

Information Technology Institute



System Development Department Tracks Overview

Intake 46
2025/2026



Integrated Development & Software Architecture Track Overview

- The .NET Development & Software Architecture Track provides a comprehensive journey through the Microsoft ecosystem – from advanced programming and web frameworks to modern software architecture and cloud-native deployment.
- It is designed for trainees who aspire to become enterprise-grade software engineers and solution architects capable of designing secure, scalable, and maintainable systems.
- The track blends hands-on development with deep architectural concepts, preparing graduates to lead full-cycle software projects in enterprise environments.

Core Learning Areas:

Programming & Frameworks

This phase emphasizes mastering Microsoft's development stack for building robust, data-driven web applications, covering:

- Visual C# .NET and Secure Coding Essentials
- Advanced SQL Server Programming with Entity Framework 6 & Core
- Language Integrated Query (LINQ) for data manipulation
- ASP.NET Core MVC, Blazor, and Web APIs for web development
- gRPC and SignalR for real-time communication
- TypeScript, Advanced JavaScript, ES.Next, jQuery, Angular, and Responsive Web Design for front-end integration
- Test-Driven Development (TDD) and Unit Testing for quality assurance
- SOLID Principles and .NET Design Patterns for clean software design
- IIS Administration and Azure Fundamentals for deployment and hosting.

Core Learning Areas:

Architecture & Cloud

This segment focuses on developing an architectural mindset for scalable, distributed enterprise systems, covering:

- Software architecture and modern concepts
- Domain-Driven Design (DDD) and Event-Driven Architecture
- SOA design and N-Layered Architecture
- Aspect-Oriented Architecture (AOP) and MVVM Light Toolkit
- Object-Relational Mapping (ORM) techniques
- Cloud application architecture and scalability
- Microsoft Azure and AWS fundamentals for integration
- Docker and Kubernetes for containerization and orchestration
- Microservices architecture for modular systems
- Microsoft Team Foundation Server (TFS) and VS Architecture tools for lifecycle management.

Core Learning Areas:

Testing, DevOps & Continuous Improvement

A professional developer should focus on key competencies in software quality and delivery, including:

- Source Control with Git and Azure DevOps
- Unit Testing, TDD, and MVVM Testing
- CI/CD concepts using Azure Pipelines
- Cloud Deployment and Container Management
- Secure Coding Standards and Performance Optimization

Team Collaboration Tools like Azure Boards, and GitHub Projects.

Focus Area

Backend & Enterprise Solutions



Job Profiles

Graduates are qualified for:

- .NET Developer / Backend Engineer
- Full Stack Developer (.NET + Front-End)
- Software Engineer / Application Developer
- Solution Architect



Companies in Egypt

- Link Development
- ITWorx
- Raya Information Technology
- eFinance
- Vodafone VOIS
- Orange Egypt
- Etisalat Egypt
- WE
- DXC Technology
- Integrant
- CrossWorkers

Professional Development & BI-infused CRM Track Overview

- The Professional Development & BI-infused CRM Track bridges the gap between software engineering, business intelligence, and digital transformation.
- It equips trainees with both technical and analytical expertise to design, customize, and integrate Microsoft Dynamics 365 CRM solutions while leveraging data analytics and visualization tools for smart decision-making.
- This track is ideal for professionals aiming to work in banking, finance, consulting, or enterprise solution environments, where data-driven customer engagement and performance monitoring are key.

Core Learning Areas:

Programming & Frameworks

The foundation layer equips participants with essential skills for enterprise application development, focusing on:

- Visual C# .NET, Secure Coding Essentials, and SOLID Principles for software design
- Advanced SQL Server Programming and Entity Framework for data handling
- ASP.NET Core MVC, Blazor, and Web APIs for web integration
- gRPC and SignalR for communication frameworks
- Test-Driven Development (TDD) and Unit Testing for quality assurance
- TypeScript, Advanced JavaScript, jQuery, Angular, and Responsive Web Design for UI enhancement
- IIS Administration and Microsoft Azure Fundamentals for deployment and hosting.

Core Learning Areas:

CRM & Power Platform

At the heart of this track is Microsoft Dynamics 365 Customer Engagement (CE), where participants will learn to implement, customize, and enhance CRM systems for enterprise-level solutions.

