.NET WEB DEVELOPER PROGRAM

A ten-week comprehensive program covering web development using Microsoft® .NET technologies

DePaul University's .NET Web Developer Program is designed to provide programmers with an intensive and comprehensive introduction to all essential aspects of the technologies, techniques and principles of Microsoft .NET. The program stresses an understanding of the relevant technologies, an understanding of the most common products, and the use of the Web as a platform to deliver solutions to business problems.

Classroom lectures and demonstrations will be complemented by reading and programming assignments. The student will be provided with the .NET Framework, Visual Studio 2015, and supporting tools enabling the student to develop and test applications.

YOU WILL LEARN:

- .NET framework
- Common Language Runtime (CLR)
- C# language
- Visual Studio 2015
- Razor
- ASP.NET MVC
- ADO.NET, Entity Framework
- Language Integrated Query (LINQ)
- Assemblies
- Global Assembly Cache (GAC)
- jQuery
- Web API and RESTful web services
- WPF
- WCF and SOAP
- .NET security

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.NET is Microsoft’s most ambitious and its most complex, comprehensive and inclusive technology initiative. It recognizes that the Internet and its standards will play a dominant role in the software development of the future. It also reflects the fact that object-oriented programming has become the norm. Instead of relying solely on Visual Basic®, the Visual Studio development environment gives the user the choice of using C#, Visual Basic or any of the many languages supported by .NET, including COBOL, Perl, Python® and even Java™. There is no question that .NET is a formidable response to the challenge of Java and Sun™'s J2EE™ initiative.

Most notable about the .NET platform is its comprehensiveness. Over the base .NET runtime, .NET layers application libraries encompassing database access, network programming, conventional desktop user interfaces, XML processing, Web development, and much more. New programming initiatives such as the Windows Presentation Foundation, Windows Communication Foundation and WorkFlow are all built on top of the .NET Framework. .NET is the present and future of software development in the Microsoft environment.

The goal of the .NET Web Developer Program is to give the programmer an excellent understanding of the entire sweep of the .NET initiative, the tools and knowledge to develop a wide range of .NET applications with special emphasis on Web applications, and also knowledge of likely future directions. The principal language that will be used in the program is C#.

Students in the .NET Web Developer Program are expected to do a considerable amount of work outside of class. The software provided enables the student to maximize learning opportunities. Instructors will be accessible in person and through electronic mail. The participant must have a solid programming background (at least two years of professional software development experience is required), including experience with Windows®-based or object-oriented programming, and a basic knowledge of HTML and databases.

CURRICULUM

The following topics are covered in the program. Each unit involves reading assignments. All work can be done using the software provided; some of the work can also be done using the Institute's dedicated laboratories.

YOUR LEARNING ENVIRONMENT

Introduction to .NET. Tools and software distributed to the students.

.NET FRAMEWORK


COMMON LANGUAGE RUNTIME


BASE CLASSES


OBJECT-ORIENTED PROGRAMMING


C#


.NET SECURITY


FORMS AND CONTROLS


WPF


.NET EVENTS

Defining events. Firing an event. Defining an event handler. Subscribing to events. Delegation. ASP.Net events.
ADO.NET
- Connected mode vs. disconnected mode
- Data sets
- Data tables
- Data readers
- Data adaptors
- Transactions
- Concurrency
- Data binding for rich-client applications
- Data sources

WEB BASICS
- Review of HTTP
- HttpRequest/HttpResponse
- Caching

ASP.NET
- Web controls
- Control-based, event-driven execution
- Data binding
- Templates
- Configuration files
- Themes
- Session, Cache, and Application Indexers
- WebForms and MVC frameworks
- Razor

WEB SERVICES AND WCF
- SOAP-based and REST-style Web Services
- WSDL documents
- WCF services

GENERAL INFORMATION

ADMISSION
Applicants must have a solid programming background (at least two years of professional software development experience is required), including experience with Windows-based or object-oriented programming, and a basic knowledge of HTML, CSS and databases.

A substantial commitment of time is required for this intensive course of study. Acceptance into the program will be determined by the admissions committee on the basis of an applicant's overall qualifications, including work history and educational background.

FACILITIES
To promote the learning process, the Institute maintains special-purpose laboratories as well as dedicated classrooms equipped with state-of-the-art audio/visual equipment.

In addition, the college’s unique Course OnLine (COL) technology allows students to replay classes over the Internet. COL captures and replays five components of the classroom experience—audio, video, PC screen, and whiteboard—and incorporates them into one interface to provide an innovative rebroadcast system.

CLASSES
The Institute offers one section of the program each quarter. Classes meet on Tuesday and Thursday evenings and in the morning on approximately half of the Saturdays during the program. The option to take the program entirely online is also available.

FACULTY
The faculty consists of a team of instructors from the College of Computing and Digital Media and experts from industry. Faculty will be available throughout the program both in person and through electronic mail.
The college, through its School of Computing and its School of Cinema and Interactive Media, offers a variety of programs at the undergraduate and graduate levels. Over 1,000 students are enrolled in the college’s bachelor’s programs and over 2,000 students are enrolled in the master's and Ph.D. programs making the college’s graduate program one of the largest in the country. The college offers more than 200 courses each quarter, many in the evening, in several locations: the Loop Campus, the Lincoln Park Campus, the O'Hare Campus, the Naperville Campus, and the Rolling Meadows Campus. Most of the degree programs are also available exclusively online.

Current offerings at the undergraduate level include:

**Offerings at the undergraduate level include:**
- Animation B.S. / Animation B.A.
- Computer Games Development B.S.
- Computer Graphics and Motion Technology B.S.
- Computer Science B.S.
- Computing B.A.
- Digital Cinema B.S. / Digital Cinema B.A.
- Graphic Design B.F.A.
- Information Assurance and Security Engineering B.S.
- Information Systems B.S.
- Information Technology B.S. / Information Technology B.A.
- Interactive Media B.S.
- Math and Computer Science B.S.
- Network Technologies B.S.

Offerings at the graduate level include:
- Animation M.A.
- Applied Technology M.S.
- Business Information Technology M.S.
- Cinema Production M.S.
- Computer Game Development M.S.
- Computer Graphics and Motion Technology M.S.
- Computational Finance M.S.
- Computer Science M.S.
- Computer, Information and Network Security M.S.
- E-Commerce Technology M.S.
- Human-Computer Interaction M.S.
- Information Systems M.S.
- Information Technology M.A.
- IT Project Management M.S.
- Network Engineering and Management M.S.
- Predictive Analytics M.S.
- Software Engineering M.S.
- J.D./M.A. in Computer Science Technology
- J.D./M.S. in Computer Science Technology

**Master’s of Fine Arts**
- Animation
- Cinema
- Screenwriting

**Ph.D. in Computer and Information Sciences**

The Institute for Professional Development was formed by the college in 1984 to assist both individuals and businesses in keeping pace with the rapid development of computer technologies. The Institute currently offers a variety of intensive certificate programs in these areas:

- Advanced SQL
- Big Data and NoSQL
- Big Data Using Hadoop™
- Cloud Computing Technologies
- Data Science for Business
- IPv6
- Java™ Developer
- Java™ Web Development
- .NET Web Developer
- Ruby on Rails®
- SQL Server® Business Intelligence
- SQL Server® Database Administration
- Web Development with JavaScript & HTML5
- Web Development with Python®

**APPLICATION PROCEDURE:**
Complete the enclosed application and return it with a non-refundable $40.00 application fee (check or money order made payable to DEPAUL UNIVERSITY) to:

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