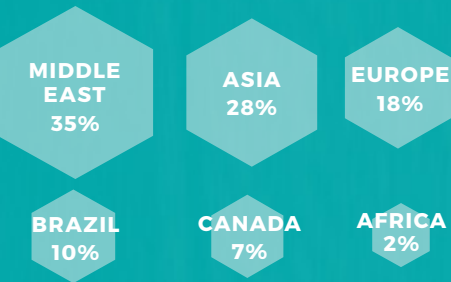
AVERAGE AGE



PREVIOUS PROFESSIONAL EXPERIENCE



NATIONALITY



Become a professional set to take the construction industry by storm

With Building Information Modeling (BIM) taking over the architecture, engineering, and construction fields, BIM Managers are in high demand. Interested in jump-starting a career in this growing field?

Students who have completed the Master's program may thrive within the following professional profiles:



BIM Manager



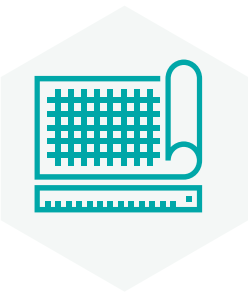
BIM Consultant



Civil BIM Engineer



BIM Coordinator



BIM Implementer



Structural BIM Engineer

“More and more companies invest in resources for BIM implementation and struggle because of the lack of professionals trained to meet this demand at a national level. This makes trained BIM professionals highly valued.”

Robert Walters Salary Survey 2019

“Advanced BIM technology is pulling fast ahead as BIM software programs improve modelling procedures and implementation for projects. The main benefits are design improvements (69% according to the world survey), savings in design time (54%), cost savings (35%) and faster re-sponse time to market (24%).”

McGraw-Hill Construction

Academic Content

Block 1: BIM Ecosystem and Fundamentals

9 ECTS

• Module 1: BIM Ecosystem & Key Concepts

-Topic 1. BIM in the AEC Industry
Topic 2. BIM Key Concepts & Overview

• Module 2: BIM for Infrastructure

Topic 1. Introduction to BIM for Roads & Highways

Topic 2. Introduction to BIM for Rails & Metros
Topic 3. Introduction to BIM for Tunnels & Bridges
Topic 4. Introduction to BIM for Subsurface Utilities
Topic 5. Infrastructural Buildings and Facilities

• Module 3: Authoring Platform Environment

Topic 1. 2D Authoring Platform Training
Topic 2. 3D Authoring Platform Training

Block 2: Specialization (Select One)

15 ECTS

A- ROADS AND HIGHWAYS

• Module 0: BIM Authoring

Topic 1: Forms Modeling

• Module 1: Road Fundamentals

Topic 1. Introduction to Roads And Highways
Topic 2. Introduction to Openroads Designer

• Module 2: Earthworks Modeling Calculations

Topic 1. Engineering/Technical Introduction
Topic 2. Scope Definition
Topic 3. Calculation Techniques

• Module 3: Horizontal and Vertical Alignment

Topic 1. Horizontal Alignment
Topic 2. Horizontal Curves
Topic 3. Vertical Alignment
Topic 4. Vertical Curves

• Module 4: Roads and Highways Modeling

Topic 1. Road Elements
Topic 2. Embankment Modeling
Topic 3. Pavement Modeling

Module 5: Advanced Topics in Highway Modeling

Topic 1. Super Elevation Modeling
Topic 2. Intersection Modeling
Topic 3. Type Of At-Grade Intersections
Topic 4. Roundabout Modeling

B. RAILWAYS AND METRO LINES

• Module 0: BIM Authoring

Topic 1: Forms Modeling

• Module 1: Rail Fundamentals

Topic 1. Rail Types
Topic 2. Rail Terminology
Topic 3. Introduction to Bentley Power Rails Software Fundamentals

• Module 2: Earthworks Modeling Calculations

Topic 1. Engineering/Technical

Introduction
Topic 2. Scope Definition
Topic 3. Calculation Techniques

• Module 3: Horizontal and Vertical Alignment

Topic 1. Track Horizontal Alignment
Topic 2. Track Vertical Alignment
Topic 3. Rail Cant (Curves And Super Elevation)

• Module 4: Special Trackwork

Topic 1. Definition of Special Trackworks
Topic 2. Turnouts and Crossovers
Topic 3. Special Trackwork Layouts

• Module 5: Cross Section Modeling

Topic 1. Track Structure Design
Topic 2. Embankment Modeling
Topic 3. Track Component and Materials

C. TUNNELS AND BRIDGES

• Module 0: BIM Authoring

Topic 1: Forms Modeling

• Module 1: Tunnel Fundamentals

Topic 1. Tunnel Basics
Topic 2. Tunnel Construction Methods

• Module 2: Bridge Fundamentals

Topic 1. Bridge Basics
Topic 2. Bridge Components

• Module 3: Tunnel BIM Modeling

Topic 1. Tunnel Modeling with OpenRoads Designer
Topic 2. Tunnel Modeling with AECOSim Building Designer
Topic 3. Tunnel Modeling Advanced Topics

