JAVA EE DEVELOPER PROGRAM

A ten-week in-depth program covering enterprise-wide applications development using Sun Microsystems’ Java™ EE

The Java EE Developer Program provides a complete overview of the Java Enterprise Edition (EE) architecture and an in-depth and comprehensive coverage of all the components of Java EE. The Java EE 5 specification includes significant updates to certain technologies from the previous specification known as Java 2 Enterprise Edition (J2EE)™, though many APIs remain the same. The Java EE Developer Program covers the newer Java EE 5 mechanisms and the APIs common to both versions, as well as important J2EE technologies that have been superseded in Java EE. Coverage of superseded J2EE technologies is especially useful for those who must continue to maintain or transition existing applications, or develop new applications based on the older J2EE APIs. The program stresses all the technical details needed to develop functioning systems and the architectural understanding needed to take full advantage of the extraordinary capabilities of Java EE to provide scalable, reliable, cross-platform solutions to a broad range of business problems.

Reading and programming assignments will complement classroom lectures and demonstrations. The software used in this program is all open-source or is freely available for download.

YOU WILL LEARN:

- Java EE architecture
- JDBC™
- EJBs™: entity, session and message-driven beans
- Java Persistence API
- EJB containers
- Network programming
- JNDI
- RMI
- JMS
- Servlets and JSP™
- Tag libraries
- XML
- SAX and DOM
- SOAP and Web services
- Application servers
- Deployment
- Transactions
- Security
- Java Connector Architecture
- Interfacing with legacy applications

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To develop systems in the new environment requires more than knowledge of a general purpose programming language and some database concepts. The variety of platforms, legacy applications, the internet, software and hardware incompatibilities, and the availability of new opportunities such as mobile applications give rise to a bewildering variety of tools and technologies likely to overwhelm any single person. In such an atmosphere the availability of well-designed, powerful, reliable, and clean development environments no longer represents a luxury but instead a necessity. Java and its attendant technologies promise to provide just such tools; the evidence is to be found in the remarkable growth in the use of the Java platform in an astonishingly wide range of applications. Java and the technologies that support it have become the solutions of choice for enterprise application integration and web-based systems. The Java EE platform has become the infrastructure of a comprehensive and unified approach to developing distributed applications. The sincerest form of flattery is said to be imitation. If this is true, the emergence of Microsoft’s .NET is just such a compliment and clearly demonstrates the broad acceptance of Sun’s vision of software development and the convergence of technologies upon a common solution.

The Java EE Developer Program covers the manifold supporting technologies of Java EE such as Java Naming and Directory Interface (JNDI) for directory-based applications, Servlets, Java Server Pages (JSP), Tag Libraries, Java Messaging Service (JMS), JavaMail for messaging, RMI-IIOP for distributed applications, JavaIDL for CORBA integration, JDBC for database access, JTS/JTA for transactions, JCA for connecting to legacy systems, the Java APIs for XML-based applications (JAXPack), Enterprise Java Beans (EJB) and Java Persistence API (JPA) for reuse, and many more.

The Java EE Developer Program covers all relevant areas of the Java EE SDK. The ideal participant will have a solid programming background, knowledge of the core Java language, and familiarity with basic SQL. Students in the program are expected to do a considerable amount of work outside of class. Instructors will be accessible in person and through electronic mail.

CURRICULUM

The following topics are covered in the program. Each unit involves reading and programming assignments. The software used in the program is all open-source or freely available for download to the student’s own computing environment. It is also available in the Institute’s dedicated computer laboratory.

YOUR LEARNING ENVIRONMENT

Program overview. Description of software environment. Directions for download and installation of software used in the program.

JAVA EE ARCHITECTURE


SESSION AND ENTITY BEANS


JMS AND MESSAGE-DRIVEN BEANS


JAVA PERSISTENCE API (JPA)

Object-relational mapping (ORM) using Plain Old Java Objects (POJOs). Using EntityManager. Java Persistence Query Language. Annotations and XML mapping files. Migration from legacy entity bean applications.

JDBC


TRANSACTIONS

| JNDI | JNDI architecture. JNDI service providers. LDAP. JNDI packages. |
| WEB ARCHITECTURE/SERVLETS | Web servers. HTTP requests and responses. Servlets environment. Servlets architecture. Servlets in Java EE. |
| XML/SOAP/WEB SERVICES | XML. XML descriptors. Java XML API. Schemas. SOAP messages. Web services. WSDL. |
| CONNECTOR TECHNOLOGY | Enterprise Application Integration using Java Connector Architecture. Interfacing with legacy applications. |

**GENERAL INFORMATION**

**ADMISSION**

Applicants must have a solid programming background (at least two years of professional software development experience is required) and knowledge of the core Java language. Applicants should also be familiar with basic SQL.

A substantial commitment of time is required for this intensive course of study. Final admission 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, whiteboard, and document camera input—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 the Saturdays during the program.

**FACULTY**

The faculty consists of a team of instructors from the College of Computing and Digital Media and experts in industry. Faculty will be available throughout the program both in person and through electronic mail.
COLLEGE OF COMPUTING AND DIGITAL MEDIA

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. Many of the degree programs are also available exclusively online.

Current offerings at the undergraduate level include:

**School of Computing**
- Computer Games Development
- Computer Graphics and Motion Technology
- Computer Science
- Computing
- Information Assurance and Security Engineering
- Information Systems
- Information Technology
- Interactive Media
- Math and Computer Science
- Network Technology

**School of Cinema and Interactive Media**
- Animation
- Computer Games Development
- Computer Graphics and Motion Technology
- Digital Cinema
- Interactive Media

Current offerings at the graduate level include:

**School of Computing**
- Applied Technology
- Business Information Technology
- Computer Graphics and Motion Technology
- Computational Finance
- JD/MS in Computer Science Technology
- JD/MS in Computer Science Technology
- Computer Information and Network Security
- E-Commerce Technology
- Human-Computer Interaction
- Information Systems
- Information Technology
- Instructional Technology Systems
- IT Project Management
- Software Engineering
- Telecommunications Systems

**School of Cinema and Interactive Media**
- Computer Games Development
- Computer Graphics and Motion Technology
- Digital Cinema – MS
- Digital Cinema – MFA
- Human-Computer Interaction

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
- IT Project Management
- Java™ Developer
- Java™ EE Developer (formerly J2EE Developer)
- Java™ Web Services
- Lightweight Java™ Web Development
- .NET Developer
- Ruby on Rails™
- SharePoint® Developer Program
- SQL Server® Business Intelligence
- SQL Server® Database Administration
- Web Development with Python®

INSTITUTE FOR PROFESSIONAL DEVELOPMENT

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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