COURSE SYLLABUS

Instructor Information

Instructor: Franck Soh, PhD
Office: 489, Bryan Building
E-Mail Address: f_sohnoume@uncg.edu
Course Meeting Time: Friday 5:30 to 7pm
Office Hours: Friday 7:15 to 8:15pm or by Appointment

Course Description

Apply fundamental programming concepts to design and implement applications for the Web. This course provides students the necessary foundations for developing Web Applications and evaluating entrepreneurial opportunities.

Course Goals

Upon successful completion of this course students will be able to:
1. Evaluate and Design the architecture of contemporary Business Applications
2. Analyze programming principles to develop applications.
3. Apply programming concepts to develop applications.
4. Implement programming techniques to develop applications.
5. Test technologies needed for developing applications.
6. Evaluate entrepreneurial opportunities related to using Web applications and technologies.
7. Synthesize managerial and entrepreneurial issues related to using applications in a new or existing business.

Prerequisites and Corequisites

A prior coding experience is highly encouraged.

Required Textbook and Other Required Materials

I do not require you to buy any textbooks for the course. The following two books available for you to download in the library as eBooks. We will use these as text and reference materials for the course. I encourage you to download and review these books.

(Note: If this is your first time using Visual Studio or indeed your first time programming, reviewing the first few chapters of the first book that introduces you to the VS environment will help you prepare for the course.)
Canvas Learning Management System

UNCG Canvas is available at https://canvas.uncg.edu. Course materials, announcements and updates will be posted on Canvas regularly. Please check canvas daily for announcements, discussions, and materials.

IDE (Integrated Development Environment)

We will use Visual Studio 2019. While VS 2017 is available, our course is geared towards VS 2019 and there is not a whole lot of difference between them. You are welcome to use VS 2017 if you wish.

All ISSCM students have access to Visual Studio Enterprise through UNCG’s Microsoft Academic Alliance program here: https://azureforeducation.microsoft.com/devtools.

You will need to log in with your UNCG username and password. You can then download the VS 2019 Enterprise (which comes with SQL Server Local DB) and install it on your machine. We will use both extensively throughout the course. Detailed information on installation of VS 2019 is provided in canvas.

Tentative Schedule

A flexible schedule of topics and reading assignments is provided on Canvas. You are responsible for checking the schedule, coming to class prepared, and finding out if in-class assignments were made in case of your absence. The chapters are assigned in the schedule, and additional reading may be provided occasionally.

Changes to the Syllabus/Schedule

The syllabus and schedule are tool to help you plan your time. Every effort is made to make the syllabus and schedule as complete as possible, but there may be occasions when changes are required, including changes in the grading components, due dates, and exams dates. The instructor will announce any deviations from the syllabus or schedule in class.

Assignments

Programming and application development assignments constitute a significant aspect of your skill development in this course. Students are required to complete each assignment.

All projects must be completed by you and outside of class. They are due at 11:59 pm on the assigned due date unless otherwise announced. Projects submitted after their due dates may be accepted with penalty based on valid reasons and documented cause, following discussion with the instructor. If no valid reason or documentation is provided, late projects will have a 10%-point deduction/day. Late projects will be accepted up to 4 business days after the due date only.

Participation

Students are expected to regularly discuss their progress in the course and participate in discussions using Zoom and the topic/assignment specific discussion boards on Canvas.
Exams

We will have a mid-term and a final exam. We will go over more information about the exams as the semester progresses.

Grading

Course grades will be based on the following:

Please note:
Questions concerning the grading of an exam or project must be resolved within a reasonable time (typically one week) after the grade has been posted in Canvas. After that period, all grades are final.

<table>
<thead>
<tr>
<th>Item</th>
<th>Percent</th>
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</thead>
<tbody>
<tr>
<td>Midterm Exam</td>
<td>25%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
</tr>
<tr>
<td>Project I</td>
<td>15%</td>
</tr>
<tr>
<td>Project II</td>
<td>15%</td>
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<tr>
<td>Project III</td>
<td>15%</td>
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<tr>
<td>Total</td>
<td>100%</td>
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The following grading scale will be applied to calculate your final letter grade based on the total grades you earn.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>93-100%</td>
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<tr>
<td>A-</td>
<td>90-92%</td>
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<tr>
<td>B+</td>
<td>87-89%</td>
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<tr>
<td>B</td>
<td>83-86%</td>
</tr>
<tr>
<td>B-</td>
<td>80-82%</td>
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<tr>
<td>C+</td>
<td>77-79%</td>
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<tr>
<td>C</td>
<td>70-76%</td>
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<tr>
<td>F</td>
<td>&lt; 70%</td>
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Extra credits

There are several options to earn extra credits through projects. Later this semester, I will describe each project with the associated extra credits.