• Module 4: Bridge BIM Modeling

Topic 1. Open Bridge Modeler Fundamentals
Topic 2. Steel Girder Bridge Modeling
Topic 3. Segmental Bridge Modeling
Topic 4. Bridge Modeling with AECOSim

D. SUBSURFACE UTILITIES

• Module 0: BIM Authoring

Topic 1: Forms Modeling

• Module 1: Subsurface Utilities Engineering (SUE) Fundamentals & Authoring Platform Environment

Topic 1. Classification of Utilities and Scope Definition
Topic 2. Wet Gravity & Pressurized Systems
Topic 3. Dry Utilities
Topic 4. Introduction to Bentley Openroads Sue Software Fundamentals

• Module 2: Modeling Wet & Dry Utilities

Topic 1. Gravity Nodes Features & Gravity Pipes
Topic 2. Pressurized Networks Pipes & Fittings
Topic 3. Modeling Pumping Stations/MEP/ Other structures
Topic 4. Modeling Dry Utilities

• Module 3: Features Definitions

Topic 1. Drainage Nodes/Conduits
Topic 2. Non-drainage Nodes/Conduits
Topic 3. Dry Utility Trenches & Components

• Module 4: Advanced Topics in SUE

Topic 1. Creating Utilities from Graphics and Excel Data
Topic 2. Design Coordination
Topic 3. Reporting and Tables

• Module 5: Utility Buildings

Topic 1. Generic Structures
Topic 2. Plant Rooms
Topic 3. Generic MEP Equipment

E. BUILDING MODELLING

• Module 0: BIM Authoring

• Module 1: Building Fundamentals

• Module 2: Structural

• Module 3: Architectural

• Module 4: Mechanical Building Services

• Module 5: Electrical

Block 3: BIM-based Advanced Project Controls

24 ECTS

Module 1: BIM for Construction - Requirements and Documentation

Topic 1. Project Specification & Documentation
Topic 2. BIM Execution Plan Module
Topic 3. Work Breakdown Structures (WBS)
Topic 4. File and Object naming Convention
Topic 5. BIM Library & Data Requirements

Module 2: BIM Based Scope Management

Topic 1: Introduction to Scope Management
Topic 2. BIM Based Scope Management Workflows
Topic 3. Bill of Quantities
Topic 4. Methods of Measurements and Quantity Surveying Rules
Topic 5. BIM Library, Data Requirements and Quantification Process
Topic 6. BIM Tagging
Topic 7. Variations and Changes

Module 3: Quality Control Methodologies

Topic 1. BIM Authoring Quality Control Methods
Topic 2. Data Quality

Module 4: Integrated BIM Implementation & Design Coordination

Topic 1. Integrated Infrastructure Construction
Topic 2. Visualization Methods
Topic 3. Coordination Requirements
Topic 4. Clash Detection & Conflicts Resolution
Topic 5. RFIs and Discrepancy Identification

Module 5: Planning & Site Logistics

Topic 1. Planning Basics and Scheduling Fundamentals
Topic 2. Schedule Simulation/4D (4D solution)
Topic 3. Advanced BIM-based Planning
Topic 4. Site Logistics and Constructability

Module 6: Advanced Project Controls System Fundamentals

Topic 1. Document Management (EDMS)
Topic 2. Estimation – Budget – Cost
Topic 3. Progress capturing

Module 7: C3D/Visual Project Controls and Integration Platform

Topic 1. Introduction to C3D. C3D Interactive Capabilities
Topic 2. C3D Implementations and Integration Capabilities
Topic 3. Reporting and Tracking Construction Progress
Topic 4. C3D Interactive Hands-on Workshop

