

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 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.

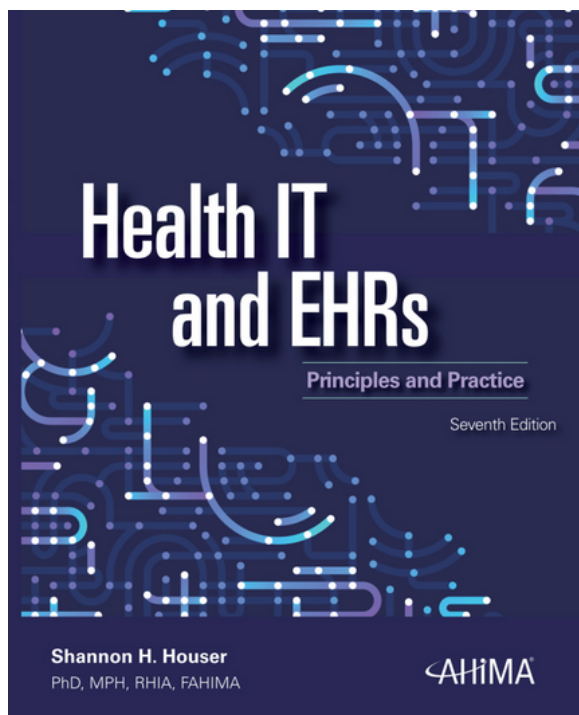
Module	Module Title	Lectures
1	Introduction to HIS and EHRs and Healthcare Workflow and Process Re-engineering	1. Introduction to Health Information Systems (HIS) and Electronic Health Records (EHR) 2. Healthcare Workflow and Business Process Re-Engineering 3. Enterprise Architectures and HIS/EHR Clinical 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 Deployment Financials
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



Houser, S. (2024). Health IT and EHRs: Principles and Practice (7th ed.). AHIMA Press.

Welcome To First Day™ Delivery For Your Course

To enhance your learning experience and simplify access to the right materials for your class, your course materials have been integrated directly into your course.

Benefits of The Program

- Exclusive preferred pricing
- Guaranteed the right materials
- Single Sign-On
- Ready to go on day one
- Course materials charge will be placed on your student account
- Option to Opt-Out on the first day of class.

Accessing Your Materials

To access the required materials for your course, click on *Course Materials (Barnes & Noble)* in the left-hand menu in Blackboard. To navigate back to the course, click on the course title at the top left of your Blackboard screen.

Boston University will bill you at the discounted price as a course charge for this course. Please be advised it is NOT recommended that you Opt-Out, as these materials are required by your professor to complete the course. You can choose to Opt-Out on the first day of class, but you will be responsible for purchasing your course materials at the Opt-Out price.

For more information and FAQs visit Barnes and Noble at Boston University [customer care page](#).

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 regularly provide recent readings.

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 or Google tools – Docs, Sheets, Slides, and optionally Drawings. 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:

met_ode_library_14_sp1_00_intro video cannot be displayed here. Videos cannot be played from Printable Lectures. Please view media in the module.

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

mlevinge@bu.edu



Michael Levinger is an adjunct faculty member at Boston University where he teaches master's and undergraduate computer science courses. He created MET 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 information technology 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. Mike has also 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 8:00 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."
- In preparation for Module, 4, the professor will do an overview of information technology for students who do not have that background or who would like a refresher. That overview will be on Saturday, February 1 at 1:00 PM ET,
- 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 24 at 8:00 PM ET and the second will be on Wednesday, February 26 at 8:00 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.

Live Office Hours

The facilitators will do weekly Office Hours on Thursday at 8:30 PM ET. The office hours are unstructured time for students to ask questions about the week's material, assignment, discussion question, quiz or about other topics related to the course. Students may join one, several or all the office hours. The first Office Hour will be on Thursday, January 16, 2025 at 8:30 PM ET.

Please join the Live Office at the beginning of the session unless you let the facilitators know in advance. If no one joins the office hours in the first fifteen minutes, the facilitators will end it.

Teaching Team Availability

In addition to the Live Classrooms and scheduled office hours, the teaching team is happy to answer questions at other times. There is a discussion board titled Ask the Teaching Team where you can post questions and we will give answers. This enables other students to have the benefit of questions and answers. You can also email the facilitators or me with questions or to arrange a virtual meeting.

