

# Postgraduate Certificate JavaScript Framework. Angular



## Postgraduate Certificate JavaScript Framework. Angular

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

Website: [www.techtute.com/us/information-technology/postgraduate-certificate/javascript-framework-angular](http://www.techtute.com/us/information-technology/postgraduate-certificate/javascript-framework-angular)

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# 01

# Introduction

Angular is a complex *framework* and although it has a certain learning curve, thanks to it you can write quality code. This *JavaScript* framework is used to build robust and efficient single page applications. If you want to be a *Front End* or *Full Stack* developer, learning Angular is a must. This online program specializes the graduate in this open source *framework* to facilitate the creation and programming of single-page web applications. In addition, knowing Angular facilitates the rotation of programmers and the demand for these professionals in the projects, which helps the workflow and cost maintenance of the projects.



“

*Angular is modular and scalable, so it will adapt to your needs as an Icomputer scientist”*

Angular is a *JavaScript framework* created by Google and supported by a large community. It is formed by a set of libraries in the *typescript* programming language and its main particularity is that it promotes the use of the MVC software design pattern that divides the program code into components, dividing it according to its responsibilities or function within the development. The computer scientist who will be working on this program will use this pattern through dependency injection, promoting the use of good practices, so that the structure of your project will be maintained, even if it grows a lot.

Angular is based on components, which facilitates the reusability of the code, and makes it maintainable and easy to test. This Postgraduate Certificate develops specialized knowledge on project creation, dependency injection, component and directive creation, routing of an application, etc.

For this purpose, this educational program presents the advantages of this modular and scalable *framework* that adapts to the needs of the computer scientist. In addition, being based on the web component standard, and with a set of application programming interface (API), it allows you to create new custom HTML tags that can be reused.

As it is a 100% online program, the student is not conditioned by fixed schedules or the need to move to another physical location, but can access a rich content that will help you reach the elite of programming at any time of day, combining, at your own pace, your work and personal life with the academic.

This **Postgraduate Certificate in JavaScript Framework. Angular** contains the most complete and up-to-date program on the market. The most important features include:

- ◆ The development of case studies presented by experts in *JavaScriptFramework* and Angular
- ◆ The graphic, schematic, and 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
- ◆ Its special emphasis on innovative methodologies
- ◆ Theoretical lessons, questions for experts and individual reflection work
- ◆ Content that is accessible from any fixed or portable device with an Internet connection



*Developing with Angular will allow you to scale, maintain and update your business projects to keep them up to date with industry trends"*



*TECH gives you the flexibility to balance this program with your daily professional and work activity. You decide where, when and how"*

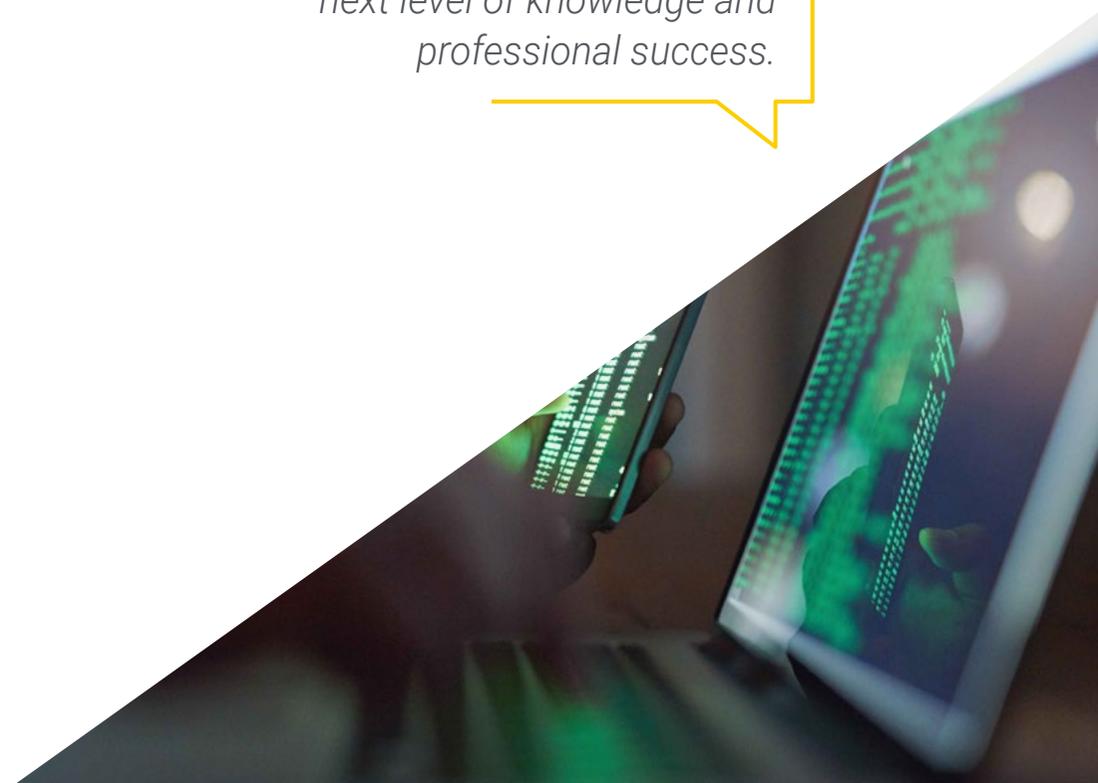
The program's teaching staff includes professionals from the sector who contribute their work experience to this educational program, as well as renowned specialists from leading societies and prestigious universities.

