**Course Syllabus – Enterprise Architecture**

Instructor: Marcia M. Yates (email: mmyates@bu.edu or marcia.m.yates@gmail.com )

Location: CAS 320, Mondays from 6pm to 8:45pm

Office hours 5:30pm

Textbooks:

* ***Enterprise Architecture as Strategy*** by Jeanne W. Ross, Peter Weill, and David C. Robertson, Harvard Business Press 2006. ISBN: 978-1-59139-839-4. (This textbook can be purchased from Barnes and Noble at Boston University. Text is abbreviated as “EAAS” below.)
* ***Software Architecture Patterns*** by Mark Richards, O’Reilly Media Inc., 2015.
	+ (This “report” is a free PDF download from the O’Reilly website. It is abbreviated as “SAPatterns” below: [https://www.oreilly.com/library/view/software-architecture-patterns/9781491971437/?\_gl=1\*ju0a61\*\_ga\*NTI4MjMwMzUzLjE2NzAyNDM4NDA.\*\_ga\_092EL089CH\*MTY3MDI0Mzg0MC4xLjEuMTY3MDI0Mzg3Mi4yOC4wLjA](https://www.oreilly.com/library/view/software-architecture-patterns/9781491971437/?_gl=1*ju0a61*_ga*NTI4MjMwMzUzLjE2NzAyNDM4NDA.*_ga_092EL089CH*MTY3MDI0Mzg0MC4xLjEuMTY3MDI0Mzg3Mi4yOC4wLjA). )
* ***Software Architecture: The Hard Parts*** by Neal Ford, Mark Richards, Pramod Sadalage & Zhamak Dehghani, O’Reilly Media, Inc. 2022. ISBN: 978-1-492-08689-5. (This textbook is abbreviated as “SA:THP” below. It is TBD as to whether the BU Bookstore will stock this textbook.)

**General Information**

**Note that this is a “flipped classroom” course. Significant class time will be devoted to workshops conducted in small groups, some of which are noted on the schedule below. Lectures may be assigned as homework reading if there is not sufficient time to cover all lectures in class. Because workshop timing is unpredictable, some topics may need to shift slightly from the plan below.**

**SNOW EMERGENCY or other cancellations: If Boston University cancels classes on the Charles River Campus, our default setting is to conduct the class over Zoom. Zoom access in included in our Blackboard course site. Instructor will be in touch by email to announce the plan. If there are wide-spread power outages, we will make up the material in another way.**

**The 2023 Spring running of this face-to-face course is scheduled for Mondays. Mondays are complicated due to two Monday holidays, February 20th and April 17th. The canceled class on February 20th will meet on Tuesday, February 21st; the canceled class on April 17th will meet on Wednesday, April 19th. There will be no class on March 6th due to Spring Vacation. These dates are all correctly stated in the week-by-week syllabus below, and our classroom should be the same as on Mondays.**

| **Class Meetings** | **Topics** | **Reading Assignments** | **Assignments** |
| --- | --- | --- | --- |
| Monday,Jan 23*Module 1 in Blackboard* | Housekeeping and explanation of assignments and Term ProjectLecture 1: Introduction to the Course and to Enterprise ArchitectureLecture 2: The Operating Model & Alignment with the BusinessIntroduction to the Term Project and Assignment 1 | EAAS: Preface, pp. vii – xi, Chapter 1,Chapter 2SAPatterns: Intro, Chapter 1, Chapter 2*Blackboard – read Module 1 content* | * *Review Module 0 in Blackboard course, take the quizzes (they do not count toward your grade);*
* *Review syllabus; create your personal schedule for the course based on this syllabus – note that the course covers a lot of material, the pace is fast, and the assignments can be time-consuming!*
* *Assignment 1*
* *1st Term Project incremental deliverable*

