


Development



Back-End .NET Developer

 Mentor individuel  OpenClassrooms Certification

Build robust, secure web applications in the C# programming language with Microsoft's .NET software framework.

 PÉRIODE DE FORMATION
12 mois à temps plein

 DURÉE DE LA FORMATION
800 heures supervisées

OPENCLASSROOMS

La formation demande un investissement en temps estimé à 1600 heures : 800 heures de formation supervisée (projets encadrés par des mentors) et 800 heures de formation guidée (cours et des ressources pédagogiques). En alternance, la durée totale ne comprend pas le temps passé en entreprise.

La période de formation peut être rallongée en cas de formation à temps partiel. La durée est estimée et dépend du niveau d'entrée en formation, de la disponibilité, du temps alloué par semaine et des capacités et rythmes d'apprentissage de l'étudiant.

At OpenClassrooms, we pinpoint the key skills needed for the most in-demand jobs and develop courses and diplomas to train our students in those areas. That's why we've developed a one-year bachelor-level diploma in web development, which you can complete entirely online with the help of a dedicated mentor.

What will I do as a .NET developer?

A .NET ("dot-net") developer is a **back-end developer** who is specialized in using Microsoft's software framework, .NET, to build web applications with the **C#** ("c-sharp") programming language. A .NET developer may be in charge of:

- developing and improving an application software
- designing technical architecture
- implementing software tests and debugging code
- producing the design schema of a database
- writing technical and functional documentation
- analyzing customer needs
- selecting and advocating for suitable technical solutions
- keeping up with changes in technologies

Wondering if .NET is the right path for you? See what one of our .NET experts has to say:

- [Op-ed: The Case for Alternative IT Education](#)
- [What is .NET?](#)
- [Why Pursue .NET?](#)

How much will I earn?

Back-end web development can be a lucrative career with many prospects opening up as you continue to rack up valuable experience. Here is what you might expect to earn in your career as a .NET developer:

United States

Beginner: \$45,000 - \$75,000

2-5 years: \$55,000 - \$85,000

5+ years: \$70,000 - \$95,000 +

United Kingdom

Beginner: £20,000 - £40,000

2-5 years: £30,000 - £50,000

5+ years: £40,000 - £60,000 +

Salaries will vary depending on your location or the location of your employer.

What are my job prospects?

This path can prepare you for the following jobs:

- .NET developer
- C# developer
- Back-end developer

Developers are also called programmers, coders, or software engineers.

After a few years of experience, a developer can advance to a position of lead developer, software designer / architect, or technical director / tech lead.

Who is eligible to enroll?

To be eligible to earn this path's diploma, candidates must demonstrate proof of one of the following prerequisites:

- an associate's degree, or equivalent, in computer science, web development, or software development
- **or** a high school/secondary school degree, vocational certificate, or equivalent, and at least 2 years of professional experience in IT, web development, or software development

All other candidates will need to go through a specific admissions process. These candidates must have:

- an associate's degree, or equivalent, in any subject and at least 1 year of professional experience in any field
- **or** a high school/secondary school degree, vocational certificate, or equivalent in any subject and 3 years of professional experience in any field
- **and** a completed placement test consisting of:
 - OpenClassrooms course completion certificates from [Build Your First Web Pages With HTML and CSS](#), [Think like a computer: the logic of](#)

[programming](#), and [Manage Your Code Project With Git & Github](#)

- a personal programming project, accompanied by a 10-minute recorded video that explains the project itself and the code behind it

For all candidates, the admissions process starts with a form to validate the aforementioned prerequisites, as well as the alignment between the candidate's professional goals and this path. Any necessary documents for the candidate's application will be collected via this form. If necessary, an individual interview with the candidate will also be organized.

- **Language:** You will need to provide a certificate not older than 2 years to demonstrate a minimum level of English B2.

Certificates accepted:

- English Diploma from a secondary institution (private or public) or an accredited higher learning institution
- Linguaskill minimum score: 160
- BULATS minimum score: 60
- TOEIC minimum score: 785
- IELTS minimum score: 6.5
- TOEFL iBT minimum score: 88
- Cambridge FCE / CAE / BEC HIGHER / BEC VANTAGE minimum score or grade: B or 160
- Certificate from a language center demonstrating a minimum level of B2 (including the number of training hours completed and the company signature or stamp)

Don't have one of these certificates? [Find out where to take an exam](#).

- **Equipment:** Candidates must also have access to a computer (PC or Mac), headphones, a microphone, a webcam, and a good internet connection for mentoring sessions (3.2 Mbps upload and 1.8 Mbps for download). In addition, to master the skills on this path, you will need to:
 - Have at least 8 GB of RAM (16 GB is more comfortable) and 100 GB of storage space available on your computer.
 - Have administrator rights to your computer in order to install required programs.

What will I learn to do?

