Course Number/Section/Name: CIDM 6330/01/ Software Engineering and Systems
Semester/Year: Spring 2022
Professor: Dr. Jeffry Babb

Class Days/Times/Location or Other Format: Online Section
Office Location: CC208H
Office Hours: Tuesday-Thursday, 7:00 PM to 10:00 PM via calendly appointment and Select Satrudays – 2 to 5 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: Calendly Link for all appoointments: https://calendly.com/jeffrybabb/dr-babb-spring-2022-office-hours

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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 Paul and Virginia Engler College of Business Mission Statement
The mission of the Paul and Virginia Engler 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 Paul and Virginia Engler College of Business Programs
The Paul and Virginia Engler 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), Master of Science in Computer Information Systems and Business Analytics (MSCISBA) 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 Paul and Virginia Engler 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

horough examination of principles of software engineering concepts. Use of object-oriented paradigm to design, analyze, and construct enterprise business applications. Traditional structured systems design and analysis. Emphasis on information analysis and logical requirement specifications of systems and validity, software quality and metrics..

Course Objectives

I have designed this course with a few assumptions in mind and these assumptions should be stated upfront prior to listing the learning objectives and desired outcomes for the course. These assumptions are based on observations from offerings of this course over recent years:

1. **MBA**: This is a graduate course in an MBA program and I would want to fully consider the goals and objectives of such a degree program in the context of the course subject matter. Please see this document: https://www.wtamu.edu/academics/college-business/academics/graduate-programs/programs/mba-program.html
2. **CISBA**: This is also a graduate course in in MS-CISBA program and the course content may appear on the comprehensive exam under the Systems Development academic area for the program.
3. **Prior Knowledge and Skill/Competency Level**: Historically, this has varied quite a bit among the students who take this course. As such, strategic decisions must be made regarding what tools we use and what approach we use. I very much intend that you design and build applications (particularly those that would support a business need), but it is very common that novices do enroll in the course alongside those with experience – I must find a balance amidst these facts. In any case, basic programming and database knowledge are requisite.

   For Python review, I recommend: https://www.w3schools.com/python/default.asp
   For SQL review, I recommend: https://www.w3schools.com/sql/default.asp

Map from COB Learning Objectives to Specific Course Objectives

Business Value / Technical Competency: We must strike a balance between keeping a business purpose for the designing and developing we learn and do in the context that this is a graduate course in business. Again, this will mean balancing technical and business/organizational concerns.

You will design and build applications that are reflective of one or more cases you develop which describe a business need for an application. We will conduct our design and development efforts primarily using contemporary web application development tools, such as ASP.NET, PHP/Laravel, Ruby/Rails, or Python/Django, in order to achieve our goals.

You will develop intent and purpose for what you build. With these assumptions intact, here are the objectives for the course:

Course Learning Objective Description	AACSB PVECOB Learning Objectives	Assessment Plan (*Assessment artifact)
Students will gain an applied and theoretical understanding of software architecture	Communication	Assignments and Project
Students will gain an applied and theoretical understanding of the software architect's role	Critical Thinking: Graduates will be critical thinkers	Assignments and Project
Students will gain an applied and theoretical understanding of contemporary software engineering principles	Critical Thinking: Graduates will be critical thinkers	Assignments and Project
Students will gain an applied and theoretical understanding of software and systems analysis and design	Functional Business Analyses and Applications	Assignments and Project
Students will gain an applied and theoretical understanding of the object-oriented paradigm	Functional Business Analyses and Applications	Assignments and Project
Students will work with tools to implement feasible prototypes of their designs	Functional Business Analyses and Applications	Assignments and Project
Students will collaborate in teams in order to produce iterative software systems solutions	Functional Business Analyses and Applications	Assignments and Project
Students will interact with stakeholders and developers in order to understand requirements	Functional Business Analyses and Applications	Assignments and Project
Students will demonstrate effective communication that results in systems designs appropriate to solutions	Functional Business Analyses and Applications	Assignments and Project
Students will envelop all of the above within a test-first/test-driven paradigm	Functional Business Analyses and Applications	Assignments and Project

Course Materials (Including text, calculator, internet connectivity, software, virtual programs, etc.)

Required Books:
Title: Clean Architecture: A Craftsman's Guide to Software Structure and Design
Author: Robert Martin
Publisher: Pearson

ISBN-13: 978-1491948965
978-0134494166

Title: Architecture Patterns with Python: Enabling Test-Driven Development, Domain-Driven Design, and Event-Driven Microservices
Author: Harry Percival and Bob Gregory
Publisher: O'Reilly
ISBN-13: 978-1492052203

Recommended Books:
Title: Practices of the Python Pro
Author: Dane Hilliard
Publisher: Manning
ISBN-13: 978-1617296086

Software and Tools:
- Visual Studio Code: https://code.visualstudio.com/
- Github account

Course Grading Policies
The course designed is to be fundamentally governed via a series of timeboxed evolutions in the development of our knowledge and skills related to software architecture and enterprise business software systems. As such, any combination of the following activities can be expected within a given evolution:
- Informal discussions (group and course)
- Formally graded discussions
- Systems Analysis and Design documents/diagrams
- Systems Development Prototypes
- Knowledge Base Reports
- Evaluation of Case Studies
- Quizzes
- Exams
- Papers

