Course Number/Section/Name: CIDM 4390/01/Software Systems Development
Professor: Dr. Jeffry Babb

Class Days/Times/Location or Other Format: Monday and Wednesday, 3:00 PM to 4:15 PM
Office Location: CC208H
Office Hours: Tuesday and Thursday, 1:00 PM to 5:00 PM; Wednesday, 4:15 to 6:15 PM

Office Phone: 806-651-2440
Email: jbabb@wtamu.edu
Social Media: Keep up with the latest happenings of your COB on Facebook and Twitter, connect with us on LinkedIn, and check out COB videos on YouTube.
Other: (Other optional information you wish to share, e.g., cell phone number, homepage, course prerequisites, etc., please remove from syllabus if not in use)

Terms of Use
A student’s continued enrollment in this course signifies acknowledgment of and agreement with the statements, disclaimers, policies, and procedures outlined within this syllabus and elsewhere in the WTClass environment. This Syllabus is a dynamic document. Elements of the course structure (e.g., dates and topics covered, but not policies) may be changed at the discretion of the professor.

WTAMU College of Business Mission Statement
The mission of the College of Business is to provide high quality undergraduate and graduate business education with a global perspective and ethical awareness. We accomplish this through emphasis on excellence in teaching, which is strengthened by faculty scholarship and supported by professional service.

Learning Objectives of the WTAMU College of Business Programs
The College of Business (COB) at West Texas A&M University (WTAMU) seeks to prepare students in the Bachelor of Business Administration (BBA), Master of Business Administration (MBA), Master of Professional Accounting (MPA), and the Master of Science, Finance and Economics (MSFE) degree programs for careers in business and to foster their professional growth and advancement via key learning goals and objectives.

The learning objectives of the College of Business are as follows:
- Leadership
- Communication
- Critical Thinking
- Business Integration
- Core Business Knowledge
- Global Business Environment
- Business Ethics and Corporate Governance
Course Description
A capstone course for the study of software engineering, Emphasis on requirement specifications, logical design, issues in OOP, design pattern, client-server computing, project management. Students construct original and significant projects that synthesize all course experiences to produce well-designed software applications.

Course Objectives

<table>
<thead>
<tr>
<th>Program Learning Outcome</th>
<th>Course Learning Outcome</th>
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</thead>
<tbody>
<tr>
<td>SO1: An ability to analyze a problem and identify the computing requirements appropriate to the solution</td>
<td>CLO1: Upon successful completion of the course, students will understand the Systems Development Life Cycle and the Process Models which implement it; CLO2: Upon successful completion of the course, students will be able to select an appropriate process model for a given organizational information system need;</td>
</tr>
<tr>
<td>SO2: An ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs</td>
<td>CLO3: Upon successful completion of the course, students will be able to elicit and document an appropriate architecture for a given organizational information system need; CLO4: Upon successful completion of the course, students will be able to develop an appropriate UML model in order to describe a given organizational information system need; CLO5: Upon successful completion of the course, students will be able to develop an appropriate database schema and Entity-Relationship Diagram</td>
</tr>
<tr>
<td>SO3: An ability to use current techniques, skills, and tools necessary for computing practice</td>
<td>CLO6: Upon successful completion of the course, students will be able to select systems development and data tools appropriate for a given organizational information system need and a chosen process model;</td>
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<tr>
<td>SO5: An understanding of the processes that support the delivery and management of information systems within a specific application environment</td>
<td>CLO7: Upon successful completion of the course, students will be able to develop, implement and use a software testing, configuration, deployment and quality assurance plan;</td>
</tr>
<tr>
<td>SO8: An ability to function effectively in teams to accomplish a common goal</td>
<td>CLO8: Upon successful completion of the course, students will be able utilize collaboration tools which allow for software teams to work together in teams;</td>
</tr>
</tbody>
</table>
SO9: An ability to communicate effectively with a wide range of audiences

CLO9: Upon successful completion of the course, students will be able work with clients to establish their information systems software requirements and deliver working software which meets a given organizational information system need.