- Jump-start your studies by defining a personal learning strategy
- Program with the C# programming language
- Use programming tools like Visual Studio, Git, and ASP.NET Core

- Visualize the design of a system with UML (Unified Modeling Language)
- Develop user interfaces using the MVC pattern
- Ensure the security of a web application
- Perform a needs analysis and propose a technical solution
- Develop an application according to customer needs
- Manage application test plans
- Provide technical support with documentation
- Stay up to date for a set of technologies
- Practice Agile web development
- ...and more!

How will I learn at OpenClassrooms?

Our learning method is unique and revolves around two elements: professional projects and dedicated mentoring sessions.

Projects

At OpenClassrooms, learning is [project-driven](#) because that's the fastest way to become proficient. Projects offer hands-on experience so you can hit the ground running when you start your new job.

Want to see an example of a project? Read our blog post [here](#).

Mentorship

During your path, you will be assigned a mentor who will offer one-to-one support via weekly video conference sessions. This mentor will offer guidance on your projects, help define objectives and guide you until you reach them. Our mentors are dedicated professionals who are experts in their field and have experience in sharing their know-how with our students.

At the end of this training, you will be delivered the *.NET Back-end React Developer* OpenClassrooms certification.

Projet 1 - 45 heures

Spend a day in the life of a back-end developer

What will your job look like? Get a peek at what it's actually like to work as a back-end developer! You'll analyze the job and define a learning strategy for working towards becoming an autonomous professional.

Compétences cibles

- Describe the role of a back-end developer
- Create a plan for completing your learning path
- Integrate content according to a mock-up

Cours associés



Understanding the Web

Facile

4 heures

Does the web interest you, but you aren't totally clear on how the whole thing works behind the scenes? Learn internet history, vocabulary, logistics, and more with this course!



Learn How to Learn

Facile

6 heures

Learning quickly and effectively is a key skill that can improve your learning capacity and help you take control of your personal and professional development.



Build Your First Web Pages With HTML and CSS



Facile



10 heures

Learn to create your first web pages using HTML and CSS, the two most important languages on the web. No coding experience required!



Create Web Page Layouts With CSS



Facile



10 heures

Go beyond basic HTML and CSS skills and learn how to create great layouts using CSS layout techniques!

Come to the rescue of a .NET application

You're the last line of defense and you've been brought in to finish up what another developer has started. Ready to go on the hunt for some bugs and get the green light on those tests? Let's dive in!

Compétences cibles

- Produce an xUnit test execution report
- Fix an application according to a test execution report

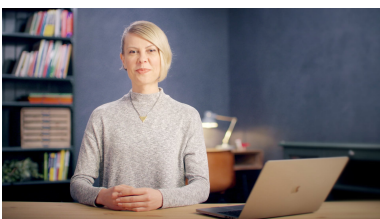
Cours associés




Learn the Command Line in Terminal

 Facile  4 heures

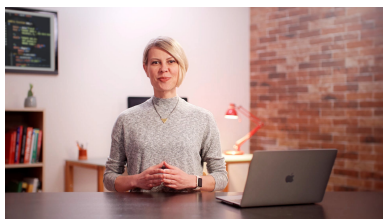
The command line in Terminal is where a lot of programming efficiency happens. Take this course to better communicate with your computer!



Think like a computer: the logic of programming

 Facile  4 heures

Have you been thinking about a career in software development? Do you find computers and computer lingo a bit foreign? This course demystifies jargon and puts computer programming within reach!



Learn Programming With C#



Facile



20 heures

Start programming by learning one of the most popular programming languages. C# will allow you to build a variety of secure and robust applications that run on Microsoft's .NET Framework.



Set Up Your .NET Coding Environment With Visual Studio



Facile



4 heures

Turn your computer into a programming powerhouse! Use Visual Studio, an Integrated Development Environment, or IDE, to set up your first .NET projects and start coding in C#.

Test the implementation of a new .NET functionality

If you want to implement a new functionality in your application, you've got to write your tests along with your code. Your job is to get it right, so you can release your app on a Friday and still have a nice weekend.

Compétences cibles

- Implement integration tests for a new functionality in a C# application
- Implement unit tests for a new functionality in a C# application

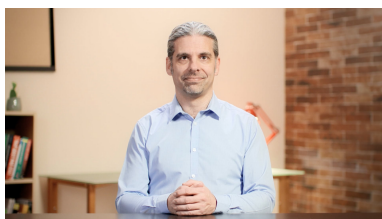
Cours associés



Test Your .NET Applications

Facile 10 heures

Testing is essential for creating high quality apps that users love. Learn best practices with test-driven development and behavior-driven development. Make your C# applications robust with unit testing, mock testing, and integration testing.



