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| **Course – 43 Title: Software Development Project-1**  |  |
| **Course No.: CCE 310 Credit : 1.50 Contact Hours: 3.00**  | **Total Marks: 100** |

**11.1 Rationale:**

**Computer Engineers should be competent in Application software through Object oriented language This C#.net /ASP.net/Java Programming Knowledge is valuable to both beginners and advanced developers that already have experience in developing applications software .**

**11.2 Objectives:**

At the completion of this course, the student will be able to:

* Create and populate Windows Forms.
* Create and use user controls in a Windows Forms application
* Create menus in a Windows Forms application
* Add code to form and control event procedures in a Windows Forms application
* Create Multiple Document Interface (MDI) applications
* Validate user input in a Windows Forms application
* Bind Windows Forms applications to various data sources by using Microsoft ADO.NET
* Use .NET and COM components in a Windows Forms application
* Debug a Windows Form Application
* Print documents in a Windows Forms application
* Localize a Windows Forms application
* Incorporate accessibility features to a Windows Forms application
* Deploy and Secure a Windows Form application

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| **11.3** **Learning Outcomes** | **11.4** **Course Content** | **11.5** **Teaching Strategy/Learning Experience** | **11.6 Assessment Strategy** |
| To Apply OOPKnowledge  | **C#.NET Language Basics** Data Types, Type Conversion, Boxing & Unboxing, Conditional Statements, Looping, Methods in C#, Properties, Arrays, Indexers, Structures, Enumerations | Group Assignment, Panel Discussion, Problem based Learning | Matching Type, Peer-Rating |
| To Apply OOPKnowledge | **Memory Management** . Garbage Collector, Stack.and Heap,System. GC Class, | Problem Based Learning, Project, Inquiry –based Learning | Practical Exam, Matching Type |
| To Apply OOPKnowledge | OOP ConceptsEncapsulation,Inheritance, Polymorphism, Class and ObjectConstructors, Dynamic types Optional parameters, Names &optional arguments, Covariant generic type parameters, Destructors, Method overloading Method overriding, Early binding, Late Binding, Abstract ClassesAbstract Methods, InterfacesMultiple Inheritance, Generic classes, Static classes, Static constructors, Object initialize | Group Assignment ,Panel Discussion | Observation |
| To Apply OOPKnowledge | **Exception Handling** System Defined Exceptions, Custom Exceptions, Try, Catch, Finally, Throwing exceptions | Group Assignment ,Panel Discussion | Observation |
| To Apply OOPKnowledge | **Delegate** Function Pointers, Multi cast delegates**File Handling** System .IO namespace, File streamStream Reader, Stream writer, Fileinfo, Directory info, Drive Info | Problem-based Learning, Demonstration, Project/Assignment | Group Exercise, Observation, Inventories |
| To Apply .NETKnowledge | **CONTENT****Developing Microsoft.NET Applications for Windows (Visual C#.NET)**Creating a FormAdding Controls to a Form Creating an Inherited Form Organizing Controls on a Form Creating MDI Application**Working with Controls**Creating an Event Handler for a ControlUsing Windows Forms ControlsUsing Dialog Boxes in a Windows Forms ApplicationAdding Controls at Run TimeCreating MenusValidating User Input**Using Data in Windows Forms Applications**Adding ADO.NET Objects to and Configuring ADO.NET Objects in a Windows Forms ApplicationAccessing and Modifying Data by Using DataSetsBinding Data to ControlsOverview of XML Web ServicesPersisting Data | Problem-based Learning, Demonstration, Project/Assignment | Group Exercise, Observation, Inventories |
| To Apply .NETKnowledge | **CONTENT Developing Microsoft.NET Applications for Windows (Visual C#.NET)**Printing and Reporting in Windows Forms Applications Lessons Printing From a Windows Forms ApplicationUsing the Print Preview, Page Setup, and Print DialogsConstructing Print Document Content by Using GDI+Creating Reports by Using Crystal ReportsDeploying Windows Forms Applications* .NET Assemblies
* Deploying Windows Forms Applications
 | Problem-based Learning, Demonstration, Project/Assignment | Group Exercise, Observation, Inventories |
| To Apply DatabaseKnowledge | **LNQ Course Outline****Introduction to LINQ and ADO.NET Entity Framework.**LINQ expressions ,Using via extension methods ,Filtering Sorting ,Aggregation ,Skip and Take operators ,Joins , Query, Lambda expressions ,**Data Projection** Single result value,Existing types Anonymous types ,Grouping  | Problem-based Learning, Demonstration, Project/Assignment | Group Exercise, Observation, Inventories |
| To Apply ASP.NETKnowledge | **ASP.NET INTRODUCTION**Difference Between ASP and ASP.NET ,ArchitectureInline Technique & Code-Behind Technique,Code Render BlocksServer Controls ,Page Basics, Page lifecycle, Post back RequestView State, Directives**PROGRAMMING WITH SERVER CONTROLS**Web Server ControlsBasic Web Controls, List Controls, Data Controls,Adv Controls, User Controls, Master Page and Content Page.[**Validation Controls**](http://www.vtc.com/products/chLessons31)Understanding ValidationClient or Server Site ValidationRequired Filed ValidatorRang Validator, Regular Expression Validator, Compare Validator, Custom ValidatorValidator Summary.**CONTENT****Developing Microsoft.NET Applications for Web (ASP.NET using C#.NET)****STATE MANAGEMENT WITH ASP.NET**Context, View State ,Cookie StateSession State,Session Tracking Application Object, Session and Application Events**ADO.NET AND ASP.NET**Working with Data ControlsGridView, -Inserting, Updating, Deleting,-Sorting in Data Grid-Paging in Data Grid, DataSource Controls,Dataset,DetailsViewFormView,Data List,Repeater Control, Crystal Reports**ADO.NET PROGRAMMING**Architecture, DataReaders and DataSets, Command ObjectTransaction ProgrammingProcedure ExecutionData Adapter and Data Set, Data Tables, Data Relation,Data ViewsUpdating Dataset |  |  |
| Project | Project, Review & Exam | Problem-based Learning, Demonstration, Project/Assignment | Group Exercise, Observation, Inventories |

**RECOMMENDED BOOKS AND PERIODICALS**