Module 1 Study Guide and Deliverables

Readings:

- Houser, 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 21 at 6:00 AM ET

Assessments:

Quiz 1 due Tuesday, January 21 at 6:00 AM ET

Discussions:

For grading consideration, all posts to this discussion topic must be made prior to Tuesday, January 21 at 6:00 AM ET. Any posts after this date/time will not be included in the grading process.

Live Classroom:

- Wednesday, January 15 at 8:00 PM ET
- Saturday, January 18 at 12:00 PM (noon) ET
- Facilitator Session: Thursday, January 16 at 8:30 PM ET

Module 2 Study Guide and Deliverables

Readings:

- Review Houser, Chapter 12 (pages 454-498)
- 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 28 at 6:00 AM ET

Assessments:	Quiz 2 due Tuesday, January 28 at 6:00 AM ET
Discussions:	For grading consideration, all posts to this discussion topic must be made prior to Tuesday, January 28 at 6:00 AM ET. Any posts after this date/time will not be included in the grading process.
Live Classroom:	• Wednesday, January 22 at 8:00 PM ET • Saturday, January 25 at 12:00 PM (noon) ET • Facilitator Session: Thursday, January 23 at 8:30 PM ET

Module 3 Study Guide and Deliverables

Readings:	• Revenue Cycle Management Overview • Review ASTP/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 4 at 6:00 AM ET.
Assessments:	Quiz 3 due Tuesday, February 4 at 6:00 AM ET
Discussions:	For grading consideration, all posts to this discussion topic must be made prior to Tuesday, February 4 at 6:00 AM ET. Any posts after this date/time will not be included in the grading process.
Live Classroom:	• Wednesday, January 29 at 8:00 PM ET • Saturday, February 1 at 12:00 PM (noon) ET • Facilitator Session: Thursday, January 30 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 Houser, Chapter 11 • Houser, Chapter 12 (pages 304-306, 315-325) ◦ Optional: Houser, Chapter 12 (remainder of chapter) • CIO Magazine Article on Beth Israel Network Outage (posted on course Blackboard discussion forum) • Review CIO Magazine Tutorial on Service Level Agreements
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- 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 11 at 6:00 AM ET, except the Peer Evaluation which is due Wednesday, February 12 at 6:00 AM ET.

Assignment 4 is a group project. It is to do a presentation that students will be asked to submit by the due date but that students will NOT be asked to present.

Assessments: Quiz 4 due Tuesday, February 11 at 6:00 AM ET

Discussions: For grading consideration, all posts to this discussion topic must be made prior to Tuesday, February 11 at 6:00 AM ET. Any posts after this date/time will not be included in the grading process.

Live Classroom:

- Wednesday, February 5 at 8:00 PM ET
- Saturday, February 8 at 12:00 PM (noon) ET
- Facilitator Session: Thursday, February 6 at 8:30 PM ET

Module 5 Study Guide and Deliverables

Readings:

- Houser, Chapter 13 and Chapter 10 (pages 346-366)
- Review: [HIMSS Interoperability Overview](#)
- Recent article – will be posted in the Live Classroom Slides and Materials discussion forum

Assignments: Assignment 5 due Tuesday, February 18 at 6:00 AM ET

Assessments: Quiz 5 due Tuesday, February 18 at 6:00 AM ET

Discussions: For grading consideration, all posts to this discussion topic must be made prior to Tuesday, February 18 at 6:00 AM ET. Any posts after this date/time will not be included in the grading process.

Live Classroom:

- Wednesday, February 12 at 8:00 PM ET
- Saturday, February 15 at 12:00 PM (noon) ET
- Facilitator Session: Thursday, February 13 at 8:30 PM ET

Module 6 Study Guide and Deliverables

Readings:

- Houser, Chapter 4; Chapter 6 (pages 206-234); and Chapter 8
- Review [Office of the National Coordinator \(ONC\) EHR Implementation Playbook](#)
- 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 25 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. 25 and Saturday, March 1, 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 25 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 24 at 10:00 am ET and closes on Sunday, March 2 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 19 at 8:00 PM ET
- Saturday, February 22 at 12:00 PM (noon) ET
- Facilitator Session: Thursday, February 20 at 8:30 PM ET
- Final Exam Review Sessions (same material)
 - Monday, February 24 at 8:00 PM ET
 - Wednesday, February 26 at 8:00 PM ET

Final Exam Details

The final exam is a proctored exam available from **Wednesday, February 26 at 6:00 AM ET to Saturday, March 1 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 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 Sunday 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 criterion 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 or because of a resubmission. 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

Fifteen 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 course.

