

GIS- Application Development Course

This course imparts fundamental GIS Development concepts with a focus on developing custom GIS applications using the Microsoft .NET Framework.

In the course exercises, you work with developer resources and windows / web controls to create GIS applications that include map creation and navigation, feature selection and rendering, geospatial operations, data management and editing, and Geoprocessing.

This course provides the foundational knowledge and skills needed to take Developing Applications Using the Microsoft .NET Framework, Extending the GIS Applications, and Developing web applications using the Microsoft .NET Framework.

Pre-requisites

1. Any person with passion and who wants a career in GIS Development can opt for GIS-ADC Course.
2. Knowledge on GIS is required.
3. Should be a graduate.
4. Minimum 2years of GIS Experience is required.
5. An Experienced Professional who wishes to switch over to GIS Development.
6. Any GIS Professional who wishes to improve his/her skills.

Who should attend this course?

Graduation/ (10+2+3) or higher degree from any discipline (Science, Geography, Geology, Environment, Disaster Management, Engineering, Computer science, Planning and architecture) with Basic computer knowledge and Minimum 2-3 Years of GIS experience would be an added advantage for learning this course.

What will be achieved?

Geosys - GIS training programs are developed with an aim to give a strong theoretical foundation as well as excellent hands-on skills to prepare the participants to explore careers and meet the challenges of the GIS professional world.

1. Create UI in .Net and in Engine.
2. Prepare customized tools.
3. Creating Pop-up Menus
4. Creating Geometry.
5. Performing Customizing of the tools.
6. Deploy the Engine application.

Why choose this course?

If your interest goes beyond existing academic education and you want to know more about the latest technology which can boost your career then this programme is for you.

Course Duration

45 Days

Key Features

Geosys believes in offering integrated career orientation, continuous support rendering model and constant IT service portfolio.

1. Specially Designed Course Material
2. Tailor-made Course Curriculum
3. Domain Experts as Faculty
4. State-of-the-art Infrastructure
5. Industry Experts as Trainers
6. Affordable Fee Structure
7. Industry-centric Approach
8. World-class Teaching Methodology

Complete curriculum

1. GIS System
In this Topic – We will learn what GIS is and what is a GIS System? What are the different Products and Extensions available in GIS?
2. GIS for Developers
In this Topic – We will learn how GIS is used for Developers? And this Topic will give an idea on how GIS is used for Desktop Development, Engine Development and Web Development.
3. Software Development Concepts
In this Topic – We will learn the different Phases on Software Development Lifecycle, And the Agile Process.
4. C Language Primer
In this Task– We will learn what is a 'C'-Language and will work on the Datatypes, variables, keywords, header files, conditional statements, control statements, Arrays and Methods.

5. Introduction to .NET Framework

In this Topic – We will learn the concepts of .Net, .Net Framework, CLR, Compilation in .Net and Assemblies.

6. C#.Net Basics

In this Task– We will learn on how to work with Console applications and windows form applications using C#.Net. We will work on datatypes, variables, conditional and control statements, Arrays, Strings, Operators and Procedures.

7. Introduction to OOPS

In this Topic- We will learn about object, classes, declaring object, Methods, Method Overloading, Constructors, Constructor Overloading, Destructors, Compile time and Runtime Polymorphism, Inheritance and Types of Inheritance and will work on each Topic with examples.

8. Getting Started With Engine

In this Topic- We will learn about the Key features of Engine, system, Requirements of Engine and the steps to be followed to become a successful GIS Developer.

9. Creating a Engine Windows Application

In this Task– We will Create a simple Engine windows Application.

10. Getting started with ArcObjects!

In this Topic- We will learn how to create customized applications using GIS Engine, Different Types of GIS Project Templates and Item Templates and Advantages of using ArcObjects.

11. Component Object Model

In this Topic- We will learn about COM, Class, and Types of classes, Interfaces, Default Interface and the advantages of COM.

12. Object Model Diagrams

In this Topic- We will learn how to read the object model diagrams; we will learn how to read the properties and methods of a class, relationships between classes and the types of classes.

Task – Creating different OMD's for the given scenarios, writing the code y using the OMD's.

13. System Library

In this Topic- We will learn what is a system library? Use of the system Library? Subsystems of System Library.

14. SystemUI Library

In this Topic- We will learn what is SystemUI Library? Subsystems of SystemUI Library and the Main use of SystemUI Library.

15. Geometry Library

In this Topic- We will learn the use of Geometry library and the subsystems of the Geometry library.

16. Display library

In this Topic- We will learn what is display library? Use of Display library and the subsystems of the Display library.

17. Carto Library

In this Topic- We will learn what Carto library is, subsystems of the Carto Library and the uses of the Carto Library.

18. Loading the Engine Controls in to the Engine Windows Application

19. Setting the Properties to the Loaded Engine Windows Controls

20. Adding the Tools to the Toolbar Control

In this Task- we will learn how to add the tools to the Toolbar Control.

21. Creating a Toolbar Palette

In this Task- we will learn how to create a Toolbar Palette using Interfaces.

22. Creating a Toolbar Menu

In this Task- we will learn how to create a Toolbar Menu using Interfaces.

23. Creating a Geometry on the Map/Page layout Control

In this Task- we will create an Envelope on Map Control which shows the overview of the Map – that is displayed in Pagelayout control.

24. Customizing the Toolbar Control

In this Task- we will work on how to customize the Toolbar control using a checkbox.

25. Saving the Toolbar Control Items

In this Task- we will work on saving the Toolbar Control Items during the runtime customization.

26. Loading the Saved Toolbar Control Items

In this Task- we will work on loading the Saved Toolbar Control Items.

27. How to set manual editing options on the layers in TOC using Engine

In this Task- we will set the option for manual editing on the layers in TOC using Engine.

28. How to work with Menustrip and Print the map?

In this Task- we will create a Menustrip and for printing the Map from the Pagelayout.

29. Setup and Deployment

In this Task – We will be know how to create a setup for an Engine windows application, the requirements for deploying an Engine application using a setup project, how to add application files to the setup project, how to set the default installation location for the project, how to create a shortcut on the user's program menu, and we will see how to add the launch conditions and Testing the setup.exe and we will learn how to deploy/install that setup file on target machine.

Project work

Hands on experiences (Latest tools, techniques, Software's) from application area. Trainee will gain a consolidated knowledge of the ArcObjects Programming. Trainee can use this experience as a real time experience, as the trainee will get a real time exposure while working on the Project.

Outcomes of GIS-ADC Course

After successfully completing this course, you will have acquired an understanding of general GIS Development and the basic functionality of GIS Application Development software.

1. Quickly create required UI for the Clients.
2. Create and Work with Toolbars.
3. Do customization for the Toolbar Control.
4. Create Geometry.
5. Work with Menu strip Items.
6. Deploying the Engine application.