



MCA (Master of Computer Applications)
MCA (Master of Computer Applications) Semester II

Course Code	PS02CMCA54	Title of the Course	THE .NET TECHNOLOGY
Total Credits of the Course	4	Hours per Week	4

Course Objectives:	<ol style="list-style-type: none">1. To learn .NET Environment and its technologies.2. To learn development skill in Window-based Programming and Web-based programming.3. To learn C#.NET and ASP.NET.4. To learn OOPs concept using C#.NET.5. To learn database programming and report generation.
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Course Content		
Unit	Description	Weightage* (%)
1.	The .NET Technology <ul style="list-style-type: none">- Introduction to .NET Framework- Architecture of .NET framework – BCL (Base Class Library), CLR (Common Language Runtime), etc.- .NET Languages – introduction, Types of applications supported by .NET Technology- Managed code, compilation to intermediate language, Just-In-Time compilation, garbage collection, assemblies and the GAC	25
2.	Language basics <ul style="list-style-type: none">- C#.NET – Introduction and features- General structure of C#.NET program- C#.NET – basic data types, variables, constants, type conversion - boxing and unboxing- C#.NET – statements (conditional and looping)- Console Applications, Windows Applications - Windows Forms and Life Cycle- User interface controls - Basic Controls, Dialog controls, Menu control	25
3.	ASP.NET - I <ul style="list-style-type: none">- Introduction to ASP.NET- ASP.NET Web Application Project – introduction, creation- ASP.NET Web form - introduction, creating web forms- ASP.NET Page – layout, lifecycle	25





	<ul style="list-style-type: none"> - ASP.NET Controls - adding server controls to a Web Form, adding event procedures to Web Server Controls, Implementing code-behind pages - Master Pages, themes and skins 	
4.	ASP.NET - II <ul style="list-style-type: none"> - Accessing Data with ADO.NET - Validating user input – validation controls, page validation - Site Navigation, Personalization - State Management - Reporting - Web Services – overview, creation and calling - Packaging and Deploying ASP.NET Applications 	25

Teaching-Learning Methodology	Blended learning approach incorporating traditional classroom teaching as well as online / ICT-based teaching practices
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	understand and use .NET Framework.
2.	use IDE.
3.	develop various kinds of Window-based applications and web-based applications.
4.	use ADO.NET and Reporting facility.





Suggested References:

Sr. No.	References
1.	Andrew Troelsen, Philip Japikse, : C# 6.0 and the .NET 4.6 Framework, Apress, 2017.
2.	Black Book: .NET 4.5 Programming (6-in-1) covers .NET 4.5 Framework, Visual Studio 2012, C# 2012, ASP.NET 4.5, VB 2012, and F# 3.0, Dreamtech Press, 2013.
3.	Bill Evjen, Scott Hanselman, Devin Rader: Professional ASP.NET 4.5, Wiley India Pvt. Ltd., 2010.
4.	Matthew MacDonald: Beginning ASP.NET 4.5 in C#, Apress, 2013.
5.	Joseph Alabari, Ben Alabari: C# 4.0 in a Nutshell, O'Reilly.
6.	G. Andrew Duthie, "ASP.NET programming with Microsoft Visual C#.NET Step by Step", version 2003, Prentice-Hall of India.

On-line resources to be used if available as reference material

1.	Documentation of relevant software packages.
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