*These are both due on Feb 6th**Think about what you want to do for the Term Project; discuss with instructor over email or before class if you want feedback.* |
| Monday, Jan 30*Module 1 in Blackboard* | Syllabus Scavenger Hunt!Lecture 3: The Core Diagram**Workshop #1:****“Technical Manager” Workshop** | EAAS: Chapter 3SAPatterns: Chapters 3, 4, 5 &Appendix*Blackboard – read Module 1 content* |  |
| Monday,Feb 6*Module 2 in Blackboard* | Lecture 4: Software Artifacts and Enterprise Architecture FrameworksLecture 5: Security and Compliance | EAAS: Chapter 3 (review)SA:THP:Preface, Chapters 1, 2, and 3*Blackboard – read Module 2 content* | ***By 6am:**** **Quiz #1**
* **Assignment #1 Due**
* **Term Project Deliverable #1 due (Proposal for your project, must be approved by instructor)**
 |
| Monday,Feb 13*Module 2 in Blackboard* | Lecture 6: Stages of Architecture Maturity*Software Architecture: The Hard Parts – summary of our first reading***(Tentative: Workshop 2)** | EAAS: Chapter 4,Chapter 8, pp. 182-186SA:THP: Chapter 4Review SAPatterns*Blackboard – read Module 2 content* |  |
| **Tuesday**,Feb 21*Module 3 in Blackboard* | Lecture 7: IT Engagement ModelLecture 8: Software Architecture Patterns | EAAS: Chapter 5SA:THP: Chapter 5*Blackboard – read Module 3 content* | ***Due by 6am:*****Quiz #2**  |
| Monday,Feb 27*Module 3 in Blackboard* | Lecture 9: “Greenfield” Development versus Legacy Systems *Software Architecture: The Hard Parts – summary of Chapters 4 & 5* | EAAS: Chapter 6SA:THP: Chapters 6 & 7*Blackboard: read Module 3 content* | ***All due by 6am*** * **Assignment #2**
* **Term Project Deliverable #2 (Your schedule for your project, including the artifacts you plan to include)**
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| **Mar 6** | **NO CLASS – SPRING VACATION** |  |  |
| Monday,Mar 13*Module 4 in Blackboard* | Lecture 10: System Integration & Linking TechnologiesLecture 11: ERP Systems*Software Architecture: The Hard Parts – summary of Chapters 6 & 7* | SA:THP: Chapters 8 & 9*Blackboard: read Module 4 content* | ***All due by 6am:*****Quiz #3** **Term Project Deliverable #3 due** |
| Monday,Mar 20*Module 4 in Blackboard* | Lecture 12: Big Data Analytics, Data Warehouses/Data Lakes in the EA*Software Architecture: The Hard Parts – summary of Chapters 8 & 9***Tentative: Workshop #3** | EAAS: Chapter 8SA:THP: Chapters 10 & 11*Blackboard: read Module 4 content* | **Assignment #3 due** |
| Monday,Mar 27*Module 5 in Blackboard* | Lecture 13: Oursourcing, Vendor Management, and SLAs*Software Architecture: The Hard Parts – summary of Chapters 10 & 11* | EAAS: Chapter 7 and Chapter 9SA:THP: Chapters 12 & 13*Blackboard: read Module 5 content* | ***All due by 6am*****Term Project Deliverable #4 due** |
| Monday,Apr 3*Module 5 in Blackboard* | Lecture 14: Deployment topics, DevOps,current Cloud challenges, Blockchain and other disrupters*Software Architecture: The Hard Parts – summary of Chapters 12, 13, 14 & 15***Tentative: Workshop #4** | SA:THP: Chapter 14 & 15*Blackboard: read Modules 5 & 6 content* | ***All due by 6am Tuesday morning:*****Quiz #4 due by 6am****Assignment #4**  |
| Monday,Apr 10*Module 6 in Blackboard* | Lecture 15: Deploying Your EA: Scaling, Monitoring, and Fault ToleranceLecture 16: The Final Lecture: Disaster Recovery and *“So You Want to Be a CIO?”* | EAAS: Chapter 8*Blackboard: read Module 6 content* | **Quiz #5 due by 6am** |
| **Apr 17** | **HOLIDAY – NO CLASS** |  |  |
| **Wednesday,**Apr 19 | **Term Project Presentations – entire class (You must attend all presentations)** |  | **Term Project Report and Presentation due!!** |
| Monday,Apr 24 | **Term Project Presentations – entire class (You must attend all presentations)** |  | ***Due by 6am Wednesday morning:*****Quiz #6** |
| Monday,May 1 | **Any remaining Term Project Presentations****Final Exam Review** |  |  |
| Monday,May 8 | **FINAL EXAM – Closed book proctored cumulative exam; taken in-class, online through Blackboard. Students must bring their own laptops for the exam.**  |  | Good luck! |

**CLASS POLICIES**

***PLEASE READ THE FOLLOWING INFORMATION CAREFULLY. IF YOU HAVE QUESTIONS OR CONCERNS, PLEASE DO NOT HESITATE TO ASK YOUR INSTRUCTOR FOR CLARIFICATION.***

Office hours: Before class on class night, or email instructor with questions. Instructor will stay after class up to 15 minutes (i.e., until 9pm), or we can use break times to answer questions or consult on Term Project. Scheduled phone calls or Zoom sessions are also possible. If there is sufficient interest, we can schedule sessions for Term Project questions for the whole class.

Snow/weather-related cancellation of class: See notice in **blue** text on first page of this syllabus.