Block 4: Master's Final Thesis Controls

12 ECTS

Module 1: Project Scope Definition

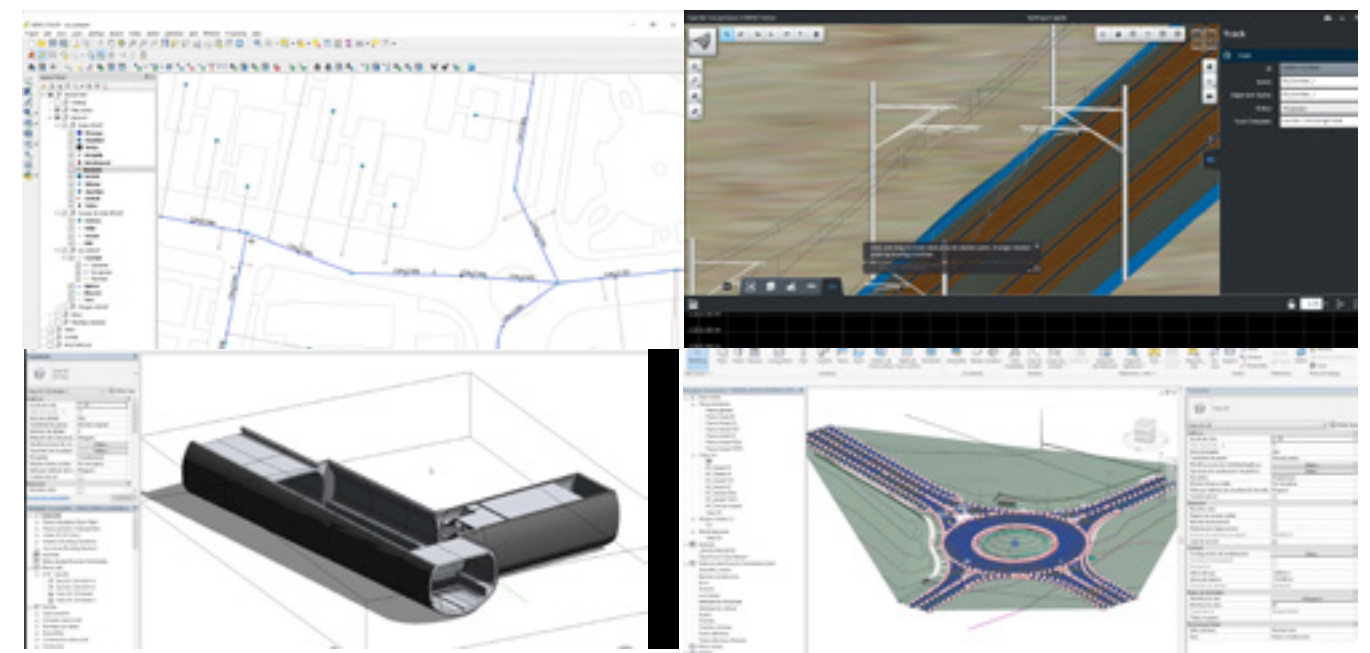
Topic 1. Project Overview
Topic 2. Program Specialization Scope
Topic 3. Advanced BIM Project Requirements
Topic 4. Project Milestones & Deliverables Plan

Module 2: Interim Project Discussion/ Evaluation

Topic 1. Program Specialization
Topic 2. Advanced BIM Project

Module 3: Final/Pre-submission Project Checkpoint

Topic 1. Program Specialization
Topic 2. Advanced BIM Project



Block 1: BIM Ecosystem and Fundamentals

This block consists of three (3) modules and aims to introduce the participants to the BIM ecosystem in the construction industry in a consistent way. These three modules also cover the main application of BIM in infrastructure projects and the key features of the authoring/modeling environment. The main goal of this block is to orientate participants in the field and to help them acquire general and comprehensive knowledge of mainstream BIM workflows, practices and processes in the field of infrastructure projects. Participants will also understand the structure of the whole program and gain practical experience through relevant exercises and case studies. The evaluation of the participants is based on the delivery of technical reports and BIM deliverables, mainly in the AECOsim Building Designer environment. Demonstration of artifacts from all software platforms will also take place.

Block 2: Specialization

This block consists of five (5) modules that include the technical core of the program. It aims to enhance participants' knowledge and understanding of the most innovative BIM software platforms. Each module incorporates a software workshop to help the participants to improve their practical technical and authoring skills. Upon the successful completion of this block, participants will be able to understand engineering drawings, enrich BIM models with valuable engineering and construction information, model complicated structures, extract IFC (issued for construction) drawings and generate BIM models' BoQ. Students' active participation and accurate evaluation will be ensured through the conduction of focused exercises and case studies. Choose (only one) from - Roads and Highways - Railways and Metro Lines - Tunnels and Bridges - Subsurface

Block 3: BIM-based Advanced Project Controls

This block consists of (6) modules which formulate a coherent chain of strategy through which the participants will gain a firm understanding and exposure to BIM-based construction management and advanced project control systems. It constitutes the most extensive block aiming to enhance participants' knowledge and understanding of visual and data-related to BIM management and control issues, giving enough space for theoretical background and practical application. Upon successful completion of this block, participants will have obtained a clear understanding of the innovative construction control methodologies applied in the C3D platform. Students' active participation and accurate evaluation will be ensured through the conduction of focused exercises and case studies.

Master's Final Thesis

This block consists of three (3) modules which will serve as building units for the successful completion and delivery of the participant's final project. The completion of this module is mandatory. All of the software platforms mentioned above will be put into use to meet the needs and requirements of the final project. Evaluation of participants' deliverables will take place at the end of the module, and

participants will receive relevant feedback throughout the team and individual sections of the project. Upon successful completion of this module, the participants will have developed skills and abilities in the following areas: training program's approach of multidisciplinary teamwork. For the development of this project the students will have to fulfill the deliverables for the different stages of a real project that actually

matches with the training program:

- Time management and time plan creation
- Soft-skills
- Professional skills in the areas of BIM, project controls and project management
- Risk assessment and team project execution



Prathish Kumar

Qatar
BIM SPECIALIST AND LORIKEET
DESIGN (QATAR)
Master's in Global BIM Management

Could you tell us about your experience with the Zigurat Master's ?

It has been a very fruitful experience. Working from a distance has been an advantage since I can manage my own time. And I must say, I prefer to organize myself and my own time to having to go to a certain place at a certain time for the lessons.

As an architect and an engineer, why did you choose BIM?

Since I first discovered BIM many years ago, I've wanted to do a program on it. And when I found Zigurat's program, I really liked the way they were implementing it. **And definitely, not only is BIM our future, it is our present. BIM is now.** In the future, all the studios and companies related to the construction field will be using BIM. And I think every professional related to the construction field will have to do a Master's in BIM sooner or later.

