Course Number	CS 296N	**Instructor**	Brian Bird
CRN	32672	**E-mail**	birdb@lanecc.edu
Classroom	19/120	**Office**	Building 19, Room 152
Credits	4	**Office Phone**	541-463-3024
Day & Time	T, Th, 10:00 – 11:50	**Office Hours**	M, W: 2:00 - 3:00 and Tu, Th: 12:00 - 1:00

Course Description

This course continues coverage of server-side programming in C# using the ASP.NET framework. You will learn the concepts underlying the MVC (Model View Controller) design pattern and learn to use the Microsoft ASP.NET Core MVC framework with Entity Framework and SQL Server. Programming assignments will consist of guided tutorial exercises as well as labs in which you will design and program a web app on your own.

Learning Outcome

To be able to design and program a web site that uses the ASP.NET Core MVC framework for a moderately complex web application.

Course Content

Technologies

ASP.NET	Visual Studio	ASP.NET Core MVC
C#	T-SQL	Razor
LINQ	xUnit	Entity Framework

Themes and Issues

Software engineering	Architectural Design Patterns	Test-driven development
Web standards	Extensibility	Object oriented programming
Separation of concerns	Avoiding dependencies	Data driven web applications

Skills

Use Visual Studio to develop and publish ASP.NET Core MVC web sites.
Effectively use software development tools like the xUnit test framework
Design, implement, test and debug a web application
Design and manage an SQL Server database that is used by an MVC web application

Learning Resources

Textbook

Pro ASP.NET Core MVC, 6th Edition, by Adam Freeman, Apress, 2016 ISBN-13: 978-1484203989 is the textbook for the course. The source code for the sample programs in the text is available for download on the publisher's web site: http://www.apress.com/us/book/9781484203989

Software

The hardware and software required for the course are available to all students in the CIT Main Lab on campus. You paid a fee when you registered for this course that provides you with unlimited access to CIT lab facilities.

Visual Studio 2015 will be the development environment provided in class and in the CIT Main Lab. This software can be obtained free of charge through your LCC Microsoft Imagine account (formerly Microsoft Dream Spark, and before that called MSDNAA), http://e5.onthehub.com/WebStore/Welcome.aspx?vsro=8&ws=EC37AD18-ED9B-E011-969D-0030487D8897. You can download it or borrow the setup DVD from the CIT computer lab.

You may alternatively use Visual Studio 2015 Community edition which is a free download from Microsoft at www.visualstudio.com/en-us/products/visual-studio-community-vs.

Web Sites

https://classes.lanecc.edu will give you access to the Moodle site for the course.

You will be deploying web apps that you create to the Microsoft Azure cloud. You are entitled to a free Azure account through LCC's Microsoft Imagine subscription as described here: https://azure.microsoft.com/en-us/offers/ms-azr-0144p

Assessment and Grading

Specific grading criteria will be applied to each of the labs, quizzes, and exams you will be working on in this class. Part of the lab involves peer evaluation. You will be provided with lab evaluation worksheets for each lab. Attendance is not graded.

The table below summarizes the grade distribution for each of the assessment tasks:

Assessment Activities	***Points for each***	***Total Points***	***Total Percentage***
8 Labs	50	400	40%
8 Lab Reviews	10	80	8%
8 Tutorial exercises	10	80	8%
Term Project	440	440	44%

Letter grades for the course will be determined by the following percentages:

	-		**+**
A	90 – 91	92 – 97	98 – 100
B	80 – 81	82 – 87	88 – 89
C	70 – 71	72 – 77	78 – 79
D	60 – 61	62 – 67	68 – 69
F	Below 60		

Late Work

- The grade for labs submitted after the due date will be reduced by 10%.
- Exams cannot be taken after the due date. Plan ahead!
- Exceptions will only be made for severe illness or emergency situations.

Academic Honesty

While students are encouraged to discuss labs and to use each other as resources, each student is responsible for his/her own work. In other words, you can help each other, but you can't copy any part of someone else's work. The end product must be entirely your own individual work.

Attendance

Class attendance is not graded but will be essential for successful completion of the class. Students who miss a class are responsible for obtaining the course content provided in class and mastering it.