Course Materials (Text, calculator, etc.)

Texts
Title: Pro ASP.NET Core MVC
Authors: Adam Freeman
ISBN: 978-1484203989
Publisher: APress

Title: Essential Scrum: A Practical Guide to the Most Popular Agile Process
Author: Kenneth S. Rubin

Software
Visual Studio 2015, Update 3 (Freely available through the CIDM department’s DreamSpark subscription): http://e5.onthehub.com/d.ashx?s=qr6y2b8p7h

Microsoft Azure account – more on this later

Map from COB Learning Objectives to Specific Course Objectives

<table>
<thead>
<tr>
<th>BBA Goals</th>
<th>Course Outcomes</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal 1: Communication; Goal 2: Critical Thinking</td>
<td>CLO 4 Students learn to match application requirements to implementation tools available in a comprehensive applications programming interface framework (SO2)</td>
<td>The semester-long project with rubric will assess this learning objective. Students will be required to identify website requirements, design a solution, and implement it using ASP.NET and C#. Dynamic data access will be a required component.</td>
</tr>
<tr>
<td>Goal 4: Functional Business Analyses and Applications</td>
<td>CLO 1 Students use an object oriented language to build applications featuring a graphical user interface (SO3)</td>
<td>Assignment using a rubric will assess this learning outcome. Students are required to use MS Visual Studio, create a website with multiple pages, apply a master page to the pages, and use various ASP.NET controls.</td>
</tr>
<tr>
<td>Goal 4: Functional Business Analyses and Applications</td>
<td>CLO 2 Students will apply best practices to application development with an emphasis on the separation</td>
<td>Assignment using a rubric will assess this learning outcome. Students are required to use MS Visual Studio.</td>
</tr>
<tr>
<td>Goal 4: Functional Business Analyses and Applications</td>
<td>CLO 3 Students will connect their applications to a variety of persistence layer implementations with an emphasis on connectivity to a modern RDBMS. (SO3)</td>
<td>The semester-long project with rubric will assess this learning objective. Students will be required to create a MS SQL Server database and connect it to webpages using ASP.NET data access controls.</td>
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<tr>
<td>Goal 4: Functional Business Analyses and Applications</td>
<td>CLO 5 Students will work in teams to analyze, design, build and implement an application. (SO 8)</td>
<td>The semester-long project with rubric will assess this learning objective. Students are required to use MS Visual Studio, create a website with multiple pages, apply a master page to the pages, and use various ASP.NET controls.</td>
</tr>
<tr>
<td>Goal 4: Functional Business Analyses and Applications</td>
<td>CLO 6 Students will utilize the fundamentals of Object-Oriented Programming - to include classes, objects, properties, attributes, behaviors, constructors, and similar basic OOP constructs – in order to realize functional application solutions to business/domain-centric problems. (SO2)</td>
<td>Programming Assignment</td>
</tr>
<tr>
<td>Goal 4: Functional Business Analyses and Applications</td>
<td>CLO 7 Students will extend basic knowledge by utilizing advanced OOP concepts including (but not limited to): encapsulation, information hiding, abstraction, composition, inheritance, polymorphism, and interfaces (SO2)</td>
<td>Programming Assignment</td>
</tr>
</tbody>
</table>

**Course Grading Policies**

A: 100% - 90%
B: 89% - 80%
C: 79% - 70%
D: 69% - 60%
F: 0% - 59%

Late work accepted on a case basis, you will have points reduced according to the degree to which your work is late. Exceptions would be afforded to late work that was coordinated as such with the instructor.
Course Assignment, Examination, and or Project Policies

I am using a percentage-weighted system for grading. The general categories of work you will engage in to earn these points are as follows:

- **Assignments:** 10%
- **Mid Term Exam:** 10%
- **Participation/Attendance:** (assessed as part of the project process, attendance will be taken)
- **System Development Process:** 40%
- **System Development Product Outcome:** 40%

