**Pir Mehr Ali Shah**

Arid Agriculture University Rawalpindi

***University Institute of Information Technology***

**Course Outline**

Course Code: CS-692 Class/Section/:

Course Title: Visual Programming Instructor’s Name: Dr. Asif Nawaz

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| **Lectures** | **Proposed Contents** | **Lectures** | **Practical** |
| Lect-1 | Introduction to .NET | Lect-2 | Persistence framework Layer  Object Relational Mapping |
| Lect-3 | .NET framework details, JIT, Security, Memory  Management, Garbage Collection, Mark / Compact Algorithm, Generations in garbage collection, CTS, CLS,  BCL | Lect-4 | Semester Project Proposal / Discuss objectives and outcome |
| Lect-5 | Visual C# language basics constructs, Namespaces Enumerations ,Classes, Access modifiers | Lect-6 | First VC# Program “Hello World” Assignment |
| Lect-7 | Properties ,Attributes,  Methods, Loops, Etc | Lect-8 | Practical Usage |
| Lect-9 | Collections and Generics Interfaces | Lect-10 | VC#.NET Input Output Text Editor in VC# |
| Lect-11 | Polymorphism (virtual and Abstract)  Inheritance | Lect-12 | Practical Usage |
| Lect-13 | VC#.NET controls 1 | Lect-14 | Controls Exercise |
| Lect-15 | VC#.NET controls 2 | Lect-16 | Controls Exercise |
| Lect-17 | Overview of ADO.NET Connecting to Data Executing Commands Working with Data  Choosing an ADO.NET Provider | Lect-18 | Example of ADO.NET |
| Lect-19 | Exception Handling  Practice of Layered Programming  Best Practices Validation in Windows | Lect-20 | Demo for Layered Programming along with exception handling |

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|  | Applications |  |  |
| Lect-21 | DataSet DataReader  Difference between Connected & Disconnected Modes of DataAccess | Lect-22 | Practice |
| Lect-23 | Stored Procedures and Its  Usage in ADO.NET | Lect-24 | Typed DataSet Practice  How to Call Stored Procedure in VC#.NET |
| Lect-25 | Stored Procedures and Its  Usage in ADO.NET | Lect-26 |  |
| Lect-27 | XML  XML manipulation in VC#.NET | Lect-28 | XML accessing in VC#.NET |
| Lect-29 | Semester Projects MID  Evaluation | Lect-30 |  |
| Lect-31 | Revision and Students  Questions and queries | Lect-32 |  |
| **Midterm Exam** | | | |
| Lect-33 | Data Controls  The DataGridView Control The ReportViewer Control | Lect-34 | DataGridView Demo |
| Lect-35 | Web Development (basic theory)  Web Server / Container (basics)  Web Request Cycle | Lect-36 | Practical aspects of theory learnt |
| Lect-37 | Asp.net basics, HTML Controls, Server Controls Difference between Html and  Server Controls | Lect-38 | Asp.NET First Example |
| Lect-39 | Asp.net Controls  Security Implementation | Lect-40 | Quiz 4 |
| Lect-41 | Session, Cookies, Validations, ViewState Validation Controls in  Asp.Net | Lect-42 | Usage of Session, Cookies, Validation, ViewState |
| Lect-43 | Comparison between: GridView, ListView, Repeater | Lect-44 | Quiz 5 |
| Lect-47 | AJAX basics and asp.net | Lect-48 | AJAX Practical Usage |
| Lect-49 | Web Services in .NET | Lect-50 | Web Service Example |
| Lect-51 | .NET Assemblies  Private Assemblies Shared Assemblies | Lect-52 | Practical of theory learnt |
| Lect-53 | Multi-lingual Applications  Satellite Assemblies | Lect-54 | Developing a Multi-lingual Application |
| Lect-55 | .NET Remoting | Lect-56 | Client Server Demo for Remoting |
| Lect-57 | Threading in .NET | Lect-58 | Thread Example |
| Lect-59 | Network Programming in  .NET | Lect-60 | Client Server Programming using TCP/IP |

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| Lect-61 | Slack | Lect-62 | Quiz 6 |
| Lect-63 | Semester Projects Final  Evaluation | Lect-64 | Semester Projects Final Evaluation |
| Lect-32 | Revision and Student  Questions and Queries |  |  |