Syllabus

> This is a single, concatenated file, suitable for printing or saving as a PDF for offline viewing. Please note that some animations or images may not work.

Course Description

> This module is also available as a concatenated page, suitable for printing or saving as a PDF for offline viewing.

MET CS581
Health Information Systems

Health Information Systems (HIS) are comprehensive application systems that automate the activities of healthcare delivery including clinical care using Electronic Health Records (EHRs), coordination of care across providers, telehealth, management of the business of healthcare such as revenue cycle management, and population health management. The course covers the functionality of these systems, the underlying information technology they require, and their successful operations. It addresses challenges in this rapidly changing field such as complex data, security, interoperability, mobile technology, and distributed users. The course emphasizes applied use of health information systems through case studies, current articles, and exercises.

Technical Notes

The table of contents expands and contracts (+/- sign) and may conceal some pages. To avoid missing content pages, you are advised to use the next/previous page icons in the top right corner of the learning modules.

This course requires you to access files such as Word documents, PDFs, and/or media files. These files may open in your browser or be downloaded as files, depending on the settings of your browser.

Learning Objectives

Upon successful completion of this course you will:

- Learn the functionality of Health Information Systems and Electronic Health Records (HIS/EHRs) through lectures, readings, and hands-on labs use of an EHR
- Learn the technical infrastructure required for HIS/EHRs, including virtualization, cloud architecture, and security
- Understand how HIS/EHRs change healthcare delivery workflows and how to manage that change
- Learn best practices for deploying and using HIS/EHRs, including project management, budget management, and system selection
- Learn about governmental regulation of EHRs
- Collect a set of tools to use in HIS/EHR and other enterprise system deployment programs
- Present results of your work in a "real-world" fashion including presentations and written assignments
- Be introduced to the applied, "real-world" deployment of enterprise application systems in general
- Practice independent, analytical thinking about the challenges of deploying HIS/EHRs and how to address them

Course Outline

The core of the course is online material that is on the course Blackboard website. That material consists of six modules, one per week. The modules are broken into two or three "lectures" that cover topic areas. The online material is supplemented with the course textbook and additional readings. These readings are described in the course syllabus and the study guide for each module.
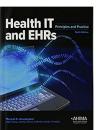
Module	Module Title	Lectures
1	Introduction to HIS and EHRs and Healthcare Workflow and Process Re-engineering	1. Introduction to Health Information Systems (HIS) and Electronic Health Records (EHR) 2. Healthcare Workflow and Business Process Re-Engineering 3. Enterprise Architectures and HIS/EHR Clinical Functionality
2	HIS/EHR Clinical Functionality & EHR Regulation	4. HIS/EHR Clinical Functionality 5. Federal Government EHR Regulations & Certification

3	HIS Business Functionality	6. Population Health Functionality
		7. Revenue Cycle Management
4	Infrastructure and Security	8. HIS/EHR Technical Infrastructure Design
		9. HIS/EHR Infrastructure Performance
		10. HIS/EHR Security and HIPAA
5	Interoperability	11. Interoperability Requirements and Methods
		12. Interoperability Standards
6	Deployment	13. HIS/EHR Deployment Project Management
		14. HIS/EHR System Selection
		15. HIS/EHR Financial Costs and Benefits
7	Prepare for and Take the Final Exam	

The course will remain open two weeks after the final exam so that you can continue discussions and ask any questions about database technology, your grades, or the course. This is also the time for a dialogue in which we hope to learn from you how we can modify the course so that it better meets your needs.

Course Materials

Required Book

Amatayakul, M. K. (2013). *Electronic health records: A practical guide for professionals and organizations* (6th ed.). American Health Information Management Association. ISBN 9781584265290.

This book can be purchased from Barnes and Noble at Boston University. It is also available from the publisher in both hardcopy and e-book formats at https://my.ahima.org/store/.

Online Materials

The course makes extensive use of online reading material. URLs will be provided for those readings. Since the course covers a very dynamic topic, the professor tries to provide at least one recent reading each week.

Personal Computer Software

The course uses online materials and software. In addition, quizzes will be completed online using the course Blackboard site (see below).

Assignments will need to be completed using Microsoft Office tools—Word, Excel, PowerPoint, and optionally Visio. You will also need access to a project management software package. For the latter, preferably you should use either Microsoft Project or the freeware product GanttProject. Here is a CNET review of GanttProject. If you need a cloud-based project management tool, please contact the professor.

BU participates in several programs that make Microsoft software available at reduced cost or even free. Students should look at the Microsoft Office for Students Distribution page for further information.