Make-up Exam Policy

It is to your advantage to take all exams at the scheduled times. Only in the case of a well-documented true emergency should an exam be missed. Please be sure to get your instructor’s prior approval for all but emergency cases. Students with university-related or requested absences, e.g., field trips in other courses or multiple exams during finals week, must make prior arrangements in advance for any conflicts with their schedule and due dates for the course. Exams missed without the prior approval of your instructor or without adequate documentation of the reason for missing the exam will result in a recorded grade of zero for the missed exam.

Grading Impact of Possible Class Disruptions

This section is about the impact of possible disruptions on your course grade. Rather than waiting for disruptions to happen, and then having to inform you how those are going to affect your grade, we want to tell you in advance how your course grade may be affected by possible disruptions. For example, what would happen if we have too many disruptions so we cannot complete all course assignments? What if we must cancel the project?
If any course individual projects, and exams are cancelled (either by the instructor or the university), the course grade will be based on the exams, and projects that have been completed in the course. The percentage cut-offs listed in the course syllabus will change.

**Attendance Policy for University Sponsored Events**

Regular class attendance is a responsibility and a privilege of university education. It is fundamental to the orderly acquisition of knowledge. Students should recognize the advantages of regular class attendance, accept it as a personal responsibility, and apprise themselves of the consequences of poor attendance. Instructors should stress the importance of these responsibilities to students, set appropriate class attendance policies for their classes, and inform students of their requirements in syllabi and orally at the beginning of each term.

ISM672 will meet on Friday evenings from 5:30 to 7 pm beginning the week of August 16. It is the student’s responsibility to attend class online and to participate in class discussions. It is the student’s responsibility to stay on track with readings and assignments to be successful in the course.

Because this is an interactive class, learning depends on attendance. Online attendance at all class meetings is expected. Information about upcoming assignments, including changes in deadlines and submission dates, may be discussed in class. If you must miss a class, you are responsible for finding out about assignments announced that day. Having missed a class will never be accepted as an excuse for missing a course requirement.

**Canvas**

Check your Canvas course regularly. Email updates and new information is added to Canvas on a regular basis. You will be responsible for any information or announcements provided to you through email and for any updates on Canvas.

**e-Mail**

- Always include a subject line.
- Remember without facial expressions some comments may not be interpreted accurately. Take care to word your emails. Use of emoticons might be helpful in some cases.
- Use standard fonts.
- Do not send large attachments without permission.
- Special formatting such as centering, audio messages, tables, html, etc. should be avoided unless necessary to complete an assignment or other communication.
- Respect the privacy of other class members

**Netiquette**

The same guidelines that apply to traditional classes should be observed in the virtual classroom environment. Please use proper netiquette when interacting with class members and the professor.

**Policy on Server Unavailability or Other Technical Difficulties**

The university is committed to providing a reliable online course system to all users. However, in the event of any unexpected server outage or any unusual technical difficulty which prevents students from completing a time sensitive assessment activity, the instructor will extend the time windows.
Students with technical issues with the course and email should contact 6TECH for support either by email or phone or chat (https://its.uncg.edu/Help/6TECH/). Please also make your instructor aware of the issue, and if there will be any delays in resolving the issue.

What you need to take this course

1. Textbooks, Visual Studio with SQL Server.
2. You must have access to a computer that connects to the Internet. The course materials are only accessible online by logging in to canvas.uncg.edu – your student identification number is required. If you do not own a computer, the computer labs on campus will be open during this semester.
3. You must have a working e-mail account. Please, make sure your e-mail address on the course Web site is up to date.
4. Because of e-mail viruses, you must use the subject ISM 672 and your full name typed in the message, or the e-mail may be ignored.
5. If you have questions, please do not respond to a Canvas Announcement, rather send me a direct email.
6. You must check your e-mail account regularly throughout the semester. Official announcements will be made by e-mail, and on the course Web site at canvas.uncg.edu.
7. You are responsible for saving all assignments correctly, so you can turn them in electronically. You should be comfortable using word processing software, programming software and have reasonable keyboarding skills. No assignments will be accepted in handwritten form.
8. Supplies: Although you will be publishing (uploading) your assignments, it is a good idea to keep copies of everything.