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 immersive education programmed to learn in real situations.

The design of this program focuses on problem-based learning, through which the professional must try to solve the different professional practice situations that arise during the academic year. For this purpose, the students will be assisted by an innovative interactive video system created by renowned and experienced experts.

*Angular facilitates code reusability, and makes it maintainable and easy to test. Specialize in this framework.*

*This Postgraduate Certificate will take your IT career to the next level of knowledge and professional success.*



# 02 Objectives

Develop specialized knowledge about Angular, generate a project with this *framework* and implement it and organize its code correctly, are some of the objectives presented in this Postgraduate Certificate. This program aims to deploy the most important technical, theoretical and practical skills currently available in this sector so that the computer scientists who study it can broaden their knowledge, up to a level of specialization, and move up in the labor market.



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*The purpose of the module is to incorporate into your daily practice new computer management techniques to create web pages and applications”*



## General Objectives

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- ◆ Generate specialized knowledge about Angular
- ◆ Discover the full potential of the *framework*, and its advanced features.
- ◆ Establish the necessary knowledge to build an application with Angular
- ◆ Assess the knowledge acquired



*This program will give you the keys to build any web solution"*





## Specific Objectives

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- ◆ Develop specialized knowledge about the architecture of the *Framework*
- ◆ Generate a project Commissioning
- ◆ Delve into Angular Methodology
- ◆ Analyze the concept of components
- ◆ Organize the code correctly

03

# Course Management

Since the contents of this Postgraduate Certificate require significant specialization and dedication, all the teachers responsible for the development of the program have proven experience in the sector. In this way, all the didactic material is benefited by a double theoretical and practical perspective that provides the student with maximum efficiency in all the proposed contents.



“

*This is the most comprehensive and modern syllabus on the market, developed by professionals in the industry”*

## Management



### Mr. Olalla Bonal, Martín

- Technical sales blockchain specialist en IBM
- Blockchain Hyperledger and Ethereum Architecture Manager at Blocknitive
- Director of the Blockchain area at PSS Information Technologies.
- Chief Information Officer at ePETID - Global Animal Health
- IT Infrastructure Architect at Bankia - wdoIT (IBM - Bankia Join Venture)
- Project director and manager at Daynet integral services
- Director of Technology at Wiron Construcciones Modulares
- Head of IT Department at Dayfisa
- Head of IT department at Dell Computer, Majsja and Hippo Viajes
- Electronics Technician in IPFP Juan de la Cierva

## Professors

### Mr. Calzada Martínez, Jesús

- ♦ Senior Software Engineer at Devo
- ♦ Desarrollador Full Stack en Blocknitive
- ♦ Front End Manager in Infinia
- ♦ Full Stack Developer at Resem
- ♦ Java Developer at Hitec
- ♦ Graduate in Computer Engineering

```
mirror_mod.use_x = False
mirror_mod.use_y = True
mirror_mod.use_z = False
elif operation == "MIRROR_Z":
    mirror_mod.use_x = False
    mirror_mod.use_y = False
    mirror_mod.use_z = True

#selection at the end -add back the deselected objects
mirror_ob.select = 1
modifier_ob.select = 1
bpy.context.scene.objects.active = modifier_ob
print("Selected" + str(modifier_ob)) # modifier ob is selected
#mirror_ob.select = 0
#one = bpy.context.selected_objects[0]
#bpy.data.objects[one.name].select = 1
except:
```

print("please select exactly two objects, the last one will be selected")