Boston University Library Information

Boston University has created a set of videos to help orient you to the online resources at your disposal. An introduction to the series is below:

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All of the videos in the series are available on the Online Library Resources page, which is also accessible from

the Campus Bookmarks section of your Online Campus Dashboard. Please feel free to make use of them.

As Boston University students, you have full access to the BU Library. From any computer, you can gain access to anything at the library that is electronically formatted. To connect to the library, use the link http://www.bu.edu/ library. You may use the library's content whether you are connected through your online course or not, by confirming your status as a BU community member using your Kerberos password.

Once in the library system, you can use the links under "Resources" and "Collections" to find databases, eJournals, and eBooks, as well as search the library by subject. Some other useful links follow:

> Go to http://www.bu.edu/library/research/collections to access eBooks and eJournals directly.
>
> If you have questions about library resources, go to http://www.bu.edu/library/help/ask-a-librarian to email the library or use the live-chat feature.
>
> To locate course eReserves, go to http://www.bu.edu/library/services/reserves.

Please note that you are not to post attachments of the required or other readings in the water cooler or other areas of the course, as it is an infringement on copyright laws and department policy. All students have access to the library system and will need to develop research skills that include how to find articles through library systems and databases.

Free Tutoring Service

Free online tutoring services by Tutor.com are available to BU online students for the duration of their eligible online course. Tutor.com is a web- based service that provides an online writing lab and access to on-demand and scheduled tutoring sessions for writing, math, business, coding languages, and other subjects. Students can submit a question to a tutor, submit a paper for feedback about writing and grammar, or schedule a live session with a tutor.

You can log in directly to Tutor.com from Blackboard Online Campus by clicking the link in the left-hand navigation menu within your online course. All activity in the Tutor.com classroom is recorded for learner review and quality control. Transcripts will be available afterward in My Account under My Locker in your Tutor.com account.

> ### Please Note
> Tutor.com services may be used only for current Boston University online courses and career services. Use of this service for purposes other than current coursework or career services may result in deactivation of your Tutor.com account.

Instructor

Michael Levinger

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Michael Levinger is an adjunct faculty member of Boston University's MET College. He created CS581 in 2009 and has been teaching the course ever since. Michael is an information technology and healthcare IT senior executive and multi-time entrepreneur specializing in the successful creation, deployment and use of mission-critical software including Health Information Systems, Electronic Health Records, MedTech, and other Health Information Technology. Most recently, Mike was responsible for the introduction of innovative consumer-oriented, Internet of Things (IoT) connected medical devices. Previously, Mike was the Chief Operating Officer of a business process outsourcing company specializing in healthcare quality reporting which made extensive use of EHRs. Previously, Mike founded a care coordination company and was President and CEO of an electronic health record consulting and systems integration company. Under Mike's leadership, that company helped numerous physician practices and healthcare delivery organizations deploy EHRs. Mike is a former advisor to the University of Missouri Medical School Healthcare Management and Informatics Department and an active member of several healthcare industry organizations.

Study Guide

This course starts on a **Tuesday**. The modules in this course run from **Tuesday to Monday**.

The course uses readings from both the textbook and online sources. When a reading assignment says "Review," you are expected to only review and skim the material, understanding what topics it covers and knowing it is available as a reference. You are NOT expected to read the full site or document in depth.

Live Classroom Sessions

In the online version of the course, the instructor does two "live classrooms" each week. These interactive sessions allow students to engage with both the instructor and other students and get additional information and details about the course materials.

Optional Live Classrooms will be held on the following schedule:

- **Wednesdays at 8:30 PM ET** – Review of the current week's material, including discussion of key points and best approaches to the week's assignment.

- **Saturdays at 12:00 PM (noon) ET** – Presentation and/or discussion on important items related to that week's work based on student requests/feedback, articles the professor sees, or "special lectures."

- The professor will do a course review and answer questions in preparation for the final exam two different times (covering the same material). The first course review will be on Monday, February 26 at 8:30 PM ET and the second will be on Wednesday, February 28 at 8:30 PM ET.

To participate in Live Classroom sessions, you will need to go to the Live Classrooms/Offices links on the course Blackboard site. In addition, they are recorded and available on the site. Live Classroom participation is optional.

Weekly Office Hours

Once a week, the facilitators will be available to answer questions about that week's material, assignment, discussion question and quiz. This session is a free format session. Students can join for one, some, or all weeks.

