

# Postgraduate Diploma International EPC Project Management





## Postgraduate Diploma International EPC Project Management

- » Modality: online
- » Duration: 6 months
- » Certificate: TECH Technological University
- » Dedication: 16h/week
- » Schedule: at your own pace
- » Exams: online

Website: [www.techtitute.com/pk/engineering/postgraduate-diploma/postgraduate-diploma-international-epc-project-management](http://www.techtitute.com/pk/engineering/postgraduate-diploma/postgraduate-diploma-international-epc-project-management)

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# 01

# Introduction

There is no doubt that EPC (turnkey) projects are on the rise. This type of constructions, which require a thorough work by the engineer, stand out for needing a global attention from the contractor, from conceptual, basic and detail engineering, to the final tests of the installation, training of the personnel and delivery of the final result to the client. Therefore, in order for the professional to take on a challenge of this magnitude, it is necessary to acquire in-depth training in the management of this type of projects, such as the one you will find in this program. We will provide you with the skills to work in this area, providing optimal management throughout the entire process.





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*Learn how to carry out an in-depth and global management of International EPC Projects and become a top-notch engineer by completing this Postgraduate Diploma"*

During this Postgraduate Diploma, the engineer will delve into everything related to international projects, from the existing types depending on the type of contract or service, the analysis and development of each stage of the project, control of the main aspects that allow the project to be carried out successfully, as well as the fundamental notions and management of international projects.

The different processes of a project will be analyzed, along with their interaction and the importance of proper coordination for the project to be completed on time and within the budget. In the same way, the main constraints of a project and the assets of each process will be studied in depth in order to control the project as a whole.

On the other hand, during the training course, the professional will learn in depth the most important aspects of a project, and will be able to manage projects of this type in national and international environments, paying special attention to the critical points that can affect the deadlines and costs of the execution of a contract.

We will also analyze the structure required for the management of each stage of the EPC Project, the existing restrictions and the different difficulties that usually arise in this type of projects.

Likewise, the professional will learn the aspects that influence the coordination of the main stages of the EPC Project. In addition, an exhaustive analysis will be made of one of the most important stages of the EPC Project, the construction. At this stage, all the stakeholders involved in the project will be analyzed to ensure its successful completion: quality, safety, cost and time.

Therefore, at the end of this Postgraduate Certificate, the professional will be able to recognize the main actors involved in the construction phase of an EPC project, identify deviations and will have the ability to establish a plan to mitigate such deviations.

All this, throughout a 100% online training program that provides the student with the ease of being able to take it wherever and whenever they want. You will only need a device with internet access, and you will be able to access a universe of knowledge that will be the main basis for engineers to position themselves in a sector that is increasingly demanded by companies in various sectors.

This **Postgraduate Diploma in International EPC Project Management** contains the most complete and up to date educational program on the market. The most important features of the program include:

- ◆ Practical cases presented by experts in Civil Engineering and Geotechnics
- ◆ The graphic, schematic, and eminently practical contents with which they are created, provide scientific and practical information on the disciplines that are essential for professional practice
- ◆ Practical exercises where self-assessment can be used to improve learning
- ◆ Special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions to the expert, debate forums on controversial topics, and individual reflection assignments
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Don't miss out on this great opportunity to study with the best professionals in the sector"*

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*If what you are looking for is to grow in your profession, without putting aside the rest of your daily tasks, then this Postgraduate Diploma is for you”*