### OPERATOR CLASSES

```
Tool
class MirrorOperator(bpy.types.Operator):
    """Mirror an object to the selected object"""
    bl_space_name = "3D Viewport"
    bl_idname = "mirror"
    bl_label = "Mirror"
    bl_options = {'REGISTER', 'UNDO'}

    @classmethod
    def poll(cls, context):
        obj = context.active_object
        return obj is not None and obj.type == 'MESH'
```

# 04

## Structure and Content

This Postgraduate Certificate has been designed based on educational efficiency, carefully selecting the contents to offer a complete course, which includes all the essential fields of study to achieve real knowledge of Angular. This way, the students will see their knowledge broadened, which will enable them to develop professionally, knowing that they can count on the support of a team of experts that they can consult at any time.



“

*The skills you will develop throughout the program will be the key to your future career success as a JavaScript expert”*

## Module 1. JavaScript Framework. Angular

- 1.1. The *Angular Framework* and its Architecture
  - 1.1.1. Angular CLI
  - 1.1.2. Architecture
  - 1.1.3. *Workspace* and Structure
  - 1.1.4. Environment.
- 1.2. Angular *Framework* Components
  - 1.2.1. Life Cycle
  - 1.2.2. View Encapsulation
  - 1.2.3. Interaction Between Components
  - 1.2.4. Content Projection
- 1.3. Angular *Framework* Templates
  - 1.3.1. Text Interpolation
  - 1.3.2. Declarations
  - 1.3.3. *Property Binding*
  - 1.3.4. *Class, Style and Attribute Binding*
  - 1.3.5. *Event Binding and Two-Way Binding*
  - 1.3.6. *Pipes*
- 1.4. Angular *Framework* Directives
  - 1.4.1. Angular Directives
  - 1.4.2. Attribute Directives
  - 1.4.3. Structure Directives
- 1.5. Services and Dependency Injection
  - 1.5.1. Services
  - 1.5.2. Dependency Injection
  - 1.5.3. *Service Providers*
- 1.6. *Routing* and Navigation
  - 1.6.1. Application with *Routing*
  - 1.6.2. Basic Routing
  - 1.6.3. Nested Routes
  - 1.6.4. Parameters
  - 1.6.5. Access and Authorization
  - 1.6.6. *Lazy Loading* of Modules
- 1.7. RxJS
  - 1.7.1. Observables
  - 1.7.2. *Observers*
  - 1.7.3. Subscriptions
  - 1.7.4. Operators
- 1.8. Forms and HTTP
  - 1.8.1. Reactive Forms
  - 1.8.2. Field Validation
  - 1.8.3. Dynamic Forms
  - 1.8.4. Requests
  - 1.8.5. *Interceptors*
  - 1.8.6. Security/Safety
- 1.9. Animations
  - 1.9.1. Transitions and *Triggers*
  - 1.9.2. Path Transitions
  - 1.9.3. Differences Between Transitions
- 1.10. *Testing* in the *Angular Framework*
  - 1.10.1. Testing Services
  - 1.10.2. Component Testing
  - 1.10.3. Testing of Directives and Pipelines



“

*You will be able to access high quality audiovisual material, created by the teachers themselves to delve deeper into each of the sections of the syllabus”*

# 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.

“

*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 has been the most widely used learning system among the world's leading Information Technology schools for as long as they have existed. 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 course, students 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 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.