### Course Topics - Tentative Calendar of Readings, Topics, and Due Dates

<table>
<thead>
<tr>
<th>Week</th>
<th>Topic/Reading</th>
<th>Assignments/Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 – 01/16 – 01/21</td>
<td>Introduction to software, agility and software engineering; Review of Core Principles; DevOps and ALM</td>
<td>Review Assignment 1 (Due 02/01)</td>
</tr>
<tr>
<td>01 – 01/22 – 01/28</td>
<td>ASP.NET MVC Core: Razor and Views Scrum Guide / Rubin</td>
<td>Sprint 0</td>
</tr>
<tr>
<td>02 – 01/29 – 02/04</td>
<td>ASP.NET MVC Core: Razor and Views Scrum Guide / Rubin</td>
<td></td>
</tr>
<tr>
<td>03 – 02/05 – 02/11</td>
<td>ASP.NET MVC Core: Controllers Scrum Guide / Rubin</td>
<td>Sprint 1</td>
</tr>
<tr>
<td>04 – 02/12 – 02/18</td>
<td>ASP.NET MVC Core: Controllers Scrum Guide / Rubin</td>
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</tr>
<tr>
<td>05 – 02/19 – 02/25</td>
<td>ASP.NET MVC Core: Models Scrum Guide / Rubin</td>
<td>Sprint 2</td>
</tr>
<tr>
<td>06 – 02/26 – 03/04</td>
<td>ASP.NET MVC Core: Models Scrum Guide / Rubin</td>
<td></td>
</tr>
<tr>
<td>07 – 03/05 – 03/11</td>
<td>Midterm</td>
<td>Sprint 3</td>
</tr>
<tr>
<td>SB – 03/12 – 03/18</td>
<td>Spring Break</td>
<td>Spring Break</td>
</tr>
<tr>
<td>08 – 03/19 – 03/25</td>
<td>Testing</td>
<td>Sprint 4</td>
</tr>
<tr>
<td>09 – 03/26 – 04/01</td>
<td>Testing</td>
<td></td>
</tr>
<tr>
<td>10 – 04/02 – 04/08</td>
<td>Development</td>
<td>Sprint 5</td>
</tr>
<tr>
<td>11 – 04/09 – 04/15</td>
<td>Development</td>
<td></td>
</tr>
<tr>
<td>12 – 04/16 – 04/22</td>
<td>Development</td>
<td>Sprint 6</td>
</tr>
<tr>
<td>13 – 04/23 – 04/29</td>
<td>Development</td>
<td></td>
</tr>
<tr>
<td>14 – 04/30 -- 05/06</td>
<td>Development</td>
<td>Sprint 7</td>
</tr>
<tr>
<td>15 – 05/07 – 05/13</td>
<td>Final Project Presentation and Submission</td>
<td></td>
</tr>
</tbody>
</table>

### Additional Course Policies

#### Attendance

I will both lecture to and write code related to the material we cover each day in class. There is a full plate of material, so missing class is not the way to achieve mastery; thus this course is designed that you come to class
for optimal success. Each day and week builds on the previous, which makes it very difficult to catch up. Please plan on attending this course regularly.

Class time

This is a time for learning and interaction. Do not be surprised if I take public and corrective action for the following types of activities if I observe them: Texting, cell phone use, web surfing unrelated topics, IMing, excessive conversation, Eating/Drinking (no food or drink in CC205), and any other disruptions.

WTAMU COB Student Code of Ethics

Each student enrolled in COB courses accepts personal responsibility to uphold and defend academic integrity and to promote an atmosphere in which all individuals may flourish. The COB Student Code of Ethics strives to set a standard of honest behavior that reflects well on students, the COB and West Texas A&M University. All students enrolled in business courses are expected to follow the explicit behaviors detailed in the Student Code of Ethics.