Weekly Office Hours will be held **Fridays at 8:30 PM ET** starting Friday, January 19. Please join the Office Hours at that time unless you let the facilitators know in advance that you will need to join later.

Module 1 Study Guide and Deliverables

Readings:	- Amatayakul, Chapters 1 and 5 - Updated HIMSS Davies Award Winner Virginia Women's Health Center Application (posted on course Blackboard discussion forum) - Review - ONC Workflow Tools - Review - AHRQ Toolkit on Workflow Assessment and Re-design - Optional – More Detail on Business Process Re-engineering - Recent article – will be posted in the Live Classroom Slides and Materials discussion forum
Assignments:	Assignment 1 due Tuesday, January 23 at 6:00 AM ET
Assessments:	Quiz 1 due Tuesday, January 23 at 6:00 AM ET
Discussions:	For grading consideration, all posts to this discussion topic must be made prior to Tuesday, January 23 at 6:00 AM ET. Any posts after this

date/time will not be included in the grading process.

Live Classroom:

- Wednesday, January 17 at 8:30 PM ET
- Saturday, January 20 at 12:00 PM (noon) ET
- Facilitator Session: Friday, January 19 at 8:30 PM ET

Module 2 Study Guide and Deliverables

Readings:

- Amatayakul, Chapters 14 and 15; Optional: Chapter 16
- Review [Promoting Interoperability component of MIP](#)
- Review [Overview of Quality Payment Program (QPP)](#)
- Recent article – will be posted in the Live Classroom Slides and Materials discussion forum

Assignments:			Assignment 2 due Tuesday, January 30 at 6:00 AM ET

Assessments:			Quiz 2 due Tuesday, January 30 at 6:00 AM ET

Discussions:			For grading consideration, all posts to this discussion topic must be made prior to Tuesday, January 30 at 6:00 AM ET. Any posts after this date/time will not be included in the grading process.

Live Classroom:

- Wednesday, January 24 at 8:30 PM ET
- Saturday, January 27 at 12:00 PM (noon) ET
- Facilitator Session: Friday, January 26 at 8:30 PM ET

Module 3 Study Guide and Deliverables

Readings:

- Amatayakul, Chapters 19 and 20; Optional: Chapter 17
- Review [ONC Playbook on Population Health](#)
- Recent article – will be posted in the Live Classroom Slides and Materials discussion forum

Assignments:			Assignment 3 due Tuesday, February 6 at 6:00 AM ET.

Assignment 3 is a presentation that students will be asked to submit by the due date but that students will NOT be asked to present.

Assessments:	Quiz 3 due Tuesday, February 6 at 6:00 AM ET
Discussions:	For grading consideration, all posts to this discussion topic must be made prior to Tuesday, February 6 at 6:00 AM ET. Any posts after this date/time will not be included in the grading process.
Live Classroom:	• Wednesday, January 31 at 8:30 PM ET • Saturday, February 3 at 12:00 PM (noon) ET • Facilitator Session: Friday, February 2 at 8:30 PM ET

Module 4 Study Guide and Deliverables

Readings:	• Optional: If you do not have a technical background or if you want a refresher on technology, review Amatayakul, Chapter 11 (pp. 325–340 and Chapter 10 (pp. 304–318) • Amatayakul, Chapter 12 • CIO Magazine Article on Beth Israel Network Outage (posted on course Blackboard discussion forum) • Review CIO Magazine Tutorial on Service Level Agreements • Optional: VMWare on Healthcare Data Management • Recent article – will be posted in the Live Classroom Slides and Materials discussion forum
Assignments:	Assignment 4 due Tuesday, February 13 at 6:00 AM ET
Assessments:	Quiz 4 due Tuesday, February 13 at 6:00 AM ET
Discussions:	For grading consideration, all posts to this discussion topic must be made prior to Tuesday, February 13 at 6:00 AM ET. Any posts after this date/time will not be included in the grading process.
Live Classroom:	• Wednesday, February 7 at 8:30 PM ET • Saturday, February 10 at 12:00 PM (noon) ET • Facilitator Session: Friday, February 9 at 8:30 PM ET

Module 5 Study Guide and Deliverables

Readings:
- Amatayakul, Chapter 13, Chapter 10 pp. 281-304
- Review: HIMSS Interoperability Overview
- Recent article – will be posted in the Live Classroom Slides and Materials discussion forum

Assignments: Assignment 5 due Tuesday, February 20 at 6:00 AM ET

Assessments: Quiz 5 due Tuesday, February 20 at 6:00 AM ET

Discussions: For grading consideration, all posts to this discussion topic must be made prior to Tuesday, February 20 at 6:00 AM ET. Any posts after this date/time will not be included in the grading process.