Debug Your .NET Application With Visual Studio

Moyenne 10 heures

Start hunting down bugs with Visual Studio! Discover through concrete examples the tips, tools, and methodology for getting to the root of problems in your code and fixing errors with unit tests.

Understand your client's needs and design the application of their dreams

Making your customer happy includes listening to what they need in order to design a high quality business domain. It's up to you to come up with the application they've been waiting for!

Compétences cibles

- Select a suitable technical solution
- Write detailed specifications
- Analyze customer requirements
- List functionalities required by the customer

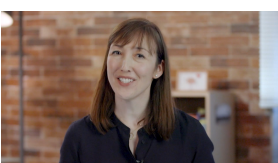
Cours associés



Write Agile Documentation: User Stories & Acceptance Tests

 Moyenne  10 heures

Learn to define user stories and acceptance tests and use the agile requirements format to store requirements on a wiki.



Create Simple Prototypes With Wireframes

 Moyenne  15 heures

Use wireframes to communicate how a website or app will work. Diagram user flows to make sure the steps are all in place.



Apply a Domain-Driven Design Approach to Development

Facile

4 heures

Use DDD to communicate the technical architecture to the various stakeholders in your project, and learn functional modeling using UML use-case diagrams and class diagrams.

Create your first application with ASP.NET Core

A new customer has come to you requesting an application with specific functionalities. Demonstrate what .NET can do for them by building an MVC app while respecting good development practices.

Compétences cibles

- Select suitable programming languages for an MVC web application
- Respect good coding practices
- Develop an application with the functionalities expected by the client

Cours associés



Use MVC, SOLID Principles, and Design Patterns in .NET



Facile



4 heures

Ready to improve your C# coding practices? Your .NET applications will be cleaner, more robust, and more maintainable with model-view-controller architecture, the SOLID principles, and design patterns.



Kick Start Your MVC Application With ASP.NET Core



Moyenne



8 heures

Improve your efficiency as a C# developer with a Model-View-Controller (MVC) framework. ASP.NET Core does the heavy lifting so you can create better modern, cloud-based, internet-connected applications in much less time!



Secure Your .NET Application



Moyenne



6 heures

Sharing sensitive data in real time is an essential element of back-end development! Use .NET Core, Identity Framework, and Token Authentication to secure your .NET MVC application.

Design and create a production-ready .NET application

Your first application impressed your customer, they now want it live! Time to turn to a database and make it production-ready!

Compétences cibles

- Design the technical architecture of an application database using an ERD
- Implement a data schema in a database
- Produce the design schema of an application database

Cours associés



Design the Logical Model of Your Relational Database

 Facile  4 heures

Ready to store your application's data? Let's cover the basics of SQL and design the structure of your first relational database with an Entity Relationship Diagram (ERD).



Implement a Relational Database with SQL

 Facile  4 heures

Ready to put your database modeling skills to use? Design and build a physical relational database with Structured Query Language (SQL) and learn the tools to manipulate your table data.



Implement a Relational Database With ASP.NET Core

■ ■ Moyenne ⌚ 6 heures

Integrate a relational database with your MVC application in ASP.NET Core using C#, LINQ, code-first migrations, SSMS, and database-first integration.



Apply a Domain-Driven Design Approach to Development

■ ■ Facile ⌚ 4 heures

Use DDD to communicate the technical architecture to the various stakeholders in your project, and learn functional modeling using UML use-case diagrams and class diagrams.

Make your .NET back end more adaptable with a REST API

Modernize the back end of an application with a REST API. Make sure it's tested, secured, and ready for deployment!

Compétences cibles

- Implement REST APIs using best practices

Scale your .NET app with distributed systems

A new client needs its monolithic application adapted to evolve more easily. Now it's up to you to make a more efficient, decoupled web application!

Compétences cibles

- Complete a Unit and Integration test suite to account for changes
- Fix faults reported by the customer on an application
- Improve an application as per a customer request
- Produce technical and functional documentation for the application

Survey the technology landscape

Create your own dashboard to stay up to date on all the latest and greatest tech happenings!

Compétences cibles

- Set up a system for staying up to date with technology
- Identify tools and resources for staying up to date with technology

Cours associés



Stay Up to Date With Innovations in Your Field



Facile



4 heures

Learn how to stay abreast of industry changes, pinpoint areas for professional development, and work more efficiently in the digital age.

Produce the right, agile, .NET solution for your customer!

Build an application for disease risk screenings. Structure your app using a microservice and a NoSQL database. Organize your time into sprints, following Agile project management principles.

Compétences cibles


- Create a segmented REST API
- Create a microservice for an application
- Implement Agile methodology to manage your code project
- Use NoSQL databases

Cours associés



Learn About Agile Project Management and Scrum

 Facile

 6 heures

Learn the principles of agile software development. Discover how a Scrum Team plans a Sprint, builds feedback, creates retrospectives, and holds daily stand-ups.