How do you see the role of the BIM Manager evolving in the international market?

For example, here in Qatar, many projects are implemented in BIM already and I'm sure that eventually, the laws are going to adjust to the BIM methodology. BIM would be a good way to control the growth of cities like Doha.

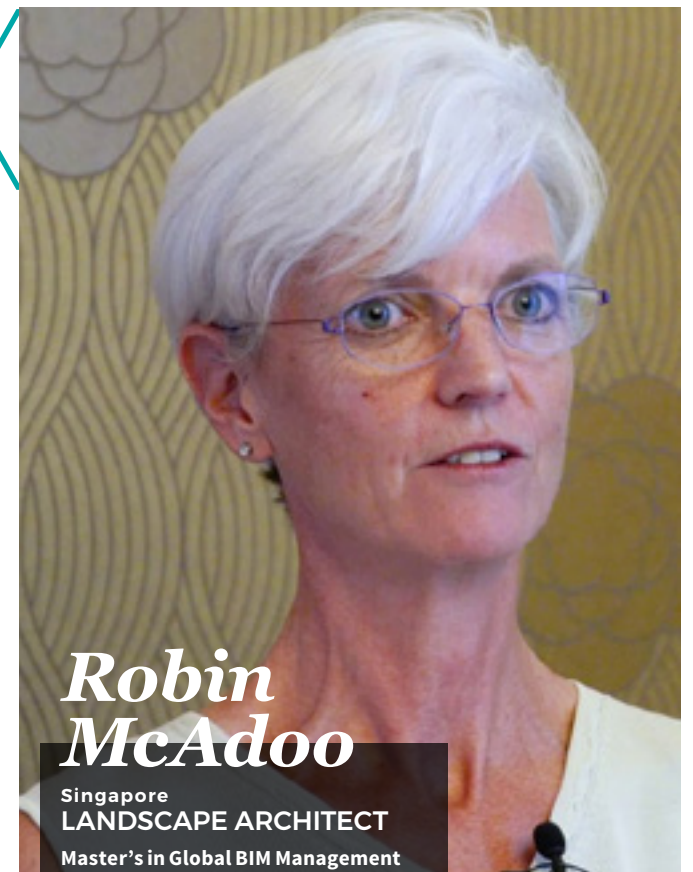
“

The thing I value most about this program is the depth of knowledge that the professors have. The instructors are available, they are helpful, they engage whenever you need. They are open and willing to answer any question you may have.”

”

What have you learned coursing the Master's ?

This program has helped me to develop a greater appreciation for the broad and deep software programs that are available. The power behind some of this software is mind-blowing.



Robin McAdoo

Singapore
LANDSCAPE ARCHITECT
Master's in Global BIM Management

International Weeks



ZIGURAT STUDENT WEEK BARCELONA

The development of projects in international and multidisciplinary teams, in which participants from different countries and of diverse professional backgrounds connect in the cloud, is one of the pillars of the training that Zigurat offers. Therefore, the students share many working hours and learn to work with other professionals from all over the world who they only know through videoconferences.

Access to the Zigurat Student Week in Barcelona is included in the price and we group all areas and masters of Zigurat: Architecture, Engineering and Digital Transformation, offering masterclasses, round tables and conferences with the most prestigious speakers, and activities of high educational value and for personal growth.

For a week, Barcelona becomes the ideal place to meet your fellow students and teachers and do some networking while getting to know one of the most famous cities in the world. The assistance is completely optional, there is no admission fee, accommodation and travel are not included and students who want to assist the Zigurat Student Week in Barcelona must be studying one of our master's programs during that academic year.



BIM SUMMER CAMP TAIPEI

The National Taiwan University (NTU) is one of the most prestigious universities in Asia. Traveling to Taipei is a unique opportunity to get to know firsthand the market of the South and Southeast Asian regions in the company of fellow students from all over the world.

For three weeks, students will be able to attend face-to-face classes at the NTU taught by the best BIM researchers and experts. Lecturers will share their knowledge and experiences on concepts, principles and strategies of BIM implementation for the development of projects in classes and practical workshops. Visits will also be organized to companies and projects in Taipei, a city where traditional and modern architecture combine as in almost no other region of the world. The assistance is optional and the students who want to attend must manage it directly with the NTU, both the trip and the accommodation.



ABU DHABI INTERNATIONAL AIRPORT TERMINAL

Our students have the unique and exclusive opportunity to participate in an on-site visit to the International Airport Midfield Terminal Building (MTB-ADIA) in Abu Dhabi organized by the company that managed the project.

This site visit gives participants the chance to apply the material learned within the course in a practical way, by relating it directly to this mega project based on what has been estimated to be the largest and most comprehensive BIM model ever created. This visit offers an in-situ and in-depth look at the project, including the project requirements, pre-award preparations and tender, electronic data interchange and the difficulties and challenges faced within the project. All this, coupled with the opportunity to visit one of the most fascinating cities in the Middle East.