Academic Integrity Policies

By submitting an assignment, each student is acknowledging their understanding and commitment to the Academic Integrity Policy on all major work for the course. Refer to the following URL: https://osrr.uncg.edu/academic-integrity/. If you have questions about how this policy applies to this course or an assignment, then please see me.

Religious Obligations Statement

It is expected that instructors will make reasonable accommodations for students who have conflicts due to religious obligations. Please make arrangements with the instructor in advance of any conflict. For more information on UNCG’s Religious Obligations policy, visit: https://drive.google.com/file/d/0B3_J3Uix1B4UeTV4Nk1vVFJoVFE/view?resourcekey=0-zRdXEmUA6rRl2ZkqKqo6u3g

Health and Wellness Statement

Your health impacts your learning. Throughout your time in college, you may experience a range of health issues that can cause barriers to your learning. These might include physical ailments, illnesses, strained relationships, anxiety, high levels of stress, alcohol/drug problems, feeling down, or loss of motivation. Student Health Services and The Counseling Center can help with these or other issues you may be experiencing. You can learn about the free, confidential mental health services available on campus by calling 336-334-5874, visiting the website at https://shs.uncg.edu/ or visiting the Anna M. Gove Student Health Center at 107 Gray Drive. Help is always available.

Accommodations for Students with Disabilities
UNCG seeks to comply fully with the Americans with Disabilities Act (ADA). Students requesting accommodations based on a disability must connect with the Office of Accessibility Resources and Services (OARS) in 215 Elliott University Center, (336)334-5440, oars.uncg.edu. The student is to provide a written request for each test accommodation to their instructor (an e-mail will suffice provided you have received a reply from the instructor). Both the requests to the OARS and to the instructor are to be made at least ten school days before the test date.