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 Sunday. 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 5% 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 of submission of a homework assignment 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
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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

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. The assignment learning objectives are shared in the assignments.

Grading will be based on evaluation of the learning topics plus overall clarity and quality of the presentation. Each learning topic has an assigned point weight and will be evaluated on the following 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					
	D	C	B	A-	A
Understanding and depth of	Lack of coverage or	Some understanding	Good overall understanding	Very good overall	Excellent, deep understanding

coverage of the material	understanding of major relevant issues of the material	or coverage of major relevant material	and coverage of major relevant material	understanding and coverage of major relevant material, with some real additional depth	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
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 listed in the assignment and above. The professor's 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 Sunday 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	https://www.bu.edu/tech/services/teaching/lms/blackboard/students/
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 but not the final exam. 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 4 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 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 sentence 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.

Academic Conduct Policy

Please visit Metropolitan College's website for the full text of the department's [*Academic Conduct Code*](#).

A Definition of Plagiarism

"The academic counterpart of the bank embezzler and of the manufacturer who mislabels products is the plagiarist: the student or scholar who leads readers to believe that what they are reading is the original work of the writer when it is not. If it could be assumed that the distinction between plagiarism and honest use of sources is perfectly clear in everyone's mind, there would be no need for the explanation that follows; merely the warning with which this definition concludes would be enough. But it is apparent that sometimes people of goodwill draw the suspicion of guilt upon

themselves (and, indeed, are guilty) simply because they are not aware of the illegitimacy of certain kinds of “borrowing” and of the procedures for correct identification of materials other than those gained through independent research and reflection.”

“The spectrum is a wide one. At one end there is a word-for-word copying of another’s writing without enclosing the copied passage in quotation marks and identifying it in a footnote, both of which are necessary. (This includes, of course, the copying of all or any part of another student’s paper.) It hardly seems possible that anyone of college age or more could do that without clear intent to deceive. At the other end there is the almost casual slipping in of a particularly apt term which one has come across in reading and which so aptly expresses one’s opinion that one is tempted to make it personal property.”

“Between these poles there are degrees and degrees, but they may be roughly placed in two groups. Close to outright and blatant deceit-but more the result, perhaps, of laziness than of bad intent-is the patching together of random jottings made in the course of reading, generally without careful identification of their source, and then woven into the text, so that the result is a mosaic of other people’s ideas and words, the writer’s sole contribution being the cement to hold the pieces together. Indicative of more effort and, for that reason, somewhat closer to honest, though still dishonest, is the paraphrase, and abbreviated (and often skillfully prepared) restatement of someone else’s analysis or conclusion, without acknowledgment that another person’s text has been the basis for the recapitulation.”

The paragraphs above are from H. Martin and R. Ohmann, *The Logic and Rhetoric of Exposition, Revised Edition*. Copyright 1963, Holt, Rinehart and Winston.

Academic Conduct Code

I. Philosophy of Discipline

The objective of Boston University in enforcing academic rules is to promote a community atmosphere in which learning can best take place. Such an atmosphere can be maintained only so long as every student believes that his or her academic competence is being judged fairly and that he or she will not be put at a disadvantage because of someone else’s dishonesty. Penalties should be carefully determined so as to be no more and no less than required to maintain the desired atmosphere. In defining violations of this code, the intent is to protect the integrity of the educational process.

II. Academic Misconduct

Academic misconduct is conduct by which a student misrepresents his or her academic accomplishments, or impedes other students’ opportunities of being judged fairly for their academic work. Knowingly allowing others to represent your work as their own is as serious an offense as submitting another’s work as your own.