Live Classroom:
- Wednesday, February 14 at 8:30 PM ET
- Saturday, February 17 at 12:00 PM (noon) ET
- Facilitator Session: Friday, February 16 at 8:30 PM ET

Module 6 Study Guide and Deliverables

Readings:
- Amatayakul, Chapter 7, Chapter 8 pp 236-247, Chapter 9, Optional Chapter 6 and Optional Chapter 8 pp 213-235
- Review Office of the National Coordinator (ONC) EHR Implementation Playbook
- Review Stanford Healthcare Vendor Policies
- Review John Halamka Beth Israel Deaconess Medical Center Operating Budget
- Recent article – will be posted in the Live Classroom Slides and Materials discussion forum

Assignments: No Assignment 6.

The **Course Project** is due Tuesday, February 27 at 6:00 AM ET. The course project is a presentation. Students are asked to submit their presentation by the due date and to present it online to their facilitator and/or the instructor between Tuesday, Feb. 27 and Saturday, March 2, or at another time arranged with your facilitator. The professor and facilitators will provide details on how and when the online presentations will occur. If you expect any schedule difficulties doing your presentation, please contact your facilitator as soon as possible.

Assessments: No quiz for Module 6.

Discussions:		For grading consideration, all posts to this discussion topic must be made prior to Tuesday, February 27 at 6:00 AM ET. Any posts after this date/time will not be included in the grading process.
Course Evaluation:		Course Evaluation opens on Monday, February 26 at 10:00 am ET and closes on Sunday, March 3 at 11:59 pm ET.
		Please complete the course evaluation. Your feedback is important to MET and the Professor, as it helps us make improvements to the program and the course for future students.

Live Classroom:

- Wednesday, February 21 at 8:30 PM ET
- Saturday, February 24 at 12:00 PM (noon) ET
- Facilitator Session: Friday, February 23 at 8:30 PM ET
- Final Exam Review Sessions (same material)
    - Monday, February 26 at 8:30 PM ET
    - Wednesday, February 28 at 8:30 PM ET

Final Exam Details

The final exam is a proctored exam available from **Wednesday, February 28 at 6:00 AM ET to Saturday, March 2 at 11:59 PM ET**. The Computer Science department requires that all final exams be administered using an online proctoring service called Examity that you will access via your course in Blackboard. Detailed instructions regarding your proctored exam will be forthcoming from the Assessment Administrator. You will be responsible for scheduling your own appointment within the defined exam window.

The Final Exam will be **closed book/closed notes** and is accessible only during the final exam period. You can access it from the Assessments section of the course. Your proctor will enter the password to start the exam.

Final Exam duration: **two hours**

The exam consists of approximately **24** total questions (combination of multiple choice, multiple answer, matching, short answer, and short essay).

The professor will do a course review in preparation for the final exam as stated above.

Course Grading Information

Please check the **Study Guide** in the syllabus for Live Classroom dates and specific due dates for assignments and assessments.

There are multiple graded items (online discussions, five assignments, five quizzes, the course term project, and a final exam). Course letter grades are determined in a multi-phase process designed to accurately determine how well each student has demonstrated that they understand and can use the subject matter of the course. The process begins when the professor and facilitators use the weights below to compute the weighted scores based on assignments, the course project, quizzes, online discussions, and final exam grades. Then the professor in conjunction with the facilitators reviews each student's overall weighted score, scores in each of the areas, the trend of scores in each of these areas, and the student's participation in Live Classrooms. Based on that review, the professor in conjunction with the facilitators then determines a letter grade for each student. Lastly, the professor finalizes the grades and uploads them to the University Information System, where students can see their grades via the Student Link.

The course uses readings from both the textbook and online sources. When a reading assignment says "Review" you are expected to only review and skim the material, understanding what topics it covers and knowing it is available as a reference. You are NOT expected to read the full site or document in depth.

Grading Policy

All students are expected to demonstrate an understanding of the class materials. To obtain an exceptional grade you must exceed expectations in your assignments, quizzes, final exam, discussions, and course term project.

Grade Weighting

All graded items are graded as a percentage of the maximum anticipated score; this traditional American grading system is sometimes termed "out of 100." Rarely a student may so exceed our expectations that they earn more than 100.

Grading Structure and Distribution

The following table gives the weightings for the five kinds of graded items.