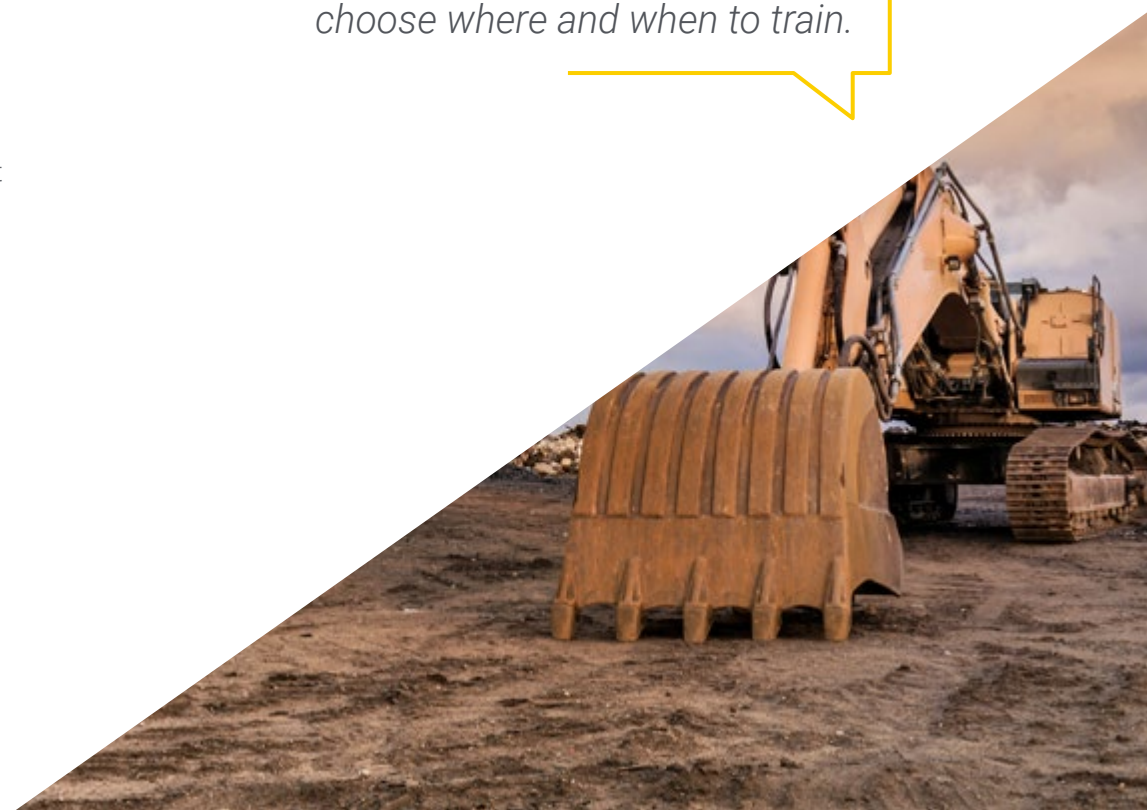
The program includes, in its teaching staff, professionals from the sector who bring to this program the experience from their work, in addition to recognized specialists from prestigious reference societies and universities.

The multimedia content, developed with the latest educational technology, will provide the professional with situated and contextual learning, i.e., a simulated environment that will provide an immersive training program designed to train in real situations.

This program is designed around Problem Based Learning, whereby the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the professional will be assisted by an innovative interactive video system created by renowned and experienced engineering experts.

*The skills you will acquire will enable you to manage EPC projects and position yourself as a prestigious professional.*

*This 100% online program will allow you to combine your studies with your professional work. You choose where and when to train.*



# 02 Objectives

TECH has designed this Postgraduate Diploma with the fundamental objective of helping engineering professionals to acquire the necessary knowledge to work on large EPC projects, taking into consideration all the necessary aspects to carry out successful project management. This will be done through the quality content which is designed on the basis of the latest premises of the profession that will enable the student to practice in these environments with greater assurance.





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*Your goals are our goals.  
If you grow, we will too"*



## General Objectives

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- ◆ Carry out an exhaustive analysis of EPC projects
- ◆ Manage the different stages of EPC projects
- ◆ Manage the contracts of large-scale projects
- ◆ Perform an in-depth breakdown of guarantees, disputes and insurance in the construction industry
- ◆ Master project management on a global basis
- ◆ Carry out cost, time and resources analysis
- ◆ Gain solid knowledge of the integration phases of a project
- ◆ Manage a project with a global, interdepartmental vision
- ◆ Be able to analyze the earned value of projects

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*A training program designed through practical cases that will teach you how to act in real situation in daily practice in your profession”*





## Specific Objectives

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### Module 1. International Projects

- ◆ In-depth breakdown of contract types
- ◆ Sound analysis and knowledge of each stage of the project
- ◆ Coordination of each stage and process of the project
- ◆ Stakeholder analysis and management
- ◆ Ability to plan contingencies for deviations
- ◆ Accurate knowledge and capacity for global analysis of a project

### Module 2. Turnkey Projects (EPC)

- ◆ In-depth breakdown of EPC Project stages
- ◆ Sound analysis and knowledge of each stage of the *E: Engineering*
- ◆ Sound analysis and knowledge of each stage of the *P: Procurement*
- ◆ Coordination of the HR Department
- ◆ Coordination of the Contracts Department

### Module 3. Management and Control of the Stages in Turnkey Projects (EPC)

- ◆ In-depth breakdown of Stage C: Construction
- ◆ Quality analysis within the Construction phase
- ◆ Safety analysis within the Construction phase
- ◆ Cost analysis and management in the Construction phase
- ◆ Time frame analysis and management in the Construction phase
- ◆ Study of control KPIs in EPC projects
- ◆ Monitoring and control of production vs. Costs

# 03

# Course Management

One of the premises that makes TECH unique is the constant search for quality. One of the aspects where this is most noticeable is in the teaching staff, which is always made up of first-rate professionals. This guarantees students that by studying here they will find the best didactic content taught by the best professionals in the sector. In this sense, this Postgraduate Diploma in International EPC Project Management is taught by highly prestigious professionals in this field, who bring the experience of their years of work to the training, as well as the knowledge acquired from research in the field.