III. Violations of this Code

Violations of this code comprise attempts to be dishonest or deceptive in the performance of academic work in or out of the classroom, alterations of academic records, alterations of official data on paper or electronic resumes, or unauthorized collaboration with another student or students. Violations include, but are not limited to:

- A. **Cheating on examination.** Any attempt by a student to alter his or her performance on an examination in violation of that examination's stated or commonly understood ground rules.
- B. **Plagiarism.** Representing the work of another as one's own. Plagiarism includes but is not limited to the following: copying the answers of another student on an examination, copying or restating the work or ideas of another person or persons in any oral or written work (printed or electronic) without citing the appropriate source, and collaborating with someone else in an academic endeavor without acknowledging his or her contribution. Plagiarism can consist of acts of commission-appropriating the words or ideas of another-or omission failing to acknowledge/document/credit the source or creator of words or ideas (see below for a detailed definition of plagiarism). It also includes colluding with someone else in an academic endeavor without acknowledging his or her contribution, using audio or video footage that comes from another source (including work done by another student) without permission and acknowledgement of that source.
- C. **Misrepresentation or falsification of data** presented for surveys, experiments, reports, etc., which includes but is not limited to: citing authors that do not exist; citing interviews that never took place, or field work that was not completed.
- D. **Theft of an examination.** Stealing or otherwise discovering and/or making known to others the contents of an examination that has not yet been administered.
- E. **Unauthorized communication during examinations.** Any unauthorized communication may be considered prima facie evidence of cheating.
- F. **Knowingly allowing another student to represent your work as his or her own.** This includes providing a copy of your paper or laboratory report to another student without the explicit permission of the instructor(s).
- G. **Forgery, alteration, or knowing misuse of graded examinations, quizzes, grade lists, or official records of documents,** including but not limited to transcripts from any institution, letters of recommendation, degree certificates, examinations, quizzes, or other work after submission.
- H. **Theft or destruction of examinations or papers** after submission.
- I. **Submitting the same work in more than one course** without the consent of instructors.
- J. **Altering or destroying another student's work or records,** altering records of any kind, removing materials from libraries or offices without consent, or in any way interfering with the work of others so as to impede their academic performance.
- K. **Violation of the rules governing teamwork.** Unless the instructor of a course otherwise specifically provides instructions to the contrary, the following rules apply to teamwork: 1. No team member shall intentionally restrict or inhibit another team member's access to team meetings, team work-in-progress, or other team activities without the express authorization of the instructor. 2. All team members shall be held responsible for the content of all teamwork submitted for evaluation as

if each team member had individually submitted the entire work product of their team as their own work.

- L. Failure to sit in a specifically assigned seat during examinations.**
- M. Conduct in a professional field assignment that violates the policies and regulations of the host school or agency.**
- N. Conduct in violation of public law occurring outside the University that directly affects the academic and professional status of the student, after civil authorities have imposed sanctions.**
- O. Attempting improperly to influence the award of any credit, grade, or honor.**
- P. Intentionally making false statements to the Academic Conduct Committee or intentionally presenting false information to the Committee.**
- Q. Failure to comply with the sanctions imposed under the authority of this code.**

Important Message on Final Exams

Dear Boston University Computer Science Online Student,

As part of our ongoing efforts to maintain the high academic standard of all Boston University programs, including our online MSCIS degree program, the Computer Science Department at Boston University's Metropolitan College requires that each of the online courses includes a proctored final examination.

By requiring proctored finals, we are ensuring the excellence and fairness of our program. The final exam is administered online.

Specific information regarding final-exam scheduling will be provided approximately two weeks into the course. This early notification is being given so that you will have enough time to plan for where you will take the final exam.

I know that you recognize the value of your Boston University degree and that you will support the efforts of the University to maintain the highest standards in our online degree program.

Thank you very much for your support with this important issue.

Regards,

Professor Lou Chitkushev, Ph.D.

Associate Dean for Academic Affairs

Boston University Metropolitan College

Microsoft Azure Dev Tools for Teaching

Microsoft Azure Dev Tools for Teaching is a Microsoft program that supports technical education by providing access to Microsoft software for learning, teaching, and research purposes. Our membership allows faculty and students currently enrolled in MET courses to obtain certain Microsoft products free of charge. All MET students are granted access to download the software for the duration of their study at MET College.

FAQ and basic information are at [Microsoft Azure Dev Tools for Teaching](#), (You may have to enter your personal BU login credentials to access this page.)

Who's Who: Roles and Responsibilities

You will meet many BU people in this course and program. Some of these people you will meet online, and some you will communicate with by email and telephone. There are many people behind the scenes, too, including instructional designers, faculty who assist with course preparation, and video and animation specialists.