Overall Grading	
Assignments	25%
Discussions & Exercises	15%
Quizzes	15%

Final Exam	20%
Course Term Project	25%

Grading Timing

The facilitators and professor strive to release grades for assignments, quizzes, and discussions by the end of the day on the Saturday following when they are due. If we cannot make that timing, most likely because the professor feels more time is needed to fairly grade the submissions, we will notify the class.

Assignments

The course has five homework assignments plus a course term project. The assignments are available on the course Blackboard site. Please read all of the assignment including the page providing information on the grading criteria. One criterian to help define the expected quality of assignments is to ask whether you would be willing to use your assignment submission in your workplace.

Feel free to do additional exercises of your own design and submit them to your facilitator for feedback. If you wish, you can ask your facilitator or professor for additional exercises tailored to your background and educational needs.

If for any reason you are unable to meet any assignment deadline, contact your facilitator, preferably in advance. Extensions may be granted under mitigating circumstances. Scores for assignments submitted late without extenuating circumstances will be penalized ten percent. Students receive one "pass" for no deduction for a one-week delay with approval from your facilitator or the professor. Assignments submitted late near the end of the term may not be graded, because our facilitators are very busy grading course term projects and the final exam, resulting in a zero score for those assignments.

If you are stuck and just can't complete part of an assignment, then submit what you can complete to your facilitator, asking for help. Your facilitator may then choose to provide you with guidance in the areas where you are stuck and return the partial assignment to you for further work and resubmission. Your facilitator will deduct from your score on the resubmission for any portion of the solution that your facilitator provided to help you. Your professor authorizes the facilitators to re-grade based on resubmissions. Whether a particular resubmission should be re-graded is up to the judgment of the facilitator or the professor. Resubmissions are intended to help struggling students who are stuck. Resubmissions are not intended for routine use.

Participation: Class Discussions and Class Contributions

Fufteen percent of your grade is based on your online contribution. This is an important part of the learning process. This grade is derived from your participation in the online class discussions. Your participation grade is based on your involvement and mastery of the material and how well you contribute to your classmates' learning experience and understanding of the material. To create the best discussion, you should do your first post by the end of day each Wednesday after the discussion question for the week "goes live" and do at least two responses to other students' posts by the Tuesday 6 AM ET deadline. Your posts should not be quick responses, like "I agree", but thoughtful comments that add to the discussion. To help review the quality of your discussion posts, the facilitators will review each student's posts in-depth at least once during the cours

To facilitate class discussions in the optional Live Classrooms, all participating students are required to have a headset or a microphone and earbuds or speakers so they can best participate verbally. Use of a webcam is encouraged but not required.

Quizzes

There are five graded quizzes. Quizzes consist of a combination of choose multiple, multiple choice, matching, and short written-answer questions. Quizzes are taken online on your own time using the course Blackboard site. They will be available for approximately one week up to the due date. Students will have one opportunity to take the quiz at a time of their choosing during that week. The results for your quiz will be released as soon as possible but no later than the following Saturday. When the quiz results are released, you will be able to see the questions and your answers. Since students have a week to take quizzes, they should be completed by the due date. Quizzes may be taken after the results have been released, with the pre-approval of your facilitator or the professor. Scores for quizzes completed late without extenuating circumstances will be penalized ten percent.

The Final Exam

There will be a proctored Final Exam in this course using a proctor service called Examity. Detailed instructions regarding your proctored exam will be forthcoming from the Assessment Administrator. You will be responsible for scheduling your own appointment. You will have two hours to complete it; there should be plenty of time. The intent of the final exam is to evaluate your mastery of the course material, so that if you learn the course material well, you will do well on the final exam.

The final exam consists of a combination of multiple-answer, multiple-choice, matching, short written-answer, and short essay questions. The format of the questions is very similar to those in the quizzes.

Grading Structure

- Homework Assignments and Course Term Project
  - Each homework assignment and the course term project have a set of "learning topics" with a weighting for each topic. Each topic will be scored on a zero to 100% basis and a grade for the

homework will be determined based on the weighted average.

- ○ Assignments should be submitted on time.
- ○ There will be a 10% point reduction for each week that homework is late unless there are approved extenuating circumstances.
- ○ Students receive one "pass" for no deduction for a one-week delay with approval of their facilitator.