**Expectations of Faculty and Students in the Bryan School**

Bryan Faculty and students in this course are expected to adhere to the guidelines stated at this link: [https://bryan.uncg.edu/wp-content/uploads/2017/08/Faculty-and-Student-Guidelines-2018-2019.pdf](https://bryan.uncg.edu/wp-content/uploads/2017/08/Faculty-and-Student-Guidelines-2018-2019.pdf)
<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Class Topics</th>
<th>Readings</th>
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<tbody>
<tr>
<td>1</td>
<td>8/16-20</td>
<td>Part I – Console Applications (No Virtual Meeting)</td>
<td>Perkins et al. 2018 – Chapters 2 and 3</td>
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<td>• Part I-1-1 IDE Download and Installation, 1st Console Application and 1st Desktop Application</td>
<td>Chapter 2</td>
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<td>• Part I-1-2 Basic of Programming (Variables)</td>
<td>• THE VISUAL STUDIO 2017 DEVELOPMENT ENVIRONMENT</td>
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<td>• CONSOLE APPLICATIONS</td>
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<td>• DESKTOP APPLICATIONS</td>
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<td>Chapter 3</td>
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<td></td>
<td>• BASIC C# SYNTAX</td>
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<td>• BASIC C# CONSOLE APPLICATION STRUCTURE</td>
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<td>• VARIABLES</td>
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<td>• EXPRESSIONS</td>
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<td>2</td>
<td>8/23-27</td>
<td>Part I – Console Applications</td>
<td>Perkins et al. 2018 – Chapters 4 to 7</td>
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<td>• Part I-2 Basic of Programming (Flow Control, Advanced Variables, Functions, Debugging and Error)</td>
<td>Chapter 4</td>
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<td>• BOOLEAN LOGIC</td>
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<td>• BRANCHING</td>
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<td>• LOOPING</td>
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<td>Chapter 5</td>
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<td>• TYPE CONVERSION</td>
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<td>• COMPLEX VARIABLE TYPES</td>
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<td>• STRING MANIPULATION</td>
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<tr>
<td>3</td>
<td>8/30-9/3</td>
<td>Part I – Console Applications</td>
<td>Perkins et al. 2018 – Chapters 8 to 11, and 13</td>
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<td>• Part I-3 Object Oriented Programming (Classes, Classes Members, Objects, Collections, Events Handler)</td>
<td>Chapter 8</td>
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<td>• WHAT IS OBJECT-ORIENTED PROGRAMMING?</td>
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| 4  | 9/6-10 | Part II – Database and LINQ
Part II-1 Navigate Database Files (Server Explorer, Data Controls, Data-Bound Components, ADO.NET) | Perkins et al. 2018 – Chapter 22
Chapter 22
• LINQ QUERY SYNTAX
• LINQ METHOD SYNTAX
• ORDERING QUERY RESULTS
• UNDERSTANDING THE ORDERBY CLAUSE
• USING AGGREGATE OPERATORS
• USING THE SELECT DISTINCT QUERY
• ORDERING BY MULTIPLE LEVELS
• USING GROUP QUERIES
• USING JOINS |
| 5  | 9/13-17 | Part II – Database and LINQ
Part II-2 Entity Framework (ADO.NET Entity Framework) and CRUD Operations | Perkins et al. 2018 – Chapter 23
Chapter 23
• USING DATABASES
• INSTALLING SQL SERVER EXPRESS
• ENTITY FRAMEWORK
• A CODE FIRST DATABASE
• BUT WHERE IS MY DATABASE?
• Navigating Database Relationships |
| 6  | 9/20-24 | Review of Parts I and II
Project 1 (Due 9/24) | Midterm Exam |
<p>| 7  | 9/27-10/1 |    |    |</p>
<table>
<thead>
<tr>
<th>Week</th>
<th>Dates</th>
<th>Learning Objectives</th>
<th>References</th>
</tr>
</thead>
</table>
| 8    | 10/4-8 | Part III – Desktop Applications  
- Part III-1 Windows Presentation Foundation (WPF) |
|      |        | Perkins et al. 2018 – Chapter 14  
Chapter 14  
- XAML  
- THE PLAYGROUND  
- CONTROL LAYOUT |
| 9    | 10/11-15 | Part III – Desktop Applications  
- Part III-2 Windows Presentation Foundation (WPF) |
|      |        | Perkins et al. 2018 – Chapter 15  
Chapter 15  
- CREATING AND STYLING CONTROLS  
- WPF USER CONTROLS  
- THE MAIN WINDOW |
| 10   | 10/18-22 | Part IV – Web Applications  
- Part IV-1 ASP.NET Web Site and Web Application (HTML, CSS, Web Controls, JavaScript, AJAX)  
Project 2 (Due 10/22) |
|      |        | Perkins et al. 2018 – Chapter 19  
Chapter 19  
- OVERVIEW OF WEB APPLICATIONS  
- WHICH ASP.NET TO USE AND WHY  
- USING ASP.NET WEB FORMS  
- CREATING ASP.NET CORE WEB APPLICATIONS |
| 11   | 10/25-29 | Part IV – Web Applications  
- Part IV-2 ASP.NET MVC (LINQ-to-SQL Model, Controllers and Actions Methods, Scaffolding, UI Rendering) |
|      |        | Perkins et al. 2018 – Chapter 19  
Chapter 19  
- OVERVIEW OF WEB APPLICATIONS  
- WHICH ASP.NET TO USE AND WHY  
- USING ASP.NET WEB FORMS  
- CREATING ASP.NET CORE WEB APPLICATIONS |
| 12   | 11/1-5 | Part IV – Web Applications  
- Part IV-3 ASP.NET Core Web Applications (HTTPDELETE, HTTPPOST, HTTPPUT) |
| 13   | 11/8-12 | Part V – Mobile Applications  
- XAMARIN on iOS and Android |
|      |        | Johnson 2018 - Part VI – 21  
Part VI – 21  
- USING XAMARIN  
- CREATING A XAMARIN FORMS PROJECT  
- DEBUGGING YOUR APPLICATION |
| 14   | 11/15-19 | Review of Parts III, IV and V  
Project 3 (Due 11/19) |
| 15   | 11/22-26 | Thanksgiving |
| 16   | 11/29-12/3 | Final Exam |

**Disclaimer:** Please note that this schedule is tentative, and changes will be made to it as deemed necessary.

**REFERENCES**


Franck Soh, Ph.D.