

## ITMD 463 SYLLABUS

### ITMD 463 Intermediate Web Application Development

Hours: 3 credit hours / 45 contact hours

Instructor: Martin Schray

#### Textbook, title, author, and year:

*Microsoft Azure Essentials: Fundamentals of Azure*,  
Michael S. Collier and Robin E. Shahan, 2015  
*Building Cloud Apps with Microsoft Azure*, Scott Guthrie,  
Mark Simms, Tom Dykstra, Rick Anderson, and Mike Wasson, 2014

#### Specific course information

- a. **Catalog description:** In-depth examination of the concepts involved in the development of Internet applications. Students will learn the differences and similarities between Internet applications and traditional client/server applications. A discussion of the technologies involved in creating these Internet applications is included, and students will learn to use these technologies to create robust server-side applications.
- b. **Prerequisites:** ITMD 361

#### Specific goals for the course

- a. **Course Outcomes:** In this course we will learn the fundamentals of the .Net framework, gaining a deeper understanding of web application standards, tools and techniques. Leverage Visual Studio Integrated Development Environment to build web application projects and deploy them. Students will learn to use the cloud infrastructure to manage the application life cycle and deploy their solution to Microsoft Azure cloud. We will introduce the modern web application and work with standards like HTML 5, CSS and use popular tools like bootstrap to build the web applications.
- b. **Course student outcomes:**
  - Use the .NET framework to build web applications (including ASP.NET, ASP.NET Standard/ASP.NET Core)
  - Work with various web application project types (Web Forms, MVC)
  - Build an end to end web application using Visual Studio Integrated Development Environment and Visual Studio Code
  - Use Cloud to build and deploy web applications on Microsoft Azure

#### Topics to be covered

- a. Introduction to .Net framework
- b. Anatomy of a web application
- c. Introduction to C#
- d. Overview of Web Application Project Types
- e. Overview of Authentication
- f. One ASP.NET
- g. Web Servers (IIS, Local, External, Custom)
- h. Building a Web Form Application
- i. Using Server Controls
- j. Building a Data Driven Web Forms Application with Visual Studio 2013 and Deploying it to the cloud
- k. Introduction to MVC; Building data driven MVC application with Entity Framework;
- l. Web API, Azure API App, and Signal R (real-time web)
- m. Introduction to HTML 5, CSS and javascript application
- n. Introduction to Mobile Application Development
- o. Application insights
- p. Azure Web Jobs
- q. Azure Functions
- r. Logic Apps
- s. Azure Log Analytics
- t. ASP.NET Core