Accuracy of Due Dates: This syllabus represents due dates as understood as of its publication in January 2023. The most up-to-date due dates will be reflected in the Blackboard calendar for the course. Instructor will *always* send out a Blackboard email announcement with any changes.

Spring Term Schedule: It is imperative that students stay current with work that is due. The Term Project is a serious, graduate student-level project and it **must be approved** by the instructor before starting work. The term goes by QUICKLY. Students who succeed in this course plan out their work from the beginning; one of your Term Project deliverables will be a schedule that you create to identify what parts of your project will be delivered when.

Each student must submit original work done only by the student: **Any paraphrased or directly quoted supporting material from the Internet, textbooks, or any other source including from the instructor’s slides or from the Blackboard course materials must be properly cited using APA form**. Students may not collaborate with other students on quizzes, assignments, or the Term Project. This is an upper numbered graduate level course; students are expected to submit assignments that incorporate *their* original ideas, not re-hashed/copied ideas from others or copy/paste from other sources without demonstrating original explanation and thinking. **Do not under any circumstances use or cite Wikipedia! It is not reliable.**

English as a Second Language: Your instructor is highly experienced with international students. A high level of English fluency is needed to do well in this course, however. It is highly recommended that students for whom English is a second language (or native English speakers who have challenges writing) seek out help from the BU writing center or an English-fluent peer to help with copy edits. Your instructor unfortunately does not have time to go over written assignments and edit them for the student.

Disability accommodations: You must be documented through the University’s disability office if you need special accommodations to take this course. The disability office will produce a letter explaining your needs; you must deliver that letter to the instructor at the start of the course if you need accommodations.

Term Project length: Reviewing and grading final term projects takes significant time – at least 3 hours per project/student. **Therefore, there is a page limit of 25 pages for the Term Project report, with font size 10 the smallest font accepted.** Instructor will stop grading after 25 pages. The page limit does not include the slides for your in-class presentation.

In-class Term Project presentation: It is fun and informative to see what other students have done for their projects; the workshops and in-class presentations are often the highlights of the course. We can only devote 2 classes for presentations, so your presentation must be succinct – about 10 to 15 minutes per presenter maximum, including a couple minutes to answer questions from the class; the exact time is dependent on the number of students in the class. ***PLEASE PLEASE PLEASE time your presentation and rehearse it!***It is very painful when we have to cut someone off because they are running over – a few minutes may be ok, more than that is not. It is mandatory to attend the Term Project presentations, as they are an important part of your learning experience in CS783.

Plagiarism policy: Cheating and plagiarism will not be tolerated in any Metropolitan College course. It is each student’s responsibility to read and understand the Boston University academic conduct code, which is available here <https://www.bu.edu/academics/policies/academic-conduct-code/> . Except for collaborative in-class workshop sessions, all assignments, quizzes, and exams must be the original work of the student whose name is on the assignment. The instructor uses plagiarism detection tools like *TurnItIn* to assess whether information has been copied directly from sources without proper citation, or whether students have copied or purchased papers that have been submitted previously in the course. **Discovery of plagiarism will result in a zero for the assignment.**

Citations: In accord with the above rules on plagiarism, any directly quoted or paraphrased material must have proper citation. Use primary sources, and do not use Wikipedia! Any assignment must also have a standard bibliography. MET College requires APA citation style (please see <http://www.apastyle.org/> if you are unfamiliar with it). **Failure to include a bibliography will result in a 25-point loss on the assignment.**

Quizzes:There are six quizzes that are accessed and taken online in Blackboard. Quizzes are due by 6am on the day indicated in the syllabus above. Quiz results cannot be released until all students have taken the quiz. Quizzes are configured so that students may take them multiple time for Final Exam review, but **only the first quiz attempt will be graded.** Note that quiz questions are randomly and automatically selected by Blackboard from a bank of questions for that quiz.

Exams: The final exam is closed book and cumulative. It will be held in class on May 4th; the test format is similar to the online quizzes, plus an essay question. There is no mid-term exam. Students must bring a laptop to class to take the exam. **Ensure that your laptop can successfully access the Blackboard site prior to the exam.**

Assignments: Assignments will be submitted in Blackboard. You must submit to the assignment dropbox. I will do my best to ensure timely feedback. All quizzes and assignments are due by 6am on the day shown in the syllabus. If you require an extension in hardship cases, please get in touch with the instructor BEFORE the due date for the assignment.

Grading: Your grade is determined as follows:

* Assignments (the incremental Term Project deliverables are averaged together for the fifth assignment) – 25%
* Workshops and class contributions/participation – up to 5% extra credit
* Online quizzes – 15%
* EA Term Project Report – 20%
* EA Term Project Presentation – 10%
* Final Exam – 30%