Code of Ethics

- Do not use notes, texts, solution manuals, or other aids for a quiz or exam without instructor authorization.
- Do not copy the work of others and/or allow others to view your answers or copy your work during a quiz, exam, or on homework assignments.
- Do not allow other parties to assist in the completion of your quiz, exam, homework, paper, or project when not permitted.
- Do not work with other students on projects or assignments without authorization from the course instructor.
- Properly cite and specifically credit the source of text, graphic, and web materials in papers, projects, or other assignments.
- Do not forge the signature of an instructor, advisor, dean, or another student.
- Provide truthful information for class absences when asking faculty for excused absences or for a make-up for a quiz, exam, or homework.
- Provide truthful information on your resume including work history, academic performance, leadership activities, and membership in student organizations.
- Respect the property, personal rights, and learning environment of all members of the academic community.
- Live up to the highest ethical standards in all academic and professional endeavors.

Students violating the Student Code of Ethics will be reported to the Dean’s office and are subject to penalties described in the West Texas A&M University Code of Student Life, which may include suspension from the University. In addition, a violator of the Student Code of Ethics may become ineligible for participation in student organizations sponsored by the COB and for recognition for College academic honors, awards, and scholarships.
COB Student Resources Link
The COB has developed a Student Resources repository (e.g., APA writing style information, business core reviews, facilities, and other helpful supplements), which can be found on the COB Website. Additionally, WTAMU has developed an Academic Study Skills information site to assist students (e.g., study habits, supplemental instruction, tutoring, writing and math skills), which can be found on the WTAMU Website. For WTAMU Writing Center information (for students needing writing assistance, guidance, and feedback), please visit their website.

COB Communications Component
Students earning a BBA degree must complete at least one course with a communications component as part of the business core requirements. The COB communications component is a requirement in the following courses: ACCT 4373 (Accounting Communications), BUSI 4333 (Cross-Cultural Issues in Business Communications), BUSI 4350 (Current Issues in Management Communications), BUSI 4380 (Conflict Resolution and Negotiation), BUSI 4382 (Emerging Media Law), CIDM 3320 (Digital Collaboration and Communication), ECON 4370 (Economics of Health Care), FIN 3350 (Personal Financial Planning), FIN 4320 (Investments), FIN 4321 (Portfolio Theory), MGT 3335 (Organizational Behavior), MGT 4380 (Conflict Resolution and Negotiation), and MKT 3342 (Consumer Behavior).

Students in a communications component course are explicitly required to demonstrate knowledge of communication skills. Specific objectives may include but are not limited to the following concepts put forth by the National Business Education Association: (1) ability to organize a written and an oral message coherently and effectively, (2) ability to use technology for communication, (3) ability to research a topic, prepare a report, and present the findings to all organizational levels, and (4) ability to demonstrate critical-thinking skills. Specific course requirements and the role of the communications component with respect to student grading policy are at the discretion of the course instructor of record.

Student Travel Opportunities
In multiple business courses, there may be opportunities for student travel supplemented by student fees. If you have an interest in such opportunities as they become available, please notify a faculty member.

Dropping/Repeating the Course
Should a student decide to drop the course, it is the student’s responsibility to be aware of the final drop dates and adhere to the WTAMU Add/Drop policy. Any student participating in the course after the WTAMU posted drop date will be considered active and a grade will be administered at the end of the course for that student. Students are charged a fee for any course attempted for a third or subsequent time at WTAMU other than a non-degree credit developmental course or exempted courses.

Scholastic Dishonesty
It is the responsibility of students and instructors to help maintain scholastic integrity at the University by refusing to participate in or tolerate scholastic dishonesty. Commission of any of the following acts shall constitute scholastic dishonesty. This listing is not exclusive of any other acts that may reasonably be said to
constitute scholastic dishonesty: acquiring or providing information for any assigned work or examination from any unauthorized source; informing any person or persons of the contents of any examination prior to the time the examination is given in subsequent sections of the course or as a makeup; plagiarism; submission of a paper or project that is substantially the same for two courses unless expressly authorized by the instructor to do so; submission of a paper or project prepared by another student as your own. You are responsible for being familiar with the University's Academic Integrity Code, as well as the COB Student Code of Ethics listed in this document.