I use a percentage-weighted system for grading. The general categories of work you will engage in to earn these points are as follows:
- **Software Design Evolutions:**
  - **Assignments: 60%**
  - **Django or Flask Project: 30%**
- **Collated Portfolio of Work: 10%**

Course Assignment, Examination, and or Project Policies
Your final letter grade will be assessed based on the following point accumulations:
- **Letter grade of "A"**: 90% or higher

- **Letter grade of "B"**: 80% up to, but not including 90%
- **Letter grade of "C"**: 70% up to, but not including 80%
- **Letter grade of "D"**: 60% up to, but not including 70%
- **Letter grade of "F"**: 59% or lower

Late Work

Late work will be handled according to the following scheme:

- **One day late**: 1 letter grade reduction
- **Two days late**: additional letter grade reduction (2 letter grades)
- **Three days late**: additional letter grade reduction (3 letter grades)
- **Four days late**: 50%
- **Five or more days late**: I will not accept the work for credit
- **Keep the professor honest policy**: If I do not turn around an assessment and grading of your work within seven days of the due date, then I will provide a "drop the lowest grade" provision for the final tally of grades.

Classroom Conduct

Whilst this is an online course, it is not a self-paced or "correspondence" course. My office hours are conducted via Zoom and I will provide a Slack for the course. I will expect to meet with you at least three times during the semester, regardless if you need office hours help, to have a conversation about your progress and performance in the material.

Additional Course Policies

Policy Topic	Course Policy
Late Work	There may be extenuating circumstances where I will entertain accepting a late submission of work from you. Any exceptions to my policy above will require explicit coordination and the consent of the instructor (me).
Group and Teamwork	When group/team work is involved, there **will** be a need to coordinate schedules to meet synchronously online. Further, as I have indiciated, there are times where your synchronous participation will be expected. I will be as accommodating as possible with schedules in this regard.

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

Readings are from the two required books: Martin and Percival/Gregory.

Week	Topic/Reading	Assignments/Notes
00 – 01/10 – 01/16	Martin Part I – Design Architecture Percival and Gregory – Intro and Chapter 1	Assignment 0 Domain Selection and Introduction
01 – 01/17 – 01/23	Percival and Gregory – Chapter 2	Assignment 1 Roman Numeral Kata
02 – 01/24 – 01/30	Martin Part II – Paradigms Percival and Gregory – Chapter 3	Assignment 2 Initial Tests and Repository
03 – 01/31 – 02/06	Percival and Gregory – Chapter 4	Assignment 3 Initial Domain Implementation
04 – 02/07 – 02/13	Martin Part III – Design Principles Percival and Gregory – Chapter 5	Assignment 4 SOLID
05 – 02/14 – 02/20	Percival and Gregory – Chapter 6	Assignment 5 Implementing Unit of Work
06 – 02/21 – 02/27	Martin Part IV – Component Principles Percival and Gregory – Chapter 7	Assignment 6 Boundaries and Coupling
07 – 02/28 – 03/06	Percival and Gregory – Chapter 8	Assignment 7 Messaging
08 – 03/07 – 03/13	Martin Part V – Architecture 1 Percival and Gregory – Chapter 9	Assignment 8 Finalizing Domain and Architecture
09 – 03/14 – 03/20	Spring Break	
10 – 03/21 – 03/27	Martin Part V – Architecture 2 Percival and Gregory – Chapter 10	Assignment 9 Your architecture as services and tests
11 – 03/28 – 04/03	Percival and Gregory – Chapter 11	Assignment 10 Event-Driven Architecture
12 – 04/04 – 04/10	Martin Part VI – Details Percival and Gregory – Chapter 12	Assignment 11 CQRS
13 – 04/11 – 04/17	Percival and Gregory – Chapter 13 and Epilogue	Assignment 12 Abstraction, Details, and Dependencies
14 – 04/18 – 04/20	Final Project and Report due	

WTAMU Paul and Virginia Engler 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. This includes posting, sharing, and otherwise distributing the course materials outside of this course without expressed permission of the faculty, college, university, or system.
- 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

The Paul and Virginia Engler College of Business Communication Component requires students to demonstrate knowledge of communication skills. The COB communications component is a requirement in the following courses: **ACCT 4373** (*Accounting Communications*), **BUSI 1304** (*Business Communication*), **BUSI 3320** (*Digital Collaboration and Communication*), **BUSI 4333** (*Cross-Cultural Issues in Business Communications*), **BUSI 4350** (*Current Issues in Management Communications*), **BUSI 4375** (*Healthcare Communication*), **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),* or **MKT 3342** *(Consumer Behavior)*.

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 Management 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 the IT Service Center at 806-651-4357 or itsc@wtamu.edu if they have problems accessing and/or using the WTClass environment. Students are also encouraged to consult the Student Technology Support Portal at students.wtamu.edu for help with WTClass.

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- Georganna Ecker- titleIX@wtamu.edu 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

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.

Copyright

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Syllabus template approved by COB Curriculum Committee May 2021. Annual review of the syllabus is a formal part of the COB continuous improvement process.