Tentative Course Schedule

Week	*Topic / In-class exercises*	*On your own: reading, exercises, labs*	*Due date*
1 *1/10* 1/12	**Intro to MVC** https://docs.microsoft.com/en-us/aspnet/core/tutorials/first-mvc-app/index	Skim Freeman Ch. 1 – Core MVC in Context Exercise 1: Freeman Ch. 2– Your 1st MVC Application Read Freeman Ch. 3– The MVC Pattern	
2 *1/17* 1/19	**Controllers and Views** • https://docs.microsoft.com/en-us/aspnet/core/tutorials/first-mvc-app/adding-controller	Lab 1 beta: Propose a web app term project Lab 1 review of your lab partner's beta version Skim Freeman Ch. 4 – Essential Language Features Read Freeman Ch. 5 – Working with Razor Exercise 2: Do the Ch. 5 project Lab 1 production version.	Mon, 1/16 Tue, 1/17 Thu, 1/19
3 *1/24* 1/26	**Unit Testing, Publish to Azure** • https://docs.microsoft.com/en-us/dotnet/articles/core/testing/using-mstest-on-windows • https://docs.microsoft.com/en-us/aspnet/core/tutorials/publish-to-azure-webapp-using-vs	Lab 2 beta: Skeletal version of your web app with Razor Lab 2 code review Skim: Freeman Ch. 6 – Working with Visual Studio (36 pages) Read Ch. 7 through page 171– Unit Testing MVC Applications (12 pages) Exercise 3: Download and run the Ch. 7 project Lab 2 production version and completed code review form.	Mon, 1/23 Tue, 1/24 Thu, 1/26
4 *1/31* 2/2	**Dependency Injection, Models** • https://docs.microsoft.com/en-us/aspnet/core/mvc/controllers/dependency-injection • https://docs.microsoft.com/en-us/aspnet/core/mvc/controllers/testing	Lab 3 beta: Add unit tests to your web site Lab 3 code review Read Freeman Ch. 7 starting at page 171 Read Freeman Ch. 8 – SportsStore (pgs. 191 – 207) Exercise 4: Do the Ch. 8 project, stop before "Preparing a Database". Lab 3 Release version and completed code review form.	Mon, 1/30 Tue, 1/31 Thu, 2/2
5 *2/7* 2/9	**Entity Framework and Scaffolding** • https://docs.microsoft.com/en-us/aspnet/core/tutorials/first-mvc-app/adding-model • https://docs.microsoft.com/en-us/aspnet/core/tutorials/first-mvc-app/working-with-sql	Lab 4 beta: Add EF and a database and publish Lab 4 code review Read Freeman Ch. 8 (pgs. 207 – 234) Exercise 5: Finish the Ch. 8 SportsStore project Lab 4 Release version and completed code review form.	Mon, 2/6 Tue, 2/7 Fri, 2/10

6 *2/14* 2/16	**Navigation**	Lab 5 beta: Add navigation to your web app Lab 5 code review Read Freeman Ch. 9 – SportsStore: Navigation (34 pages) Exercise 6: Do the Ch. 9 project Lab 5 Release version and completed code review form.	Mon, 2/13 Wed, 2/15 Fri, 2/17
7 *2/21* 2/23	**Forms and Tag Helpers**	Lab 6 beta: TBD Lab 6 code review Read Freeman Ch. 10 – SportsStore: Completing the Cart (22 pages) Exercise 7: Do the Ch. 10 project Lab 6 Release version and completed code review form.	Mon, 2/21 Tue, 2/22 Thu, 2/23
8 *2/28* *3/2*	**Annotation and validation**	Lab 7 beta: Add an administrative page to your web app Lab 7 code review Read Ch. 11 – SportsStore: Administration (28 pages) Exercise 8: Do the Ch. 10 and 11 projects. Lab 7 Release version and completed code review form.	Mon, 2/27 Tue, 2/28 Thu, 3/2
9 *3/7* *3/9*	**Authorization and**	Lab 8 Beta: TBD Lab 8 code review Ch. 12 – Security and Finishing Touches Read Ch. 12 Exercise 9: Do the Ch. 12 project Lab 8 Release version and completed code review form.	Mon, 3/6 Tue, 3/7 Thu, 3/9
10 *3/14* *3/16*	**Authentication**	Lab 9 Beta: Add authorization and authentication to your web app Lab 9 code review ~~Read Ch. 20 – API Controllers~~ ~~Exercise 10: Do the Ch. 20 project~~ Lab 9 Release version and completed code review form.	Mon, 3/13 Tue, 3/14 Thu, 3/16
11 *3/21*	Finals Week **Final Project Presentations**	No reading, exercise or lab.	 Tue, 3/21

Weekly Schedule (after the first week)

Monday

Post the beta (draft) version of last week's lab assignment

Tuesday

Complete a review of your lab partner's beta version

Wednesday

Finish this week's reading
Finish the exercise

Friday

Submit the production (final) version of last week's lab work

Academic Calendar for Winter Term 2017

First day of class	1/9/17
Last day to receive refund	1/15/17, 11:59 pm
Martin Luther King Jr. holiday	1/16/17
President's Day holiday	2/20/17
Last day for schedule changes	3/3/17
Finals week	3/20/17 – 3/19/16
Term ends	3/25/17

Disability Services

If you need support or assistance because of a disability, you may be eligible for academic accommodations through Disability Services. For more information, contact Disability Services at 463-5150 (voice) or 463-3079 (TTY), or stop by building 1, room 218.