Issam El-Absi
ACADEMIC DIRECTOR

CCC BIM Center General Manager
CCC BIM Academy Director

Initiated the use of BIM approach and methodology in CCC in 1997; currently managing three main centers of excellence for providing BIM, engineering and project control services among CCC group with a total number of BIM resources approaching 200 engineers. Issam represents CCC in the 5Di group and the ENCORD VCP group. He has participated in knowledge transfer of BIM-based systems for construction and post construction through several international and regional conferences and events.

Faculty Board



VIVI PERGANTI
Head of BIM Center (Athens)
She has participated in over 30 major BIM projects since 1997, submitted various offers for potential BIM projects, managed BIM projects that focus on the design of BIM execution plans, standards, workflows, procedures and quality control processes. Main instructor and BIM training material author of CCC's official BIM training program designed for engineers



AHMAD EZZAT
Head of BIM Center (Egypt)
Responsible for implementing advance geomatics technologies such as Indoor Mobile Mapping System, terrestrial static scanner, UAV and machine control. Responsible for establishing workflows for as-built BIM modeling based on point cloud data. Responsible for developing BIM models for road, highway and railway infrastructure projects.



AMJAD EL-MASRI
Senior BIM / Geomatics Engineer
Responsible for implementing advance geomatics technologies such as Indoor Mobile Mapping System, terrestrial static scanner, UAV and machine control. Responsible for establishing workflows for as-built BIM modeling based on point cloud data. Responsible for developing BIM models for road, highway and railway infrastructure projects.



MARIA SOULADAKI
Senior BIM/Civil Engineer MSc
Responsible for implementing BIM for Fabrication, developing and coordinating Bridges and Tunnels BIM Models, developing and Coordinating Structural BIM Models, development of BIM Execution Plans (BEP).



IMAD HAMDAN
Senior Design Engineer BIM
He has participated in the development of the "Power InRoads" software, to facilitate the infrastructure (Roads, Bridges and Tunnels) projects for the BIM workflow (generating models, material take-off, engineering coordination and controls). Imad provides training in the "Power InRoads" software for engineers in the Palestine, Athens and Egypt BIM centers.



RAED ABDUL-MON'EM HANAFIEH
BIM Projects Coordinator
He has successfully participated in many projects with CCC working on BIM/4D/5D development and engineering coordination. He has developed many automation solutions to generate automatic models and to produce material take-off from BIM elements. He has trained over 150 Engineers over the last 6 years in the BIM workflow related to MEP systems, and infrastructure subsurface utilities.



ANASTASIA TSACKA
5D engineer & Architectural engineer Msc.
Responsible for the effective development of Information Models for visualization, cost estimation, material take-off and project control. She has participated in knowledge transfer regarding BIM workflows and methodology, producing information models and reports, quality control and design coordination, methods of measurement for structural and architectural BIM using international standards such as CSI.

Guest Speakers



PASI JOENSUU
Vice President of Sales at INFRAKIT



FRANK WEISS
Vice President of BIM and Innovation at Oracle's Aconex



BENITO PEREZ
Application Engineer at Bentley Systems



EDUARDO CORTES
Senior Application Engineer at Bentley Systems



DEJAN PAPIĆ
Advancement Academies Manager at Bentley Systems



JAVIER TOMÁS
Aconex consultant and implementer for large projects



ASHRAF ELGABRY
BIM Manager of the Abu Dhabi International Airport Project



MENNO DE JONGE
Director of Digital Construction at the Royal BAM Group in the Netherlands



STEVEN EGLINTON
Director of GeoEnable and BIM Enable. Principal BIM Tutor at the Institute of Civil Engineers

METHODOLOGY**ONLINE CAMPUS**
Global and flexible

Our online methodology allows students to optimize workflows and learn with and from their fellow students in groups and forums. Students have access to material created exclusively by the lecturer, various seminars, live classes and discussion forums. The program offers maximum flexibility so you can organize your study time and access the online campus from any medium and place.

**CANVAS**
Educational Technology

The LMS Canvas technology platform is the one used by the best universities and educational centers in the world. In it, you will find all the necessary information related to your master's and you will get the most out of the extra content.

**REAL-WORLD PROJECTS**
Learning by doing

Building a house, designing a project of building structures or applying new technologies in an industrial process from the very first day? At Zigurat we believe it is vital to develop and work from the first day on real projects to assimilate and quickly apply academic content. We give you the tools to face any project in the professional world.

DIFFERENTIAL VALUES**FACULTY BOARD**
Professionalism, experience and passion

The directors and professors that make up the academic team of each master are not only some of the best and most respected professionals in the sector, but they also have a passion for teaching and sharing their experience and knowledge. Thanks to the online platform, the lecturers are much closer than you think to guide and help you.

**MULTICULTURAL ENVIRONMENT**
Global Networking

International lecturers. 1,200 students per year. More than 12,000 master's students coming from 72 different countries. Zigurat is present in 5 continents and its students become citizens of the world. Your fellow students will be professionals in the sector, with extensive experience and similar energy. Exchange knowledge and build your professional network.



Zigurat's Ecosystem

Zigurat is made up of a team of first-class professionals who take advantage of technology to break down the barriers between online training and live classes, creating, hand in hand with the directors and professors, a network of experts that fills the gap between the academic theory and the current working practice in the sector. This is achieved through maximum flexibility and basing the training on a collaborative project environment, integrating the practice in the learning experience of each participant. All our master's programs are organized in a real and experiential work environment and connect students from different parts of the world.

