

Course : ICT 202 : Advanced.NET

Course Code	ICT 202
Course Title	Advanced.NET
Credit	4
Teaching per Week	4 Hrs
Minimum weeks per Semester	15 (Including Class work, examination, preparation, holidays etc.)
Last Review / Revision	June 2019
Purpose of Course	This course helps students to understand and use .NET advanced concepts with real world .NET applications.
Course Objective	To impart knowledge of Enterprise application development using .NET Framework.
Pre-requisite	Object Oriented Fundamental, ADO.NET, ASP.NET
Course Out come	Students will be able to develop enterprise applications using .NET advanced concepts.
Course Content	<p>Unit : 1: Advanced Features of ASP.NET</p> <ol style="list-style-type: none"> 1.1. Introduction to web Architecture 1.2. Overview of ASP.NET 1.3. ASP.NET State Management 1.4. Membership Functionality 1.5. Globalization and Localization 1.6. AJAX <ol style="list-style-type: none"> 1.6.1. Client Side and Server Side AJAX 1.6.2. AJAX Toolkit 1.7. Hosting Web Application in IIS <p>Unit : 2 : ASP.NET MVC</p> <ol style="list-style-type: none"> 2.1. MVC Architectural Pattern 2.2. URL Routing Engine 2.3. Routing Configuration 2.4. Wiring Controller, Model, and View 2.5. Data Access and Modeling 2.6. TempData, ViewBag and ViewData 2.7. Unit Testing and ASP.NET MVC <p>Unit : 3 : RESTful Services</p> <ol style="list-style-type: none"> 3.1. Introduction to Web Services 3.2. RESTful API 3.3. Working with .NET Application 3.4. Working with RESTful Services 3.5. Razor View Engine <p>Unit : 4 : ASP.NET CORE</p> <ol style="list-style-type: none"> 4.1. Introduction to ASP.NET Core 4.2. Working with OpenID and OAuth Login 4.3. Asynchronous Programming 4.4. Multiple Environments and Development Mode 4.5. Working with WebSockets and SignalR 4.6. Self hosting of Web Applications 4.7. Dependency Injection 4.8. Action Filters 4.9. Security and Identity 4.10. Working with SQL and No-SQL Data Storage Types <p>Unit : 5 : AngularJS with .NET</p> <ol style="list-style-type: none"> 5.1. Single-page Application Framework 5.2. Angular CLI 5.3. Model-View-Controller Architecture 5.4. Two Way Data Binding

	<p>5.5. Directives, Pipes, Components, Scope Inheritance, Method Chaining, Templates, Services, Forms and Validation</p> <p>5.6. Animation and Routing</p> <p>5.7. Calling API, Using Third Party API</p> <p>5.8. Web-Sockets, Use of UI Frameworks Plug-ins</p>
Reference Book	<ol style="list-style-type: none"> 1. Pro ASP.NET 4.5 in C# by Adam Freeman, APress, 2013 2. Mastering ASP.NET Core 2.0 by Ricardo Peres, Packt Publishing Limited, 2017 3. Professional ASP.NET MVC 5 by Jon Galloway, Wrox, 2014 4. Beginning ASP.NET 4.5: in C# and VB by Imar Spaanjaars, Wiley, 2014 5. Beginning Node.js by Basarat Syed, Apress, 2014 6. ASP.NET Core 2 Fundamentals by Onur Gumus and Mugilan T. S. Ragupathi, Packt Publishing Ltd, 2018 7. Learning ASP.NET Core MVC Programming by Mugilan T. S. Ragupathi, Packt Publishing Ltd, 2016 8. ASP.NET Core Essentials by Shahed Chowdhuri, Packt Publishing Ltd, 2016 9. Enterprise Application Architecture with .NET Core by Ganesan Senthilvel, Ovais Mehboob Ahmed Khan, Habib Ahmed Qureshi, Packt Publishing Ltd, 2017 10. ASP.NET Core 2 and Angular 5 by Valerio De Sanctis, Packt Publishing Ltd, 2017 11. ASP.NET MVC with Entity Framework and CSS by Lee Naylor, APress, 2016 12. Pro ASP.NET Core MVC by Adam Freeman, Springer, 2016
Teaching Methodology	Lectures, Discussion, Independent Study, Seminars and Assignment
Evaluation Method	<p>30% Internal assessment</p> <p>70% External assessment</p>