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*TECH offers you the most complete teaching staff on the educational market so that you can train based on the experience of the best”*

## Management



### Mr. Ruiz Cid, Martin Joaquín

- ◆ Technical Director EPC Project Group - EPC Project Manager Leader at Soltec Energías
- ◆ Industrial Technical Engineer specializing in Mechanics/Structures from the Polytechnic University of Cartagena
- ◆ Industrial Engineer in Electricity from the Polytechnic University of Cartagena
- ◆ Master's Degree in Power Electronics and Adaptive Control
- ◆ MBA in Strategic Company Management from UNED (National Distance Learning University)
- ◆ Master's Degree in Renewable Energies and the Environment
- ◆ Professional Project Manager Course
- ◆ EPC Turnkey Project Management Course
- ◆ Industrial Instrumentation Course



# 04

# Structure and Content

The syllabus has been built based on the intensive and high-impact specialization requirements of Postgraduate Diploma. Through a complete course, which incorporates all the fields of work in which management of large EPC projects is involved, the student will develop their theoretical and practical knowledge, achieving a professional and personal growth that will allow them to intervene in this field of work with confidence. You will achieve this through top-notch content designed by the best professionals in the industry.







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*The contents that TECH offers you with this Postgraduate Diploma will serve as a great theoretical support and will help you to face real situations in your profession"*

## Module 1. International Projects

- 1.1. Projects and Organizational Context
  - 1.1.1. Project in the Organization
  - 1.1.2. Elements of the Project
  - 1.1.3. Importance of the Project in the Organization
- 1.2. Types of Project According to the Service
  - 1.2.1. Types of Projects
  - 1.2.2. Project Analysis
  - 1.2.3. Orientation of the Project
- 1.3. Main Processes in the Development of a Project
  - 1.3.1. Start-Up and Planning Process
  - 1.3.2. Execution and Monitoring
  - 1.3.3. Closing Process
- 1.4. Analysis of Restrictions in Cost, Scope and Quality
  - 1.4.1. Costs Restriction Analysis
  - 1.4.2. Scope Restriction
  - 1.4.3. Quality Restriction
- 1.5. Restrictions in Time, Resources and Risks
  - 1.5.1. Time Restriction Analysis
  - 1.5.2. Resources Restriction
  - 1.5.3. Risks Restriction
- 1.6. Analysis of the Types of Contracts
  - 1.6.1. Unit Price Contract
  - 1.6.2. *Lump Sum* Contract
  - 1.6.3. Cost Plus Margin Contract
- 1.7. Project Management According to Typology
  - 1.7.1. Project Management at Unit Price
  - 1.7.2. Lump Sum Project Management
  - 1.7.3. Cost Plus Margin Project Management
- 1.8. Project, Program and Portfolio
  - 1.8.1. Analysis of the Project in the Organization
  - 1.8.2. Analysis of the Program in the Organization
  - 1.8.3. Analysis of the Portfolio in the Organization

- 1.9. Project Stakeholders
  - 1.9.1. Pyramid of Stakeholders in the Project
  - 1.9.2. Analysis of *Stakeholders*
  - 1.9.3. Interaction of *Stakeholders*
- 1.10. Analysis of the Organization's Process Assets
  - 1.10.1. Asset Analysis in Start-Up and Planning
  - 1.10.2. Analysis of Assets Under Execution and Control
  - 1.10.3. Analysis of Assets at Closing

## Module 2. Turnkey Projects (EPC)

- 2.1. EPC Project
  - 2.1.1. EPC Project Context
  - 2.1.2. Project Components
  - 2.1.3. Needs Analysis
- 2.2. Stages in the EPC Project
  - 2.2.1. Identification of Stages in an EPC Project
  - 2.2.2. Identification of Initial Needs in the Stages
  - 2.2.3. Timing of Each Stage
- 2.3. Management of Stage *E - Engineering*
  - 2.3.1. Analysis of Stage E
  - 2.3.2. Timeline for Stage E
  - 2.3.3. Necessary Resources for Stage E
- 2.4. Analysis of Stage *E - Engineering*
  - 2.4.1. Necessary Structure for the Development of Stage E
  - 2.4.2. Restrictions
  - 2.4.3. Difficulties and Risks
- 2.5. Management of Stage *P - Procurement*
  - 2.5.1. Analysis of Stage P
  - 2.5.2. Timeline
  - 2.5.3. Resources Required
- 2.6. Analysis of Stage *P - Procurement*
  - 2.6.1. Necessary Structure for the Development of Stage P
  - 2.6.2. Restrictions
  - 2.6.3. Difficulties and Risks