At Zigurat we want you to enjoy absorbing the new knowledge, as well as to help you explore and develop your skills and abilities. In this way, not only do we prepare you to face any challenge, but also to be ethically and socially responsible, execute critical thinking, while preparing you as a competent professional for occupational sectors in constant development.

ADDITIONAL SERVICES**MODULE 0**
The most useful welcome

Our welcome module is designed to update and balance the initial know-how of the students, equipping them with tools, software and learning resources, so they can face the new challenge of taking one of our master's programs. You will be in touch with the tutor who will guide you and do regular follow-ups, helping you to improve your skills and your performance.

**STUDENT WEEKS**
Face-to-face tutorials and projects

We give you the option to attend masterclasses and international weeks in different parts of the world that adapt to the areas of your master's. Take advantage of the professional environment of the presentations of the best experts, do some networking, meet your fellow master's students and enjoy the activities scheduled in each city. Which do you prefer? Barcelona, Abu Dhabi or Taipei?





Advancing professional careers

We take your professional career very seriously and take pride in knowing that this might be one of the reasons you decided to do an International Master with Zigurat. Choosing a professional specialty is an important decision, so from the moment a student comes into contact with us, our team of advisors guides and advises him according to his curriculum, experience and job opportunities.

Our students complete the best-prepared programs to deal with the challenges that the growing digitization of the industry, architecture and engineering proposes. But our work does not end here: not only do we care about providing our students with the necessary knowledge, but we also offer them tools and strategies for job search, contact with companies, face-to-face networking meetings, exclusive employment opportunities and access to the material in order to be up to date in their sector.

We call these phases of development the ABC of your projection and include them in professional services to maximize your chances of success.

A

The first phase starts with a **welcome program** where you can learn to make the most of our Virtual Campus (Canvas). Catch up with all the specific content of your area, start to develop a personal growth action plan with our tools or strengthen your knowledge and skills with courses and documentation.

INCUBATION

B

During the time of your educational training with us, you will **work with leading professors and directors and fellow students** from other companies, positioning yourself in a preferential position.

During this stage, you can continue using the tools we offer you on the Campus and in the forums in order to **boost your personal brand** and entrepreneurship. You can also participate in all of our **face-to-face events**, an ideal place to enrich yourself and connect with all your fellow students and lecturers.

DEVELOPMENT

C

Once you finish your studies, you will still be part of the institution through **Zigurat Community**. In our Alumni project, we help you with your professional and personal development, for which you can take advantage of the multiple benefits of being part of the Zigurat Community.

Our exclusive job bank of the companies in the sector, activities and unique personalized events, networking globally in a group of professionals and companies, and many more opportunities and services that will help you to open a range of opportunities and enrich your career.

EXPANSION



Zigurat Community is an Alumni project that came into existence with the student body and faculty community in mind. As part of the Zigurat Community, you can stay connected to a global network that offers you multiple possibilities from anywhere in the world.