People in Your Online Course in Addition to Your Fellow Students

Your Facilitator. Our classes are divided into small groups, and each group has its own facilitator. We carefully select and train our facilitators for their expertise in the subject matter and their excellence in teaching. Your facilitator is responsible for stimulating discussions in pedagogically useful areas, for answering your questions, and for grading homework assignments, discussions, term projects, and any manually graded quiz or final-exam questions. If you ask your facilitator a question by email, you should get a response within 24 hours, and usually faster. If you need a question answered urgently, post your question to one of the urgent help topics, where everyone can see it and answer it.

Your Professor. The professor for your course has primary responsibility for the course. If you have any questions that your facilitator doesn't answer quickly and to your satisfaction, then send your professor an email in the course, with a cc to your facilitator so that your facilitator is aware of your question and your professor's response.

Your Lead Faculty and Student Support Administrator, Jennifer Sullivan. Jen is here to ensure you have a positive online experience. You will receive emails and announcements from Jen throughout the semester. Jen represents Boston University's university services and works for BU Virtual. She prepares students for milestones such as course launch, final exams, and course evaluations. She is a resource to both students and faculty. For example, Jen can direct your university questions and concerns to the appropriate party. She also handles general questions regarding Online Campus functionality for students, faculty, and facilitators, but she does not provide tech support. She is enrolled in all classes and can be contacted within the course through Online Campus email as it is running. You can also contact her by external email at jensul@bu.edu or call (617) 358-1978.

People Not in Your Online Course

Although you will not normally encounter the following people in your online course, they are central to the program. You may receive emails or phone calls from them, and you should feel free to contact them.

Your Computer Science Department Online Program Coordinator, Michelle Younger. Michelle administers the academic aspects of the program, including admissions and registration. You can ask her questions about the program, registration, course offerings, graduation, or any other program-related topic. She can be reached at metcsol@bu.edu or (617) 353-2566.

Your Computer Science Department Program Manager, Crystal Kelley. Crystal is responsible for administering most aspects of the Computer Science Department. You can reach Crystal at kelleycr@bu.edu or (617) 353-2566.

Professor Guanglan Zhang, Computer Science Department Chairman. You can reach Professor Zhang at guanglan@bu.edu or at 617-358-5688.

Professor Lou T. Chitkushev, Associate Dean for Academic Affairs, Metropolitan College. Dr. Chitkushev is responsible for the academic programs of Metropolitan College. Contact Professor Chitkushev with any issues that you feel have not been addressed adequately. The customary issue-escalation sequence after your course facilitator and course faculty is Professor Zhang, and then Professor Chitkushev.

Professor Tanya Zlateva, Metropolitan College Dean. Dr. Zlateva is responsible for the quality of all the academic programs at Boston University Metropolitan College.

Disability and Access Services

In accordance with University policy, every effort will be made to accommodate students with respect to speech, hearing, vision, or other disabilities. Any student who may need an accommodation for a documented disability should contact [Disability and Access Services](#) at 617-353-3658 or at access@bu.edu for review and approval of accommodation requests.

Once a student receives their accommodation letter, they must send it to their instructor and/or facilitator each semester. They must also send a copy to their Faculty & Student Support Administrator, who may need to update the course settings to ensure accommodations are in place. Accommodations cannot be implemented if the student does not send their letter.

Netiquette

BU Virtual has produced a netiquette guide to help you understand the potential impact of your communication style.

Before posting to any discussion forum, sending an email, or participating in any course or public area, please consider the following:

Ask Yourself...

- How would I say this in a face-to-face classroom or if writing for a newspaper, public blog, or wiki?
- How would I feel if I were the reader?
- How might my comment impact others?
- Am I being respectful?
- Is this the appropriate area or forum to post what I have to say?

Writing

When you are writing, please follow these rules:

- **Stay polite and positive in your communications.** You can and should disagree and participate in discussions with vigor; however, when able, be constructive with your comments.
- **Proofread your comments before you post them.** Remember that your comments are permanent.
- **Pay attention to your tone.** Without the benefit of facial expressions and body language, your intended tone or the meaning of the message can be misconstrued.
- **Be thoughtful and remember that classmates' experience levels may vary.** You may want to include background information that is not obvious to all readers.
- **Stay on message.** When adding to existing messages, try to maintain the theme of the comments previously posted. If you want to change the topic, simply start another thread rather than disrupt the current conversation.
- **When appropriate, cite sources.** When referencing the work or opinions of others, make sure to use correct citations.