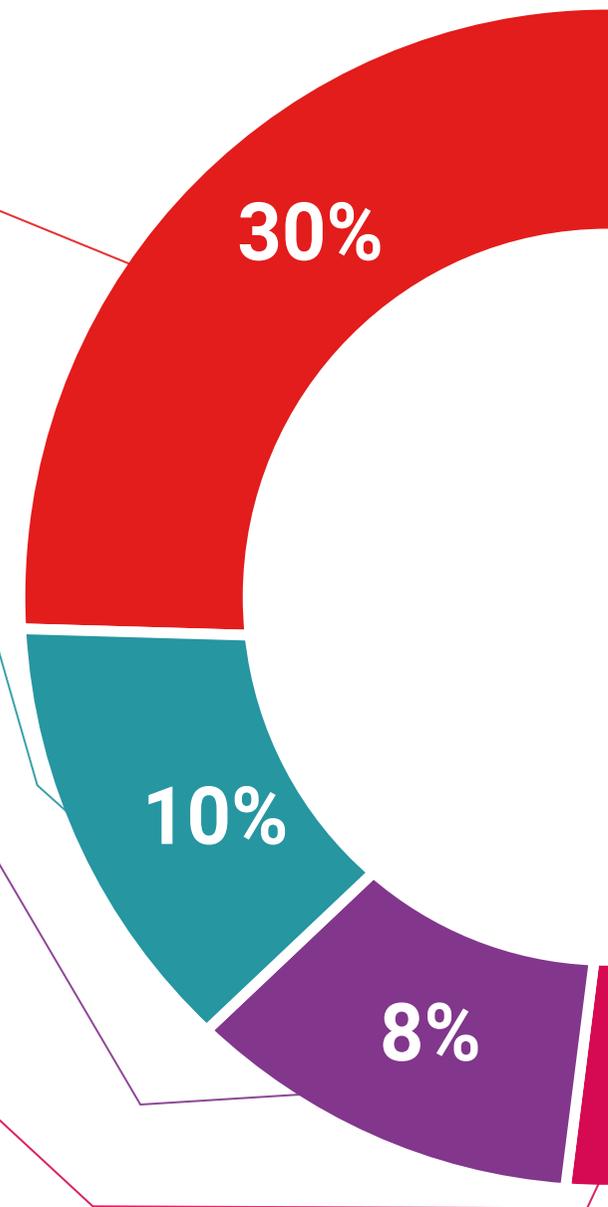
### Practising Skills and Abilities

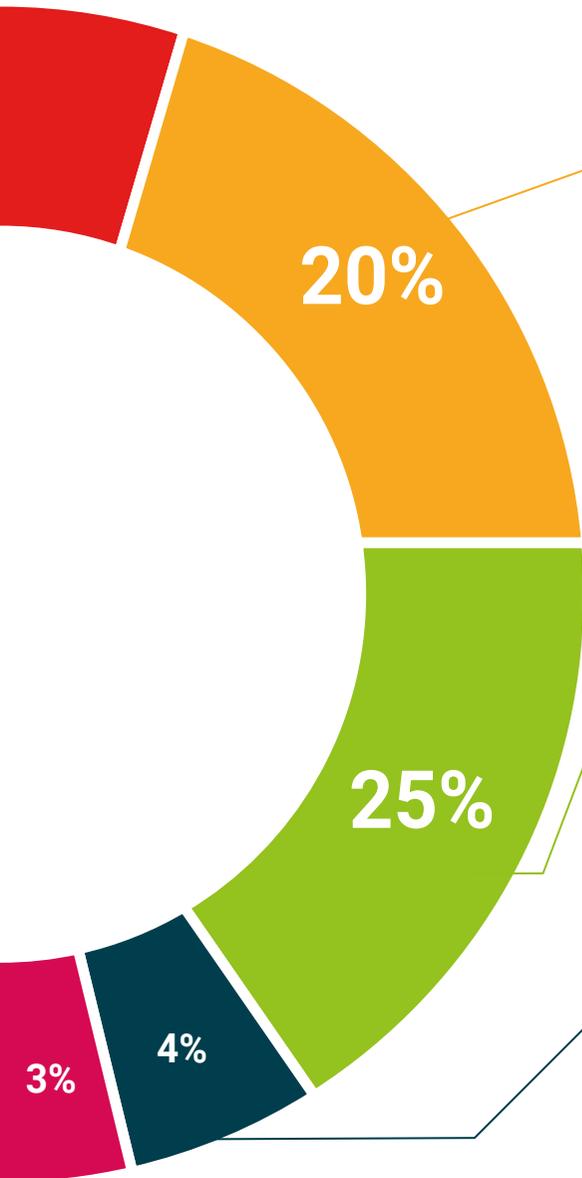
They will carry out activities to develop specific skills and abilities in each subject area. Exercises and activities to acquire and develop the skills and abilities that a specialist needs to develop in the context of the globalization that we are experiencing.



### 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

The Postgraduate Certificate in JavaScript Framework. Angular guarantees students, in addition to the most rigorous and up-to-date education, access to a Postgraduate Certificate issued by TECH Technological University.



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*Successfully complete this program and receive your university qualification without having to travel or fill out laborious paperwork”*

This **Postgraduate Certificate in JavaScript Framework. Angular** contains the most complete and up-to-date program on the market.

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

The diploma 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 Certificate in JavaScript Framework. Angular**

Official N° of Hours: **150 h.**



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



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