- Quizzes
    - ○ Multiple-answer, multiple-choice, and matching questions will be graded based on getting the correct answer. When applicable, deductions are taken for wrong answers, but you cannot get a negative score on a question.
    - ○ Each question requiring a written answer will have a set of "learning topics" that are being tested for with a weighting for each topic. Each topic will be scored on a zero to 100% basis, and a grade for the written answer will be determined based on the weighted average.
    - ○ Quizzes should be completed during the week they are available online up to the quiz deadline, unless there are approved extenuating circumstances.

- Final Exam
    - ○ Multiple-answer, multiple-choice, and matching questions will be graded based on getting the correct answer. When applicable deductions are taken for wrong answers, but you cannot get a negative score on a question.
    - ○ Each question requiring a written answer will have a set of "learning topics" that are being tested for with a weighting for each topic. Each topic will be scored on a zero to 100% basis, and a grade for the written answer will be determined based on the weighted average.
    - ○ Final exam questions will also have a weighting factor since some written questions are longer and more in-depth than others.

- Class exercises and online discussions
    - ○ These will be graded qualitatively per the rubric below.

Your assignments, course term project, discussions, quizzes, and final exam will be graded on a percentage basis. The following table summarizes typical correspondence of percentage grades and letter grades for individual graded items. The process and criteria for determining course letter grades is more complex than computing the weighted average grade and looking up the letter grade in the table below.

Letter Grade	Approximate Percentage Grade Range
A	95–100
A−	90 < 95
B+	85 < 90

B	80 < 85
B−	75 < 80
C+	70 < 75
C	65 < 70
C−	60 < 65
D	55 < 60
F	< 55

Note that C is the lowest grade that satisfies degree requirements in graduate courses and that you need to maintain a grade point average of 3.0 or better to graduate.

The percentage ranges above are approximate. Your letter grade is determined by the facilitators and the professor as the best overall measure of how well you have demonstrated that you understand the material, taking into separate consideration your performance in the quizzes, assignments, course term project, discussions, and final exam. Additional grading criteria include any substantial difference in your performance in the course project and the proctored final exam and the general trend of your scores over the term. The actual grade ranges will be adjusted to reflect the difficulty of graded items. While there is no fixed absolute number of grades in any one level, it is important to note that high grades reflect an excellence in the understanding of class material and organization of thought. In addition, an important aspect of any class is the shared thoughts and insights of the class members. Grades will also reflect an individual's contributions to the class.

Minimal preparation is reading the material, and being able to summarize what it is about, what the major issues are, and some recommendations.

Superior preparation involves being able to (i) summarize the situation or problem presented by the material; (ii) recommend solutions; (iii) support your recommendation with data, relevant details, and analyses; and (iv) discuss innovative solutions, or why obvious solutions might be discounted.

Off-Syllabus Work—The course topic is part of a very dynamic industry. As such, there is much material that is not covered in the class. Students are encouraged to read and consider related material and issues that are beyond those defined in the syllabus to include in their work and in class discussions.

Timeliness

Because of the fast pace of this course, strict following of assessment and assignment deadlines is crucial. No work will be accepted after the deadlines unless there are approved mitigating circumstances, which includes the one late assignment submission "pass" described elsewhere. In case of an emergency, students are required to contact their facilitators or the professor BEFORE the deadline and discuss their situation. In the case of serious or emergency situations, or if, for any reason, you are unable to meet any deadline, contact your facilitator or the professor.

Discussion Grading Rubric

In the online version of the course, graded discussion periods are held Day 1 of each module until 6:00 AM ET on Day 1 of the following module. Discussions are the way we "participate" in the online class. So, it's important that you post thoughtful messages that move the conversation forward in some way. "Yeah, I agree" and "Me, too" are not acceptable postings and will not earn any points. Your participation in discussions can earn you points for each discussion. After the due date for the discussion, you will be graded on your overall participation in that discussion thread. Late posts are welcome for their intellectual value but will not be considered in your grade. The discussion grading rubric below is the guide we use to evaluate your discussion contributions.

Your posts should show that you have read the material in the online site, readings, and your group's posts and have applied all of that to the question at hand. You should do more than merely spit back what the readings say; you should engage with the material by analyzing and interpreting it. Your posts should be grammatically clear enough not to present anyone with a problem in understanding your point. It's not a formal writing forum, but it's not Facebook either.

To earn full points:

- Initial postings should be completed early in the week to facilitate the discussion. Therefore, initial postings are due by Wednesday at the end of the day.
- Follow-up posts should be timely and all posts are due by Tuesday at 6 AM ET.
- You are expected to make at least two follow-up posts but are encouraged to make more.
- The content of your posts should be complete, on-point, thoughtful, and offer new ideas.
- Supporting detail is abundant and appropriate (that is, references from the pieces read and/or other sources).
- Content often encourages further discussion on the topic or follows up on others' thoughts.
- Postings are characterized by originality, engagement, and relevance to the topic.
- Postings demonstrate an understanding of the material assigned and familiarity with the ideas of the course materials and other students (in other words, it's obvious that you've read and understood both the required reading and what your peers have written in their postings).