**Academic Integrity**

All work must be completed individually unless otherwise stated. Commission of any of the following acts shall constitute scholastic dishonesty: acquiring or providing information for any assigned work or examination from any unauthorized source; informing any person or persons of the contents of any examination prior to the time the exam is given in any subsequent sections of the course or as a makeup; plagiarism; submission of a paper or project that is substantially the same for two courses unless expressly authorized by the instructor to do so. For more information, see the [Code of Student Life](#).

**Viewpoints/External Websites Disclaimer**

The views expressed in this document, web-based course materials, and/or classroom presentations and discussions are those of the professor and do not necessarily represent the views of West Texas A&M University, its faculty and staff, or its students. Views expressed by students are likewise those of the person making such statements. It is understood and expected that each individual within this course will respect and allow individual difference of opinion.

Neither the professor, the COB, nor WTAMU are responsible for the content of external websites discussed in the classroom and/or linked to via online course materials, emails, message boards, or other means. Referred websites are for illustrative purposes only, and are neither warranted nor endorsed by the professor, COB, or WTAMU. Web pages change frequently, as does domain name ownership. While every effort is made to ensure proper referencing, it is possible that students may on occasion find materials to be objectionable for reasons beyond our control.

**Acceptable Student Behavior**

Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (Code of Student Life). Unacceptable or disruptive behavior will not be tolerated. Students engaging in unacceptable behavior may be instructed to leave the classroom. Inappropriate behavior may result in disciplinary action or referral to the University’s Behavioral Intervention Team. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc.

**Technology Requirements**

All technological requirements for the successful completion of this course are the responsibility of the student, including access to a working computer and or to a device with secure broadband Internet.
connection, data storage and retrieval, and state-of-the-art security. The student is responsible for all technological problems not related to WTAMU, including but not limited to equipment failures, power outages, and Internet breakdowns. Furthermore, students are responsible for all necessary technical and operational skills for completing this course, and for being familiar with WTClass (the Blackboard Learning System) both in a general sense and in a specific sense as pertaining to this course and any materials stored within. The professor is not responsible for any technical matters related to WTClass. Students must contact WTClass if they have problems accessing and/or using the WTClass environment.

Physical or Educational Access - ADA Statement
West Texas A&M University seeks to provide reasonable accommodations for all qualified persons with disabilities. This University will adhere to all applicable federal, state and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal educational opportunity. It is the student’s responsibility to register with Student Disability Services (SDS) and to contact faculty members in a timely fashion to arrange for suitable accommodations. Contact Information: Student Success Center, CC 106; phone 806-651-2335.

Title IX Statement
West Texas A&M University is committed to providing a learning, working and living environment that promotes personal integrity, civility, and mutual respect in an environment free of sexual misconduct and discrimination. Title IX makes it clear that violence and harassment based on sex and gender are Civil Rights offenses subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. Harassment is not acceptable. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here:
- WTAMU Title IX Coordinator Becky Lopez – Kilgore Research Center 147, or call 806.651.3199
- WTAMU Counseling Services – Classroom Center 116, or call 806.651.2340
- WTAMU Police Department – 806.651.2300, or dial 911
- 24-hour Crisis Hotline – 800.273.8255, or 806.359.6699, or 800.692.4039
- Visit the Notalone website
For more information, see the Code of Student Life.

WT Attendance Policy for Core Curriculum Classes
For the purposes of learning assessment and strategic planning, all students enrolled in Core Curriculum or developmental courses at West Texas A&M University must swipe their Buff Gold cards through the card reader installed in the classroom/lab for each class/lab meeting.

Evacuation Statement
If you receive notice to evacuate the building, please evacuate promptly but in an orderly manner. Evacuation routes are posted in various locations indicating all exits, outside assemble area, location of fire extinguishers, fire alarm pull stations and emergency telephone numbers (651.5000 or 911). In the event an evacuation is necessary; evacuate immediately do not use elevators; take all personal belongings with you; report to outside assembly area and wait for further information; students needing assistance in the evacuation process should
bring this to the attention of the instructor at the beginning of the semester.

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* Syllabus template approved by COB Curriculum Committee May 2016. Annual review of the syllabus is a formal part of the COB continuous improvement process.