- 2.7. Management of Stage C - *Construction*
    - 2.7.1. Analysis of Stage C
    - 2.7.2. Timeline
    - 2.7.3. Resources Required
  - 2.8. Analysis of Stage C - *Construction*
    - 2.8.1. Necessary Structure for the Development of Stage C
    - 2.8.2. Restrictions
    - 2.8.3. Difficulties and Risks
  - 2.9. EPC Projects: HR Department
    - 2.9.1. Main Functions
    - 2.9.2. Necessary Resources for This Department
    - 2.9.3. Coordination and Communication With the Rest of the Project
  - 2.10. EPC Projects: Contracts Department
    - 2.10.1. Main Functions
    - 2.10.2. Necessary Resources for This Department
    - 2.10.3. Coordination and Communication With the Rest of the Project
- Module 3. Management and Control of the Stages in Turnkey Projects (EPC)**
- 3.1. Coordination of Stages in an EPC Project
    - 3.1.1. Planning of Stages
    - 3.1.2. Communication Between Teams
    - 3.1.3. Incident Resolution Process Steps
  - 3.2. Stage C: Main Structural Components: Quality
    - 3.2.1. Component Q. Quality
    - 3.2.2. Analysis of the Quality Part of the Project
    - 3.2.3. Structure and Importance
  - 3.3. Stage C: Main Structural Components: Health and Safety
    - 3.3.1. HSE Component. Health and Safety
    - 3.3.2. Analysis of the Health and Safety Part of the Project
    - 3.3.3. Structure and Importance
  - 3.4. Stage C: Main Structural Components: Costs
    - 3.4.1. Component C. Cost
    - 3.4.2. Analysis of the Costs Control Part of the Project
    - 3.4.3. Structure and Importance
  - 3.5. Stage C: Main Structural Components: Time Frame
    - 3.5.1. Component T. Time Frame
    - 3.5.2. Analysis of the Time Frame Control Part of the Project
    - 3.5.3. Structure and Importance
  - 3.6. EPC Project Management
    - 3.6.1. Project Manager Management
    - 3.6.2. Characteristics of the Manager
    - 3.6.3. Coordination and Communication
  - 3.7. Analysis of International Projects
    - 3.7.1. Global Analysis of the Project from Management
    - 3.7.2. Management Reporting Processes
    - 3.7.3. Control of the Main KPIs of the Project
  - 3.8. EPC Project Deviations
    - 3.8.1. Main Deviation in a EPC Project
    - 3.8.2. Analysis of Deviations
    - 3.8.3. Procedure for Notifying the Client of Deviations
  - 3.9. Analysis and Monitoring of Economic Deviations of the Project With Regards to the Contract
    - 3.9.1. Production Control
    - 3.9.2. Cost Control
    - 3.9.3. Monitoring of Production vs. Costs
  - 3.10. Management of Non-Conformities in EPC Projects
    - 3.10.1. Main Non-Conformities in EPC Projects
    - 3.10.2. Management Procedures
    - 3.10.3. Analysis and Mitigation



*High-level training specially designed to train the best engineers in the industry"*

05

# Methodology

This academic program offers students a different way of learning. Our methodology uses a cyclical learning approach: **Relearning.**

This teaching system is used, for example, in the most prestigious medical schools in the world, and major publications such as the **New England Journal of Medicine** have considered it to be one of the most effective.





“

*Discover Relearning, a system that abandons conventional linear learning, to take you through cyclical teaching systems: a way of learning that has proven to be extremely effective, especially in subjects that require memorization"*

### Case Study to contextualize all content

Our program offers a revolutionary approach to developing skills and knowledge. Our goal is to strengthen skills in a changing, competitive, and highly demanding environment.

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*At TECH, you will experience a learning methodology that is shaking the foundations of traditional universities around the world”*



*You will have access to a learning system based on repetition, with natural and progressive teaching throughout the entire syllabus.*



*The student will learn to solve complex situations in real business environments through collaborative activities and real cases.*

### **A learning method that is different and innovative**

This TECH program is an intensive educational program, created from scratch, which presents the most demanding challenges and decisions in this field, both nationally and internationally. This methodology promotes personal and professional growth, representing a significant step towards success. The case method, a technique that lays the foundation for this content, ensures that the most current economic, social and professional reality is taken into account.