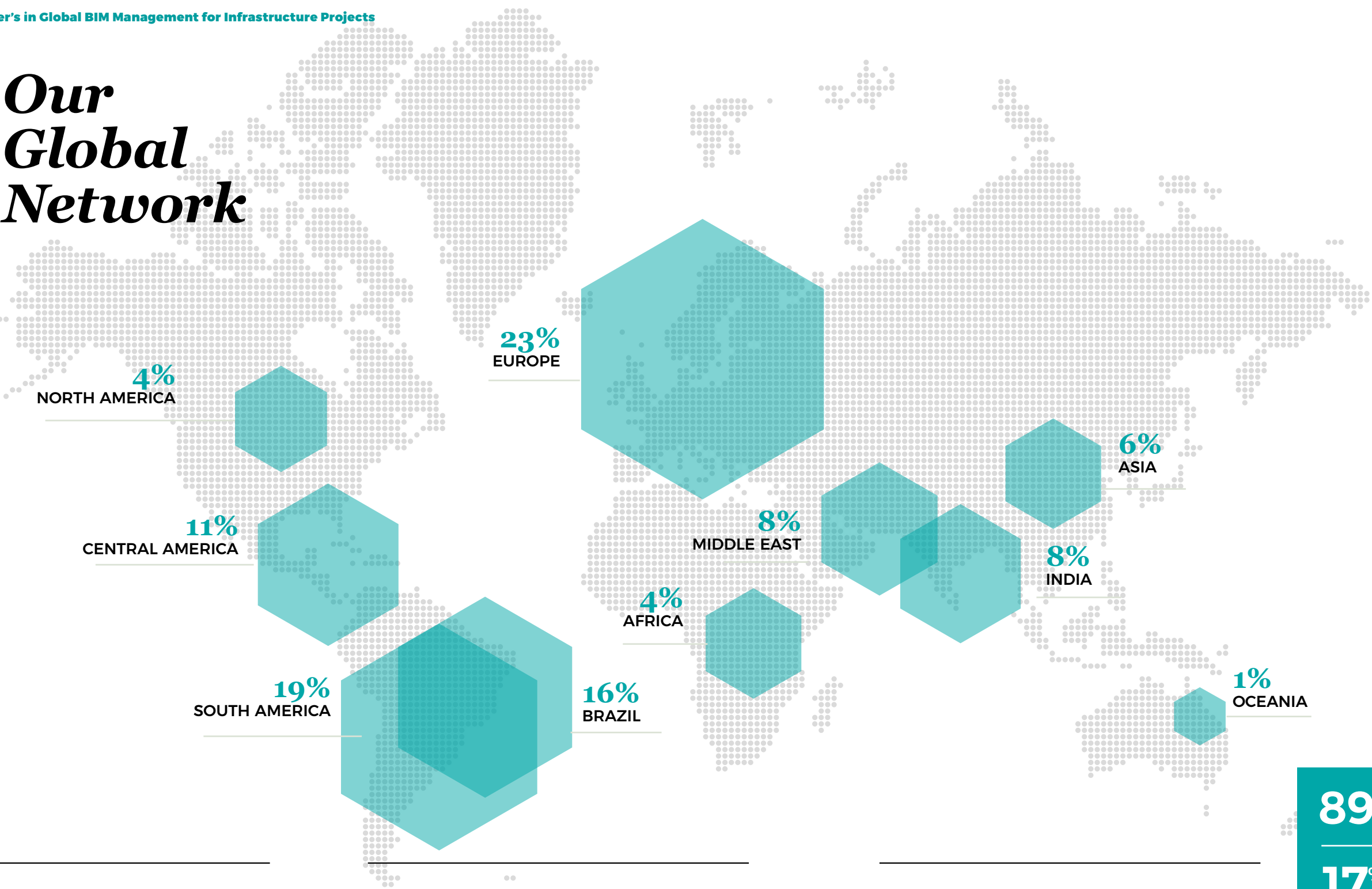
Belong to a network of students from more than 70 countries. Contact, connect and share your experience and learn about that of your fellow students in forums and conferences, or participate in promotional activities and meetings. Find students with similar expertise, collaborate with people from the same sector and expand your network of professional contacts. Meet them personally at our annual meeting: the Zigurat Student Week in Barcelona.

Keep expanding the horizons of your knowledge. Keep track of the latest trends in your sector and develop your professional soft skills. We offer you seminars with the best professionals from different fields and profiles. You can access courses and free platforms to help you in your development and learn about exclusive discounts on our master's programs to continue training and growing as an expert.



Connect with companies that recruit profiles like yours through our job bank. Receive expert counseling, get the tools, methods and advice needed to create your personal brand and differentiate yourself from other professionals. Receive or contribute all your experience in our Zigurat Mentoring program.

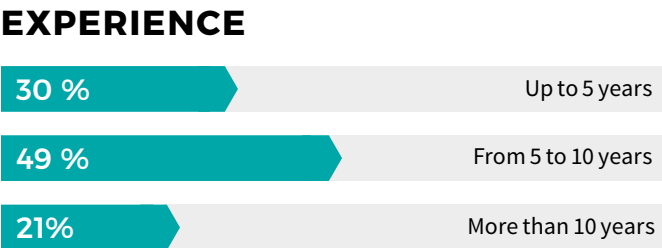
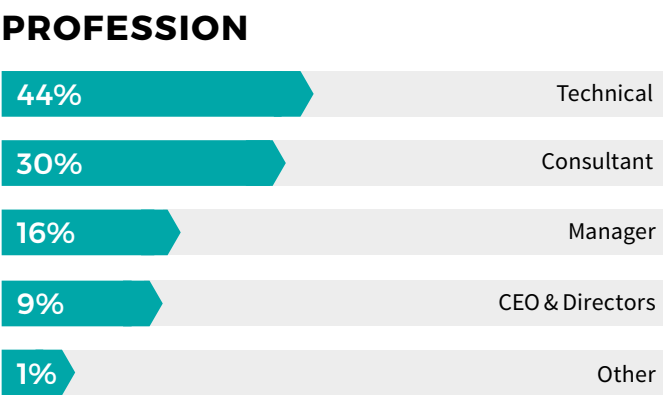
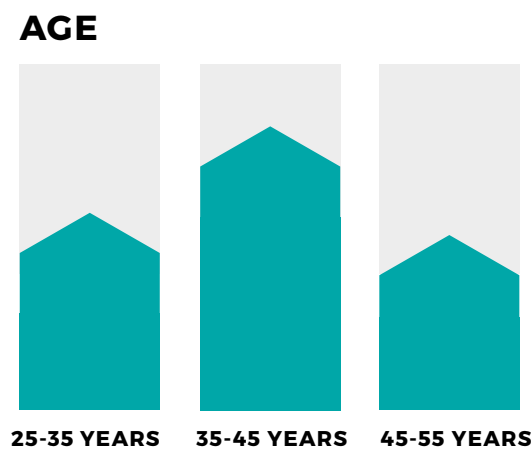
Our Global Network



AVERAGE
7
YEARS OF PROFESSIONAL
EXPERIENCE

+72
DIFFERENT
NATIONALITIES

34
AVERAGE AGE OF THE
STUDENT



- 89%** improve their working conditions upon completion of one of our programs.
- 17%** start a new business after finishing one of our master's degrees.
- 62%** participate in our international weeks in Barcelona, Taipei or Abu Dhabi.
- 98%** rate the quality and content of our programs between 8-10.
- 89%** still form part of the Zigurat Community in order to have access to an international network.