The following chart represents the rubric employed for grading the threaded discussion entries and in-class discussions in the blended course version:

Points	Skills
9–10	Demonstrates excellence in grasping key concepts; critiques work of others; stimulates discussion; provides sample citations for support of opinions; readily offers new interpretations of discussion material. Ideas are expressed clearly, concisely; uses appropriate vocabulary.
7–8	Shows evidence of understanding most major concepts; will offer an occasional divergent viewpoint or challenge; shows some skill in support for opinions. Some signs of disorganization with expression; transition wording may be faulty.
5–6	Has mostly shallow grasp of the material; rarely takes a stand on issues; offers inadequate levels of support. Poor language use; garbles much of the message; only an occasional idea surfaces clearly; expression seems disjointed; overuse of the simple sentence and a redundancy with words and commentary; paragraphs often appear unrelated to each other. This student requires constant prompting for contributions.
1–4	A minimal posting of material. Shows no significant understanding of material. Language is mostly incoherent. Does not respond readily to prompting.

Credits: GRADING RUBRIC FOR THREADED DISCUSSIONS

From John F. Bauer, "Assessing Student Work from Chat Rooms and Bulletin Boards."

New Directions for Teaching and Learning 91 (Fall 2002): 35.

Assignment, Quiz and Final Exam Written Answer, and Course Project Grading Rubric

Course assignments are designed to help the students use the course materials in a "real-world" fashion. Therefore, the assignments are similar to the types of materials that would be needed if the student were managing an HIS or EHR deployment project at a healthcare provider. As a result, the assignments require a mix of submission types including PowerPoint presentations, Excel worksheets, memos, and written answers. The course term project builds on the assignments by asking students to summarize, integrate, and present material from the assignments.

We are as objective as we can be in grading these materials. The assignments, course project, short-answer, and short essay questions in the quizzes and final exam have specific learning objectives that reflect key parts of the materials. Grading will be based on evaluation of the learning topics plus overall clarity and quality of the presentation. Each learning topic will have an assigned point weight and will be evaluated in four areas which have approximately equal weight plus clarity and quality of the work, which will have ten points. This approach is shown in the following table.

Criteria	Grading (1 to 100 Scale)				
	65–69	70–79	80–89	90–94	95–100
Understanding and depth of coverage of the material	Lack of coverage or understanding of major relevant issues of the material	Some understanding or coverage of major relevant material	Good overall understanding and coverage of major relevant material	Very good overall understanding and coverage of major relevant material, with some real additional depth	Excellent, deep understanding and coverage of material both major and additional depth and its inter-relationships
Application of the material to address specific problem(s)	Little demonstration of how to use the material	Some demonstration of how to use the material	Good overall demonstration of how to use the material	Very good overall understanding of using the material effectively	Excellent, deep understanding of using the material in a highly effective manner
Creativity & Innovativeness using the materials	Little significant or reasonably backed creative or innovative points-of-view or ideas	Few creative and innovative ideas or points-of-view that are reasonable & are backed by some analysis.		Very good creative and innovative ideas or points-of-view that are perceptive & are backed by strong analysis	Outstanding creative and innovative ideas or points-of-view that are perceptive & are backed by very strong analysis
Specific Details	Grading: Each specific item will have a defined point value, typically from 2 to 3 points.				
Clarity and quality of the material	Grading: Up to 10 Points				

If you have thoughtful questions about your facilitator's evaluation, please discuss them with him or her. This can be an excellent opportunity to learn. If it is necessary for the instructor to re-grade an assignment, the professor independently grades the entire assignment—not parts—using the criteria above. His grade would replace the

facilitator's.

Quiz Instructions

Accessing the Quiz

There are five graded quizzes. Quizzes consist of a combination of choose multiple, multiple choice, matching, and short written answer questions. Quizzes are taken online on your own time using the course Blackboard site. They will be available for approximately one week up to the due date to complete the quiz. Students will have one opportunity to take the quiz at a time of their choosing during that week. The results for your quiz will normally be released by the end of the following Saturday after the quiz due date. When the quiz results are released, you will be able to see the questions and your answers. Since students have a week to take quizzes, they should be completed by the due date. Quizzes may be taken after the results have been released, with the professor's or a facilitator's permission. Grade deductions for late quizzes are as described above.