**“** *Our program prepares you to face new challenges in uncertain environments and achieve success in your career”*

The case method is the most widely used learning system in the best faculties in the world. The case method was developed in 1912 so that law students would not only learn the law based on theoretical content. It consisted of presenting students with real-life, complex situations for them to make informed decisions and value judgments on how to resolve them. In 1924, Harvard adopted it as a standard teaching method.

What should a professional do in a given situation? This is the question that you are presented with in the case method, an action-oriented learning method. Throughout the program, the studies will be presented with multiple real cases. They will have to combine all their knowledge and research, and argue and defend their ideas and decisions.

## Relearning Methodology

TECH effectively combines the Case Study methodology with a 100% online learning system based on repetition, which combines 8 different teaching elements in each lesson.

We enhance the Case Study with the best 100% online teaching method: Relearning.

*In 2019, we obtained the best learning results of all online universities in the world.*

At TECH, you will learn using a cutting-edge methodology designed to train the executives of the future. This method, at the forefront of international teaching, is called Relearning.

Our university is the only one in the world authorized to employ this successful method. In 2019, we managed to improve our students' overall satisfaction levels (teaching quality, quality of materials, course structure, objectives...) based on the best online university indicators.





In our program, learning is not a linear process, but rather a spiral (learn, unlearn, forget, and re-learn). Therefore, we combine each of these elements concentrically.

This methodology has trained more than 650,000 university graduates with unprecedented success in fields as diverse as biochemistry, genetics, surgery, international law, management skills, sports science, philosophy, law, engineering, journalism, history, and financial markets and instruments. All this in a highly demanding environment, where the students have a strong socio-economic profile and an average age of 43.5 years.

*Relearning will allow you to learn with less effort and better performance, involving you more in your training, developing a critical mindset, defending arguments, and contrasting opinions: a direct equation for success.*

From the latest scientific evidence in the field of neuroscience, not only do we know how to organize information, ideas, images and memories, but we know that the place and context where we have learned something is fundamental for us to be able to remember it and store it in the hippocampus, to retain it in our long-term memory.

In this way, and in what is called neurocognitive context-dependent e-learning, the different elements in our program are connected to the context where the individual carries out their professional activity.



This program offers the best educational material, prepared with professionals in mind:



### Study Material

All teaching material is produced by the specialists who teach the course, specifically for the course, so that the teaching content is highly specific and precise.

These contents are then applied to the audiovisual format, to create the TECH online working method. All this, with the latest techniques that offer high quality pieces in each and every one of the materials that are made available to the student.



### Classes

There is scientific evidence suggesting that observing third-party experts can be useful.

Learning from an Expert strengthens knowledge and memory, and generates confidence in future difficult decisions.



### Practising Skills and Abilities

They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### Additional Reading

Recent articles, consensus documents and international guidelines, among others. In TECH's virtual library, students will have access to everything they need to complete their course.





**Case Studies**

Students will complete a selection of the best case studies chosen specifically for this program. Cases that are presented, analyzed, and supervised by the best specialists in the world.



**Interactive Summaries**

The TECH team presents the contents attractively and dynamically in multimedia lessons that include audio, videos, images, diagrams, and concept maps in order to reinforce knowledge.

This exclusive educational system for presenting multimedia content was awarded by Microsoft as a "European Success Story".



**Testing & Retesting**

We periodically evaluate and re-evaluate students' knowledge throughout the program, through assessment and self-assessment activities and exercises, so that they can see how they are achieving their goals.



06

# Certificate

This Postgraduate Diploma in International EPC Project Management guarantees you, in addition to the most rigorous and up-to-date training, access to a Postgraduate Diploma issued by TECH Technological University.



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*Successfully complete this training program  
and receive your university certificate  
without travel or laborious paperwork”*

This **Postgraduate Diploma in International EPC Project Management** contains the most complete and up to date educational program on the market.

After the student has passed the assessments, they will receive their corresponding **Postgraduate Diploma** issued by **TECH Technological University** via tracked delivery\*

The certificate issued by **TECH Technological University** will reflect the qualification obtained in the **Postgraduate Certificate**, and meets the requirements commonly demanded by labor exchanges, competitive examinations, and professional career evaluation committees.

Title: **Postgraduate Diploma in International EPC Project Management**

Official N° of Hours: **450 h.**



\*Apostille Convention. In the event that the student wishes to have their paper certificate issued with an apostille, TECH EDUCATION will make the necessary arrangements to obtain it, at an additional cost.

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



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