- Fundamentals of Microsoft Power Platform & Dynamics 365 CE (CRM)
- Advanced Customization and Integration of Power Platform & Dynamics 365 CE (CRM)
- Sales and Customer Service Modules within Dynamics 365
- Development of Power Apps for low-code/no-code business applications
- Utilizing Microsoft Azure DevOps and Developer Tools for versioning, builds, and CI/CD in CRM projects.
- Integrating CRM with Power Automate and Power BI for automated workflows and analytical dashboards

Core Learning Areas:

Architecture, Integration & Cloud

This section covers enterprise scalability, integration, and secure deployment in hybrid environments, including:

- Microsoft Azure Cloud Administration & Integration
- Microsoft DevOps Practices (pipelines, releases, source control)
- CRM and BI Integration in large enterprises
- Cloud Security and Compliance Best Practices
- Modern Software Architecture Techniques for CRM & BI scalability

Business Intelligence & Data Analytics

This component enables trainees to convert raw enterprise data into valuable insights using modern BI and analytics tools, including:

- Microsoft SQL Server BI Stack (SSIS, SSAS, SSRS)
- Power BI for data visualization and dashboards
- Data warehousing and ETL processes
- Data mining algorithms for predictive analytics
- Design of KPIs and performance metrics for analysis
- Integration of Azure Data Services for cloud reporting.

Focus Area

Banking, Finance, Data Analytics

Job Profiles

Graduates from this program are well-prepared to pursue careers in CRM, analytics, and enterprise consulting settings:

- CRM Functional / Technical Consultant
- BI Developer
- Reporting Specialist
- Power BI Developer
- CRM Support or System Administrator

Companies in Egypt

- **Banking & Finance:**
 - National Bank of Egypt (NBE)
 - Banque Misr
 - CIB
 - QNB Alahli
 - Ahli United Bank
 - ADIB Egypt
 - EFG Hermes
 - Fawry
 - E-Finance
 - ValU
 - Paymob
- **Technology & Consulting:**
 - Link Development
 - Raya IT
 - ITWorx
 - CrossWorkers
 - DXC Technology
 - Integrant
 - PwC
 - KPMG
 - EY
 - Deloitte

Cross-Platform Mobile Development Track Overview

- The Cross-Platform Mobile Development Track enables trainees to create native-quality mobile applications for Android and iOS using modern frameworks like Flutter, Xamarin, and React Native.
- It emphasizes high-performance UI design, app architecture, API integration, and cloud connectivity, ensuring graduates can deliver scalable mobile solutions for enterprises and startups.

Core Learning Areas:



This program integrates front-end development, mobile frameworks, and backend connectivity to create robust, user-centered applications.

- Visual C# .NET and Secure Coding Essentials
- **Dart and Flutter Development**
- **Xamarin Development and MVVM Toolkit Fundamentals**
- **React Native and JavaScript Integration**
- Node.js, MongoDB, and Firebase for backend services
- **Web APIs for Mobile Developers and RESTful Integrations**
- Advanced SQL Server Programming and Entity Framework
- AI-Powered Coding Assistant Tools and Gen-AI-based Development
- **Test-Driven Development (TDD) and Continuous Integration**
- Introduction to Microsoft Azure for Mobile Deployment
- **Docker, Cloud Services, and Containerized Mobile Environments**

Focus Area

Flutter, React & MAUI Apps



Job Profiles

Graduates are qualified for:

- Mobile Application Developer (Flutter/React Native/Xamarin)
- Cross-Platform App Engineer
- Full Stack Mobile Developer
- Front-End Mobile UI Developer
- Mobile Software Engineer



Companies in Egypt

- Vodafone VOIS
- Etisalat Egypt
- Orange Digital Center
- ITWorx
- Link Development
- Instabug
- Fawry
- ValU
- Emerging mobile-focused startups

Web & UI Development Track Overview

- The Web UI Development Track prepares trainees to design and develop modern, interactive, and responsive web interfaces.
- It emphasizes mastering front-end frameworks, UI/UX design principles, and web performance optimization to deliver high-quality user experiences.
- This track enables graduates to become creative engineers who can bridge design and functionality across enterprise and consumer web applications.

Core Learning Areas:



The program encompasses comprehensive front-end development, responsive design, and collaboration with backend and design teams.

- Advanced JavaScript, TypeScript, and ES.Next
- Fundamentals of Angular, React.js, Next.js, and Vue.js
- Basics of Node.js and REST API Integration
- Secure Coding Practices and Source Control (Git)
- Responsive Web Design Frameworks and Modern Layouts
- CSS Preprocessors, Material UI, and GraphQL API
- JavaScript Design Patterns and Modern Framework Architecture
- Fundamentals of Docker and Kubernetes for Deployment
- Test-Driven Development (TDD) and JavaScript Unit Testing
- UI/UX Principles, Design Thinking, Wireframing, and Prototyping
- Essentials of Adobe Photoshop, Illustrator, and UX Writing

Focus Area

Front-End Development , Design & Experience



Job Profiles

Graduates are qualified for:

- Front-End Developer
- React / Angular / Vue.js Developer
- UI/UX Engineer
- Web Application Developer
- Front-End Architect
- Web Designer



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- Orange Egypt
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- CrossWorkers
- Instabug
- ValU
- DXC Technology
- Exalt