Our Academic Partners

Participants who complete any of our training programs obtain a specific certificate attesting that they have completed and passed the Master’s Degree at Zigurat Global Institute of Technology, an institution with almost 20 years of experience in the online education sector, recognized by the industry leaders as well as the academic world. In addition, depending on the Master, the students will also receive a dual degree from the Universitat de Barcelona - IL3, the Universitat Politècnica de Catalunya or UNIFEBE.



The Universitat de Barcelona, the best rated Spanish university in the independent QS ranking, and its Institut de Formació Contínua - IL3 give their endorsement to a large part of our degrees. Our students will be awarded a dual degree from both Zigurat and Institut de Formació Contínua - IL3.



The Universitat Politècnica de Catalunya, one of the first technical universities in Spain and the 120th in Europe, according to the independent QS ranking, has been recognizing some of our programs for several years through its foundation and offers in collaboration with Zigurat a dual degree.



Zigurat’s collaboration with UNIFEBE makes the Máster Internacional BIM Manager the most complete training in BIM specialty in the Portuguese language. For the Brazilian public and optionally, the training is recognized by the Ministry of Education (MEC) of Brazil at post-graduate level Lato Sensu EAD.



PARTNERS



PROFESSIONAL CERTIFICATIONS



COLLABORATING COMPANIES

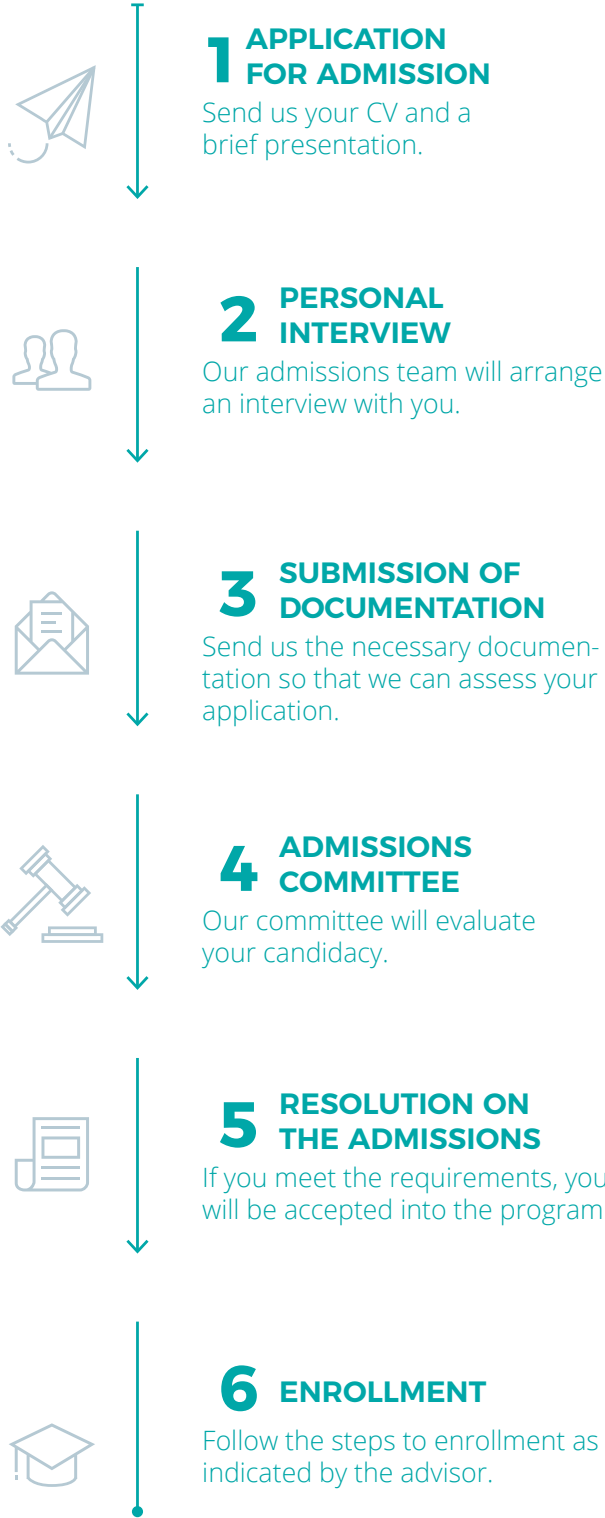


Admission Process

IF YOU WISH TO ENROLL IN A ZIGURAT MASTER YOU MUST TAKE THE FOLLOWING STEPS THROUGH OUR WEBSITE.

Zigurat and its academic partners promote diversity among professionals through the scholarships and grants program. Participants who meet the criteria will be eligible for these financial aids and fundings.

Candidates will be selected for their projection and professional excellence. Since our inception, more than 200 students have been able to enjoy our institutional scholarship program





ZIGURAT

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OF TECHNOLOGY

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