



# EUROPEAN BACHELOR'S IN APPLICATION DEVELOPMENT & CONNECTED SOLUTIONS – EQF LEVEL 6



**Level**  
6 EQF (*European Qualifications Framework*)



**Duration**  
1 year



**Credits**  
60 ECTS



**Target group**  
Students - people seeking employment - employees and professionals in the sector



**Admission requirements**  
Candidates holding a level 5 EQF qualification or a qualification equivalent to the attainment of 120 ECTS



**Course Structure**  
Full-time or work-study



**Pedagogical methods**  
Theoretical courses, tutorials and practical work  
Case studies and professional scenarios  
Individual and group projects



**Professional assessments :**

- Continuous assessment
- Case Study (6h)
- Activity report and professional support (30 min)

**CCE :**

- Quizzes (1h20)

**Modern language :**

- Reading Comprehension (1h)
- Listening (45min)

## The FEDE, as a certifier, is in charge of the assessment processes

- Organisation and planning of exam sessions
- Development of topics and model answers
- Ensuring compliance with examination regulations and supervision (anonymity, integrity, confidentiality)
- Assessment and marking of papers
- Reporting results, issuing diplomas, diploma supplements and certificates

[www.fede.education/en/fede-quality-charter](http://www.fede.education/en/fede-quality-charter)

The European Bachelor's degree in Application Development and Connected Solutions trains professionals capable of designing, deploying and securing software solutions adapted to modern environments.

The programme covers front-end and back-end development, cloud infrastructure management, the Internet of Things and cybersecurity, while incorporating Agile and DevOps methods. It prepares students to master current technologies (React, Node.js, AWS, Kubernetes) and modern architectures (microservices, serverless), with a view to responding to changes in digital practices.

## LEARNING OUTCOMES

- Develop web and mobile applications and secure their cloud deployment
- Master SQL and NoSQL databases and optimise queries
- Design secure APIs with authentication and API gateways
- Program connected objects (IoT) using secure protocols (MQTT, HTTP, WebSockets)
- Apply Agility and DevOps (Scrum, Kanban, CI/CD) to manage projects effectively
- Implement modern architectures (microservices, serverless) and ensure software resilience
- Ensure quality through automated testing
- Secure applications according to OWASP standards, SSL/TLS and best practices in digital identity
- Collaborate in teams using digital tools (Jira, Trello, GitLab, Slack) and produce rigorous technical documentation

## PROGRAMME

### PROFESSIONAL SKILLS ((500 À 640 HOURS)

Agile and DevOps project management - Software architecture, design and Agile management - Modern web development: front-end and PWA - Backend development and APIs: Node.js, PHP, SQL/NoSQL - Advanced API and microservices development : API-first architectures, GraphQL and serverless - Native and hybrid mobile development : iOS, Android, Flutter - Software testing and QA automation - Securing web and mobile applications : OWASP, GDPR, API Security - Cloud computing and serverless architectures - IoT development and communication between connected objects - Ethics, regulation and green software design - Application development in AI and applied Machine Learning - Technology watch and IT practices evolution

### Professional assignment (≥12 weeks)

Internship - Apprenticeship - Salaried employment

### MODERN LANGUAGE (60-80 HOURS)

Modern language 1 - CEFR Level B1  
German, English, Spanish, French, Italian, Portuguese  
Modern language 2 and 3 (optional)  
German, English, Arabic, Chinese, Spanish, French, Italian, Portuguese

## CAREER DESTINATIONS

### List of careers accessible after obtaining the Bachelor's degree with 0 to 2 years of experience :

- Full stack developer (web and mobile)
- Back-end / front-end developer
- IoT application developer
- Application integrator
- Database administrator
- Junior DevOps engineer

### List of careers accessible with 3 to 5 years of experience :

- Software architect
- Lead developer / Tech Lead
- Application development consultant
- Cloud/serverless developer
- API and microservices developer
- Green software developer
- Artificial intelligence developer

## FEDE'S ASSET - EUROPEAN DEGREE

### EUROPEAN CULTURE AND CITIZENSHIP (40H)

#### The European project: Culture and Democracy for Active Citizenship

- Importance of History (OHE - Observatory on History Teaching in Europe)
- Contemporary Europe
- Europe and the World
- Cultures and diversity in Europe
- European citizenship
- The Workings of the European Union
- Importance, challenges and future of European construction
- Focus on corruption (GRECO)

#### Intercultural management and human resources

- Culture and cultural diversity
- Intercultural communication in an organisation
- Managing intercultural aspects and resolving cultural conflicts
- Working in Europe
- Social protection systems in Europe
- Corporate Social Responsibility (CSR)