

Internship Program

Infrastructure and Civil Engineering



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university

Internship Program
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01

Introduction

The Infrastructure and Civil Engineering field is undergoing a significant transformation driven by the advancement of new technologies. According to a recent report, the adoption of digital technologies could increase productivity in the construction industry by 15% and reduce costs by 6%. Given this, professionals must update their knowledge to handle innovative tools such as smart sensors. In this way, experts will be able to improve efficiency, sustainability and safety in their infrastructure projects. To facilitate this task, TECH presents a revolutionary qualification consisting of a 3-week practical stay in a reference institution, where engineers will delve into the latest advances that have emerged in this area.

“

*Through this Internship Program,
you will solve complex Civil
Engineering problems using
innovative and effective approaches”*





Rehabilitation of existing infrastructure is a growing challenge as many essential structures (such as bridges, roads and public buildings) reach or exceed their designed service life. In this context, it is essential that Civil Engineering professionals incorporate into their practice the most innovative techniques for the maintenance of these critical infrastructures, as well as advanced monitoring and diagnostic strategies. This is the only way for professionals to contribute to prolonging the useful life of structures and improve the safety of aging buildings.

Within this framework, TECH has created an avant-garde practical program consisting of a stay in a reference entity in the field of Infrastructure and Civil Engineering. In this way, during 3 weeks, the graduates will be part of a team of top level experts, with whom they will work actively in tasks such as planning and execution of hydraulic works or infrastructure repair. Thanks to this, the students will be able to update their knowledge while gaining new skills to significantly optimize their practice.

On the other hand, during this stay, students will have the support of an assistant tutor, who will be responsible for ensuring compliance with all the requirements for which this Internship Program has been designed. In this way, the graduates will work with total guarantee and security in the handling of the most sophisticated technology. Therefore, graduates will live an enriching experience that will allow them to experience a significant improvement in their professional performance.

02

Why Study an Internship Program?

The growth of cities and the need for improved infrastructures have made Infrastructure and Civil Engineering a highly demanded field by institutions. In this sense, companies are looking to incorporate experts in their organization to develop, maintain and improve structures in an efficient, safe and sustainable way. In view of this, professionals need to update their knowledge on this subject in order to incorporate into their practice the most innovative techniques to optimize the design of their constructions. For this reason, TECH has designed a unique and disruptive academic product in the current educational panorama, which will allow engineers to enter a real working environment where they can put into practice the latest procedures in Infrastructure and Civil Engineering.



You will design both water systems and water resources, including flood control and water supply”

1. Updating from the latest technology available

New technologies are significantly transforming the field of infrastructure and civil engineering by providing tools that contribute to various aspects, ranging from design to construction and maintenance. For example, intelligent energy management systems optimize the use of resources in infrastructure, reducing energy consumption and operating costs. In view of this, TECH is developing an Internship Program that will allow graduates to handle the most sophisticated technological tools for their professional practice.

2. Gaining in-depth knowledge from the experience of top specialists

During this Internship Program, the graduates will join a work team formed by outstanding professionals in Infrastructure and Civil Engineering, which guarantees the excellent quality of the program. Thanks to the guidance of the tutor who will accompany them during their on-site stay, students will experience a significant improvement in their professional career as Civil Engineers.

3. Entering first-class professional environments

TECH carefully selects all available centers for its Internship Programs. As a result, graduates will be assured access to a prestigious environment in the field of Infrastructure and Civil Engineering. In this way, students will be able to experience first-hand the routine of a demanding, rigorous and meticulous area of work, always applying the latest scientific advances in their working methods.



4. Putting the acquired knowledge into daily practice from the very first moment

In academia, there is a notable lack of university programs that offer knowledge development in a practical way. To address this need, TECH has designed an innovative teaching model that will allow engineers to access a real working environment for 3 weeks, significantly improving their skills in Infrastructure and Civil Engineering.

5. Expanding the boundaries of knowledge

TECH offers engineers the possibility of carrying out this Internship Program in prestigious international organizations. In this way, graduates will be able to update their knowledge by working with highly experienced professionals in the field of Infrastructure and Civil Engineering.



You will have full practical immersion at the center of your choice"

03 Objectives

Through this Internship Program, engineers will have a deep understanding of advanced principles and practices in Infrastructure and Civil Engineering. Likewise, graduates will acquire skills to design complex structures using advanced tools and methods, such as modeling and simulation software. At the same time, professionals will promote the use of sustainable technologies in design, which will allow them to carry out green construction practices and use resources efficiently. In addition, students will master the relevant codes, regulations and standards in this field.