Reading

When you are reading your peers' communication, consider the following:

- **Respect people's privacy.** Don't assume that information shared with you is public. Your peers may not want personal information shared. Please check with them before sharing their information.
- **Be forgiving of other students' and instructors' mistakes.** There are many reasons for typos and misinterpretations. Be gracious and forgive other's mistakes or point them out privately and politely.
- **If a comment upsets or offends you, reread it and/or take some time before responding.**

Important Note

Don't hesitate to let your instructor or your faculty and student support administrator know if you feel others are inappropriately commenting in any forum.

All Boston University students are required to follow academic and behavioral conduct codes. Failure to comply with these conduct codes may result in disciplinary action.

Registration Information and Important Dates

[View the drop dates for your course.](#)

[Withdraw or drop your course.](#)

- If you are dropping down to zero credits for a semester, please contact your college or academic department.
- **Nonparticipation in your online course does not constitute a withdrawal from the class.**
- If you are unable to drop yourself on MyBU Student Portal, please contact your college or academic department.
- Online courses will open to students in Blackboard on the first day of the term.
- Online courses close to students three weeks after the last day of the term. Please plan to download and save any assignments or material you'd like to keep by that date.

Technical Support

Help Desk

Boston University IT Help Desk can be reached via email (ithelp@bu.edu), phone (617-353-4357) or by filling out the [support form](#) on their website. For IT Help Desk hours of operation, visit the [contact page](#). If you are contacting IT outside of business hours, you will receive a response the following day. Visit the BU Information Services & Technology (IS&T) [news page](#) for announcements and system-wide alerts.

Technology Requirements and Resources

To successfully view all content in your course, it is important that your computer setup meets the necessary minimum technical requirements. Certain courses with specific functionality or educational tools may require additional technical requirements, these details can be found on the Course Resources or Materials page in the Syllabus.

System Requirements

- Access to reliable, high-speed internet: Check your [internet connection speeds](#)
- Learning Management System (Blackboard): [System Requirements](#)
- Synchronous live classroom sessions (Zoom): [System requirements for Windows, macOS, and Linux](#)
- Courses with proctored exams (Examity): [System requirements for Windows, macOS](#)
- Two-factor authentication service for BU applications: [Duo Security](#)

Downloads

- Recommended web browsers: [Mozilla Firefox](#) or [Google Chrome](#)
- Synchronous live classroom sessions (Zoom): [Zoom download center](#)
- Courses with proctored exams (Examity): Desktop or laptop computer with [Google Chrome](#) or [Microsoft Edge](#)
- Two-factor authentication service for BU applications (Duo Security): optional [Duo Mobile download for iOS](#) or [Duo Mobile download for Android](#)

Recommended Hardware

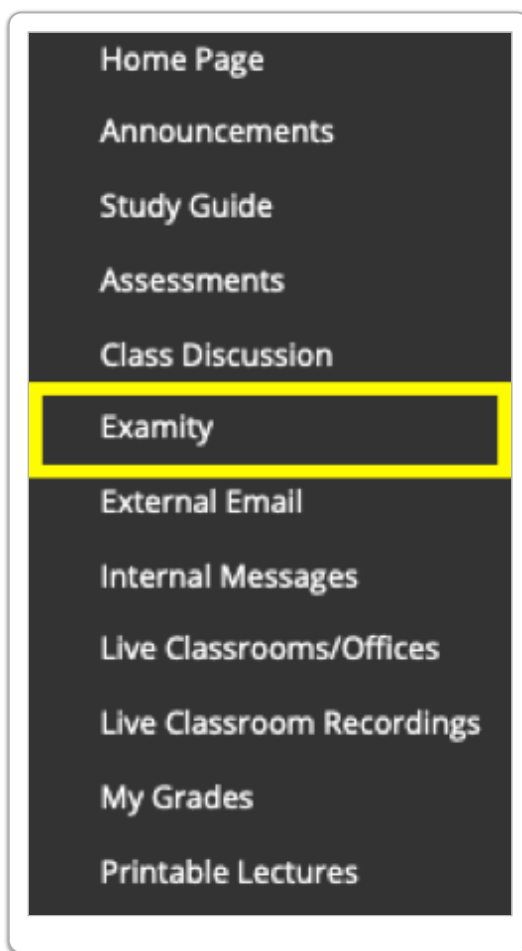
- Desktop or laptop computer recommended for best experience, some course functionality including proctored exams are not compatible with phones or tablets
- Headset with built-in microphone for high quality audio during live classroom sessions
- Webcam (required for proctored exams)
- Working computer speakers (required for proctored exams)

Clearing Your Browser Cache

It is recommended that users periodically [clear their browser cache](#) to ensure they are viewing the most current course content. Completing this step often resolves login issues and problems viewing course materials.

