MCA602: ADVANCED APPLICATION DEVELOPMENT

	L	T	P	Cr
	2	0	2	3.0

Course Objectives: Students will able to understand the .NET framework, concepts of C# programming and ASP.NET technology. Students can enable to develop Integrated Development environment to build GUI based, Data Base based applications in .NET Framework using C#..

Basic C# programming: Introduction to the .NET Framework 4.0- CLR, BCL, CLS, CTS; Features of C#, Datatypes, Operators, Flow control statements, Enumerations, Arrays: n-dimensional, Jagged arrays, Methods, Param array, String and stringbuilder, Exception handling.

OOP's based C# programming: OOP's concepts, Classes, Namespaces, Constructors and destructors, Garbage collection, Boxing and un-boxing, Operator overloading, Properties, Indexers, Inheritance, Abstract classes and interfaces, Structures, Collections and Generics, Class library(DLL) and Assemblies, Delegates, Multithreading, File handling- Stream reader, Stream writer, Binary reader, Binary writer, Text reader, Text writer, File methods; Serialization and formatters.

GUI and ADO.Net: Events, Windows forms: Common controls, Container, Menu and toolbars, Data and dialog controls, Connection object, Command object, Datareader, Dataset, Dataadapter, Connected and disconnected scenarios, GUI components for data control and data binding, Stored procedure, XML data access, Language integrated query(LINQ).

ASP.net: Introduction, Architecture, working with web form and server controls, Client side and server side validation, enhancing web sites using master pages and themes, State management, Data connectivity using ASP.net, Silverlight application.

Laboratory Work: The lab work will be based on the C# programming concepts, console applications, window forms, database connectivity using ADO.net and ASP.net, XML, web services and server controls .net technologies.

Recommended Books

1. Dietel H.M., Deitel P.J., Hoey P.R. and Yaeger C.H., Simply C#: an application-driven tutorial approach, Pearson Education (2003).
2. Schildt H., C# 4.0 The Complete Reference, Tata Mc-Graw Hill (2010).
3. Hejlsberg A., Torgersen M., Wiltamuth S., and Golde P., The C# Programming Language, Microsoft (2010).
4. Robinson S., Nagel C., Watson K.,GlynnJ.,Skinner M. and Evjen B., Professional C# 4.0 and .NET 4, Wrox (2010).
5. Hanselman S., Rader D. and Evje B. ASP.NET 4 in C# and VB, Wrox (2010).