General Objectives

- ♦ Acquire new knowledge in Civil Engineering and Infrastructures
- ♦ Acquire new skills in terms of new technologies, latest machinery and software, knowledge of next steps and recycling
- ♦ Extrapolate this knowledge to other sectors of the industry, focusing on those fields that require more skilled and qualified personnel year after year
- ♦ Processing the data generated in Civil Engineering activities, through the BIM environment, a mandatory reality for the drafting, construction, management and operation of infrastructures





Specific Objectives

- ◆ Know in detail the latest IT tools available in the market for the optimization of resources for the drafting of projects
- ◆ Approach to the latest technologies for the collection of field data necessary for the drafting of the project
- ◆ Study the use of the most suitable software for the preparation of bids
- ◆ Prepare the necessary processes for the administrative start-up of a construction site and the latest developments in this regard
- ◆ Have the necessary guidelines for the drafting and management of the necessary Health and Safety documents: ESS and MSS
- ◆ Develop the latest tools available for documentation management
- ◆ Develop knowledge of the latest earthmoving machinery available for earthmoving operations
- ◆ Training for the analysis of existing geotechnical engineering for the optimization of existing foundations
- ◆ Know the appropriate machinery and construction processes for gravity and pressure piping works
- ◆ Know the particularities, suitable machinery and construction processes of channeling works
- ◆ Develop issues related to the particularities of the execution of works at airports, both from a technical and operational point of view
- ◆ Focus on the development of works in the industrial and renewable energy sectors.
- ◆ Acquire the skills for proper purchasing management
- ◆ Analytical capacity to optimize results in the development of each project
- ◆ Develop knowledge of the methods for closing open nonconformities during the course of the Construction Work
- ◆ Detect and create conflicting prices
- ◆ Study conservation and maintenance contracts in greater depth
- ◆ Drafting bids for maintenance and conservation contracts, both from a technical and economic point of view
- ◆ Know the necessary guidelines for carrying out inventories of infrastructures susceptible to repair, applying the latest technologies such as drones for the analysis of infrastructures
- ◆ Know which are the new IT tools for the decision making process of action in some infrastructures or others



Increase your confidence in decision-making by updating your knowledge through this practical stay”

04

Educational Plan

The Internship Program of this university program in Infrastructure and Civil Engineering consists of a 3-week internship in a distinguished organization, from Monday to Friday, with 8 consecutive hours of practical training with an assistant specialist. During the course of this itinerary, the graduates will have the opportunity to work in a highly demanding work environment, joining a team of professionals specialized in this field who will pass on the most recent innovations that have taken place.

In this proposal, of a completely practical nature, the activities are aimed at developing and perfecting the skills necessary for the provision of Infrastructure and Civil Engineering services, and are oriented towards specific training for the exercise of the activity.

Engineering professionals have an excellent opportunity to update their knowledge while working with a team of Infrastructure and Civil Engineering professionals. In this way, they will acquire both the knowledge and the skills they need to significantly optimize their practice and thus make a quality leap in their professional career.

The practical teaching will be carried out with the active participation of the student performing the activities and procedures of each area of competence (learning to learn and learning to do), with the accompaniment and guidance of the professors and other training partners that facilitate teamwork and multidisciplinary integration as transversal competencies for the praxis of Infrastructure and Civil Engineering (learning to be and learning to relate).





The procedures described below will be the basis of the practical part of the program, and their implementation will be subject to the center's own availability and workload, the proposed activities being the following:

Module	Practical Activity
Planning Phase	Conduct topographic surveys and soil studies to analyze the feasibility of the project
	Prepare plans that include technical specifications for the structures involved in the initiative
	Process the corresponding construction licenses and environmental permits
	Evaluate the environmental effects of the project and create mitigation measures
Risk Prevention and Occupational Safety	Prepare a document detailing in detail the preventive and protective measures at the site
	Monitor construction activities on an ongoing basis to ensure compliance with safety regulations
	Provide courses and workshops on safe practices and the use of personal protective equipment
	Install safety signs at the construction site
Maintenance of Structures	Conduct periodic visual inspections to detect damage or deterioration of infrastructure
	Implement monitoring systems to monitor structural health in real time
	Develop short-term plans for the conservation of structures
	Carry out preventive maintenance such as drain cleaning, unclogging of ducts and disposal of waste
Design of Hydraulic Works	Draw up plans and specifications for the construction of both dams and reservoirs
	Design irrigation, drainage and aqueduct canals
	Plan drinking water supply networks
	Create dams, retaining walls and other protective structures

05

Where Can I Do the Internship Program?