Proctored Exams

Courses with proctored exams will have an Examity link in the left-hand course navigation. This link will not appear until scheduling opens. The BU Virtual Assessment Administrator will notify you when it is time to schedule your exam. Details on Examity's technical requirements and how to schedule your exam are in the Proctored Exam Information module on the course homepage. The Assessment Administrator can be reached at pexams@bu.edu. Examity support is available 24/7 via phone (855-392-6489), email (support@examity.com), or 'live chat' when logged in to the Examity dashboard.



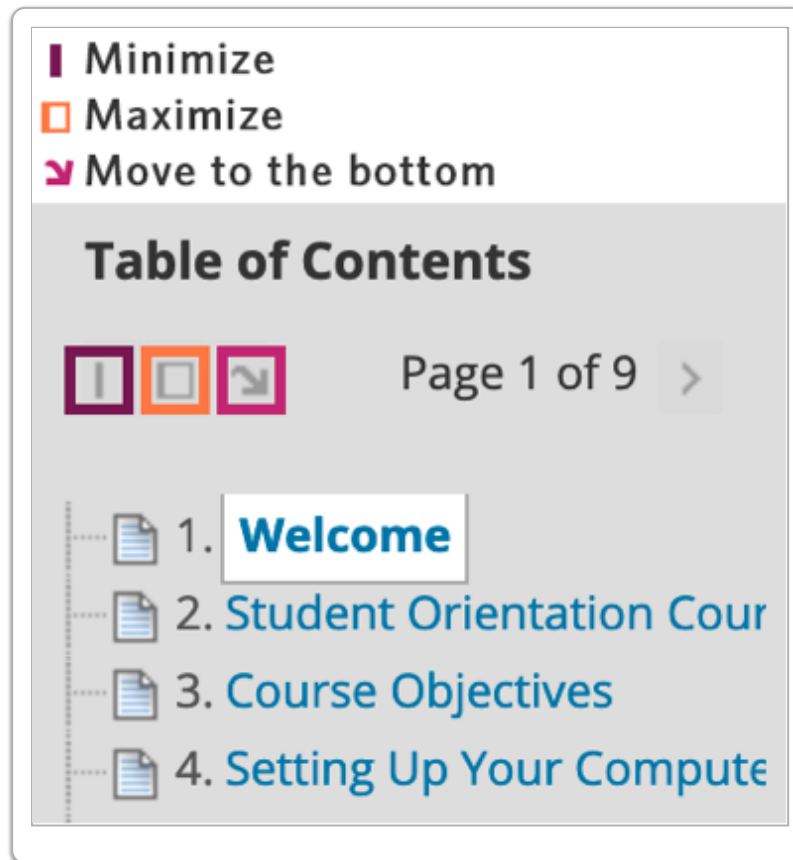
Navigating Courses

While navigating through your courses it's important to note that all hyperlinks will open in a new browser window.

The Blackboard navigation tools—shown in the images below—allow you to show and hide both the Course Menu and the Table of Contents which can free up space when moving through weekly lecture material.

The Table of Contents may contain folders that open and close (+ and – signs) and may conceal some pages. To avoid missing content pages, you are advised to use the next- and previous-page buttons (and icons) in the top-right corner of the learning content.

Navigation tools for the Table of Contents are shown in the image below:



Clicking the space between the Course Menu and the Table of Contents allows you to show or hide the Course Menu on the left:

DE Student Orientation 
(2020 Spring 2)

Home Page

Announcements

Assessments

Assignments

Calendar

Class Discussion

External Email

Internal Messages

Table of Contents

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Hide Course Menu

 1. **Welcome**

 2. Student Orientation Cou

 3. Course Objectives

 4. Setting Up Your Comput

 5. Blackboard App for Onli

 6. Disability Services

 7. Netiquette

 8. Registration Information

 9. Technical Support

Boston University Metropolitan College