Quiz Details

- The questions are either multiple-choice, multiple-answer, matching, or short answer.
- All questions are randomized within the quiz.
- The points for each question are shown.
- The quiz questions will display one at a time on your screen.
- You may skip over questions and revisit them in any order.
- You will have 120 minutes to complete each quiz.
- You can take each quiz only once.
- You may not pause the quiz and return to it later.
- You will be able to continue to save answers to questions after the time has expired, but any late answers will be time stamped and marked as late. This will allow us to grade your quiz fairly in the event that technical difficulties occur while you take your quiz.

Saving Answers

- To answer a multiple-choice question, select the appropriate choice from the list below the question.
- When you have completed your response, click "Save Answer" at the top of the question.
- As you proceed through the exam, you can go back and edit previous responses that you saved.
- A timer is displayed above the questions tracking the remaining time available.
- You will see question number buttons above questions. You will need to click on "Question

Completion Status" to see the question numbers. You can use these buttons to navigate from question to question at any time.

○ When you have completed all answers, go to the last question of the exam and click the "Save and Submit" button.

> If a technical issue of any kind arises during the quiz requiring you to go beyond the time limit, complete the quiz answering the remaining questions and then contact your facilitator or professor immediately.

Comments on the Quiz

Please remember that these questions are formatted and asked in a certain way for a reason. Questions may not always have a perfect answer and you are advised against always looking for the perfect answer. You should be looking for the best answer(s) in the list.

There will be a short answer area at the end of the quiz; it appears as a quiz question, but there are no points for this item. Use this as a place to provide feedback about the quiz as a whole or to comment upon a quiz item. Be sure to reference the question number. Your facilitator will examine your comments in order to decide whether a grade adjustment or other action should be taken.

If a technical issue of any kind arises during the exam, complete the exam, answering the remaining questions, and then contact your facilitator or instructor immediately.

Other Questions

If you have any questions about a quiz please feel free to contact your facilitator or the instructor.

Technical Support

Assistance with course-related technical problems is provided by the IS&T Help Center. To ensure the fastest possible response, please fill out the online form using the link below.

IT Help Center Support	
Email	ithelp@bu.edu Please use "BB Learn Question" in the subject line
Web	http://www.bu.edu/tech/web/course-sites/blackboard-learn/
Phone	617-353-4357

Artificial Intelligence including Generative AI

Artificial Intelligence (AI) and machine learning including generative artificial intelligence (GenAI) are increasingly available and accessible. These technologies are having substantial impact on both academics, the use of HIS/ EHRs, and in the professional world generally. In recognition of this increased adoption, this course allows the use of GenAI per the following policies. This specific approval is given to help you to become familiar with AI tools, to increase your AI literacy, and to understand how to use AI in appropriate ways within both academic and professional contexts.

You may use one or more GenAI tools for this class for all assignments, quizzes, and discussion posts. In all cases, you are required to let the teaching team know that you used GenAI or a similar tool and disclose the prompt(s) you used. If you do not provide attribution and we find out that you used an AI tool, you will receive an automatic zero on that assignment, quiz, or course project. Note that the quizzes have a time limit, and the professor does not believe that using GenAI will be that helpful completing quizzes or discussion posts.

AI and GenAI are becoming valuable tools both professionally and personally. To help students learn more about using these tools, Assignment 5 requires use of GenAI. The details are spelled out in the assignment. The Final Exam is closed book including not allowing use of the Internet, so you are NOT allowed to use any AI tools for the Final Exam.

ChatGPT and other GenAI and automated content tools are known to return incomplete, incorrect, and/or biased information, along with fake citations or sources. Therefore, they and are not considered a completely reliable resource. It is the student's responsibility to ensure that all information is accurate. If you use GenAI tools to complete an assignment or the course project, you are required to do a two to four paragraph summary of how the tool(s) both successfully helped you complete the assignment and how the tool(s) did not do a good job on the assignment. You do not need to provide this summary on quizzes.

Many GenAI tools, such as ChatGPT, require that you provide personal information, such as an email address. Please review the privacy information supplied by the tool so that you are aware of the uses of your information. As your instructors, the facilitators/teaching assistants and I abide by FERPA (Family Educational Rights and Privacy Act) Guidelines and will not create or respond (for example, through feedback or grades) to assignments in any way that will impact the privacy of your student records.

Boston University Metropolitan College