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| <b>Title</b>              | <b>Enterprise Application Development</b>  |
| <b>Code</b>               | <b>CMP-442</b>   |
| <b>Credit Hours</b>       | 3  |
| <b>Category</b>           | Computing  |
| <b>Prerequisite</b>       | None   |
| <b>Co-Requisite</b>       | None   |
| <b>Follow-up</b>          | None   |
| <b>Course Description</b> | <p><b>Topics:</b> Introduction to Course, Overview of Enterprise Application Development, Microsoft technology history, Intro to .net and its architecture, Concept of MSIL, CLR, CLS, CTS, .NET Managed and Unmanaged Code, .Net Assembly, Introduction to C# fundamentals, Boxing and Un-Boxing, Implementing multi-tier architecture, Introduction to ADO.Net, Sql Injection, parameterized queries, Usage of Data Set, Data Adapter and Command Builder in disconnected Model, Delegate, Multicast delegates, introduction to windows forms, Html, Introduction to java script, data types, variables, functions, Debugging js using Firebug, Introduction to the Browser's Object (BOM), Document Object Model, Introduction to JQuery, JQuery Effects, Introducing LINQ, LINQ to Objects, LINQ to Sql, Query Syntax, Projection, Filtering and Join In Linq Queries, Introduction to ADO.NET Entity Framework, The Entity Data Model, CSDL, Eager vs Lazy Loading, POCO Classes, DbContext API, Querying Entity Data Models, Introduction to ASP.NET MVC, MVC Application Structure, Controllers overview, Action Methods, parameterized action methods, Introduction to Razor Syntax, Code Expressions, , Code Blocks, Implicit Vs Explicit Code Expression, Data Annotations, Client + Server Side Validation, Validation and Model Binding, Validation and Model State, MVC Membership, Authorization and Security, Introduction to Service Oriented Architecture, SOAP, WSDL, Service Contract, Data Contract, XML, WCF Bindings, ABC of WCF, Restful Services, Consuming rest services (CRUD operations) using JQuery AJAX and JSON, Introduction to Web API, Example of Web API using CRUD Example, MVC Routing.</p> |
| <b>Text Book(s)</b>       | <ol style="list-style-type: none"> <li>1. Herbert Schildt, C# 4.0 The Complete Reference, McGraw-Hill, 2010, ISBN: 007174116X.</li> <li>2. A. Freeman, S. Sanderson, Pro ASP.NET MVC 4, 4<sup>th</sup> Edition, Apress, 2012, ISBN: 1430242361.</li> </ol>   |
| <b>Reference Material</b> | <ol style="list-style-type: none"> <li>1. Julia Lerman, Programming Entity Framework, 2<sup>nd</sup> Edition, O'Reilly, 2010, ISBN: 0596807260.</li> <li>2. Fabrice Marguerie, Steve Eichert, Jim Wooley, LINQ in Action, Manning Publications, 2008, ISBN: 1933988169.</li> <li>3. Jeremy McPeak, Beginning JavaScript, 5<sup>th</sup> Edition, Wiley, 2015, ISBN: 978-1-118-90333-9.</li> <li>4. Pablo Cibraro, Kurt Claeys, Fabio Cozzolino, Johann Grabner, Professional WCF 4: Windows Communication Foundation with .NET 4, Wiley, 2010, ISBN: 978-0-470-56314-4.</li> <li>5. Handouts and Internet references</li> </ol>  |