COP 4593 – Component Programming with .NET

Credits: 3

Text book, title, author, and year: *Pro C# 5.0 and the .NET 4.5 Framework, 6th Edition,* Andrew Troelsen, Apress, 2012.
   a. **Supplemental materials:** Documents posted on Blackboard.

Specific course information
   a. **Catalog description:** Microsoft .NET is explored as a component-based platform for programming Web and other applications.
   b. **Prerequisites:** COP 3530
   c. **Required, elective, or selected elective:** CE elective

Specific goals for the course
   a. **Specific outcomes of instruction:** By the end of the course students will understand the .NET architecture and be able to code .NET database programs, Web applications, and Web services using SQL and C#.

Brief list of topics to be covered:
- Overview of .NET Architecure
- The C# Programming Language
- The Microsoft SQL Server DBMS
- ADO.NET as the .NET way to invoke SQL statements from a programming language like C#.
- C# 3.0 features and LINQ: C# features for querying collection types, and their use in providing high-level database interfaces for C# that are naturally integrated into C . ADO.NET Linq to Entities.
- Implementing Web Applications with ASP.NET Web Forms and ASP.NET MVC.
- Implementing Web Services with ASP.NET and WCF.