True to its commitment to provide programs characterized by their high quality, TECH rigorously selects all available institutions for the development of Internship Programs for its students. Thanks to this meticulous process, the institution has selected institutions of international prestige. In this way, the engineers will have the opportunity to carry out their on-site training in first-class facilities. There they will have the support of a work team made up of real experts in the field of Infrastructure and Civil Engineering.

“

You will carry out your practical stay in a renowned entity, where you will be part of a work team made up of experts in Infrastructure and Civil Engineering”





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The student will be able to do this program at the following centers:



Engineering

Cones

Country	City
Spain	Madrid

Address: Calle Zinc, 3, Humanes de Madrid,
28970. Madrid

A prestigious construction company highly specialized in
quality control of materials and geotechnical studies.

Related internship programs:

- Geotechnics and Foundations
- Acoustic Engineering



Engineering

Lo Bruno Estructuras S.A.

Country	City
Argentina	Santiago del Estero

Address: Fray L. Beltrán y 1º Teniente
Ardiles. Parque Industrial - La Banda,
Santiago del Estero

Company specialized in the manufacture of
construction materials

Related internship programs:

- MBA in Commercial Sales Management
- Infrastructure and Civil Engineering

06

General Conditions

Civil Liability Insurance

This institution's main concern is to guarantee the safety of the students and other collaborating agents involved in the internship process at the company. Among the measures dedicated to achieve this is the response to any incident that may occur during the entire teaching-learning process.

To this end, this entity commits to purchasing a civil liability insurance policy to cover any eventuality that may arise during the course of the internship at the center.

This liability policy for interns will have broad coverage and will be taken out prior to the start of the practical training period. That way professionals will not have to worry in case of having to face an unexpected situation and will be covered until the end of the internship program at the center.



General Conditions of the Internship Program

The general terms and conditions of the internship program agreement shall be as follows:

1. TUTOR: During the Internship Program, students will be assigned with two tutors who will accompany them throughout the process, answering any doubts and questions that may arise. On the one hand, there will be a professional tutor belonging to the internship center who will have the purpose of guiding and supporting the student at all times. On the other hand, they will also be assigned with an academic tutor, whose mission will be to coordinate and help the students during the whole process, solving doubts and facilitating everything they may need. In this way, the student will be accompanied and will be able to discuss any doubts that may arise, both clinical and academic.

2. DURATION: The internship program will have a duration of three continuous weeks, in 8-hour days, 5 days a week. The days of attendance and the schedule will be the responsibility of the center and the professional will be informed well in advance so that they can make the appropriate arrangements.

3. ABSENCE: If the students does not show up on the start date of the Internship Program, they will lose the right to it, without the possibility of reimbursement or change of dates. Absence for more than two days from the internship, without justification or a medical reason, will result in the professional's withdrawal from the internship, therefore, automatic termination of the internship. Any problems that may arise during the course of the internship must be urgently reported to the academic tutor.

4. CERTIFICATION: Professionals who pass the Internship Program will receive a certificate accrediting their stay at the center.

5. EMPLOYMENT RELATIONSHIP: The Internship Program shall not constitute an employment relationship of any kind.

6. PRIOR EDUCATION: Some centers may require a certificate of prior education for the Internship Program. In these cases, it will be necessary to submit it to the TECH internship department so that the assignment of the chosen center can be confirmed.

7. DOES NOT INCLUDE: The Internship Program will not include any element not described in the present conditions. Therefore, it does not include accommodation, transportation to the city where the internship takes place, visas or any other items not listed.

However, students may consult with their academic tutor for any questions or recommendations in this regard. The academic tutor will provide the student with all the necessary information to facilitate the procedures in any case.

07 Certificate

This private qualification will allow you to obtain a **Internship Program diploma in Infrastructure and Civil Engineering** endorsed by **TECH Global University**, the world's largest online university.

TECH Global University is an official European University publicly recognized by the Government of Andorra ([official bulletin](#)). Andorra is part of the European Higher Education Area (EHEA) since 2003. The EHEA is an initiative promoted by the European Union that aims to organize the international training framework and harmonize the higher education systems of the member countries of this space. The project promotes common values, the implementation of collaborative tools and strengthening its quality assurance mechanisms to enhance collaboration and mobility among students, researchers and academics.

This **TECH Global University** private qualification is a European program of continuing education and professional updating that guarantees the acquisition of competencies in its area of knowledge, providing a high curricular value to the student who completes the program.

Title: **Internship Program in Infrastructure and Civil Engineering**

Duration: **3 weeks**

Attendance: **Monday to Friday, 8-hour shifts, consecutive shifts**

Credits **4 ECTS**



future
health confidence people
education information tutors
guarantee accreditation teaching
institutions technology learning
community commitment
personalized service innovation
knowledge present quality
development languages
virtual classroom

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university

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