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

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MET CS669

Database Design and Implementation for Business

This course uses the latest database tools and techniques for persistent data and object-modeling and management. Students gain extensive hands-on experience with exercises and a term project using Oracle, SQL Server, and other leading database management systems. Students learn to model persistent data using the standard Entity-Relationship model (ERM) and how to diagram those models using Entity-Relationship Diagrams (ERDs), Extended Entity-Relationship Diagrams (EERDs), and UML diagrams. Students learn the standards-based Structured Query Language (SQL) and the extensions to the SQL standards implemented in Oracle and SQL Server. Students learn the basics of database programming, and write simple stored procedures and triggers.

The Role of this Course in the MSCIS Online Curriculum

This is a core course in the MSCIS online curriculum. It provides students with an understanding and experience with database technology, database design, SQL, and the roles of databases in enterprises. This course is a prerequisite for the three additional database courses in the MSCIS online curriculum, which are CS674 *Database Security*, CS699 *Data Mining and Business Intelligence* and CS779 *Advanced Database Management*. By taking these three courses you can obtain the Concentration in Database Management and Business Intelligence. CS674 *Database Security* also satisfies an elective requirement for the *Concentration in Security*. CS779 *Advanced Database Management* covers advanced design and normalization, ANSI and Oracle extensions to the relational model, object-oriented and object-relational databases, XML in databases, advanced database tuning, emerging database technologies, and other more advanced database topics.

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.

Course Objectives

This course will enable you to:

- Explain database concepts, particularly the concepts of relational databases
- Design and implement SQL databases of ordinary complexity
- Explain and use top-down database design with bottom-up techniques
- Understand and use basic object-oriented design techniques and the EERD notation.
- Understand and use the Structured Query Language—DDL, DML and DCL.
- Write simple stored procedures and triggers using PL/SQL or Transact-SQL
- Use and develop application databases.

Learning Outcomes

By reading the lectures and completing the assignments in this course, you will be able to:

- Understand and explain the roles that databases play in organizations.
- Normalize database tables so that you can design and implement correct database systems.
- Understand and use the Structured Query Language (SQL) in depth and obtain ample hands-on practice.
- Understand and use database transactions and concurrency.
- Create a Term Project that covers all aspects of designing a database and the SQL requests that run against that database.
- Understand the basics of advanced topics such as database performance tuning, distributed databases, and the data warehouse.

Instructor

Pamela Farr

Computer Science Department
Metropolitan College
Boston University
808 Commonwealth Ave, 2nd floor
Boston, MA 02215

Email: pfarr@bu.edu

Office Hours and Questions:
You will have ample opportunity for questions at our many Live Classrooms. I also welcome your questions via Online Campus and standard email.

Hello,

My name is Pamela Farr and I will be your instructor for this course. One of my greatest joys in teaching is interacting with students in the live classrooms. Some of our main goals in this course are to show you how interesting and exciting database design can be and how it directly relates to business functionality in today's world.

I received my master's degree from this program in 2012, and I have been facilitating and teaching at BU ever since. I have been an Oracle database administrator since 1998, and have been on the production support end of such systems as Travelocity and American Airlines. I currently support multiple databases at a medium-sized community college (20,000 students) in Eugene, Oregon, just down the road from the University of Oregon.

I have two sons, a dog and a husband and a mid-century modern home in Eugene. We are working on updating the house to this century, so on any particular day I might be up a ladder painting and/or plastering.

Initial Course Developers

Dr. Robert Schudy

Dr. Schudy made significant contributions to all aspects of this course over many years. He has been practicing advanced database management in industry and teaching database classes in industry and at BU for years. His responsibilities as an Associate Professor in the MET Computer Science Department include faculty coordination of the database area and faculty coordination of this MSCIS online program.

He received a Ph.D. in Computer Science from the University of Rochester. He has conducted research and developed systems at Hewlett Packard Laboratories, and Bolt Beranek and Newman. He hase served as chief scientist for startups and have architected designed and managed the development of many computer systems.

Dr. Vijay Kanabar

This course was originally developed by Professor Vijay Kanabar. Dr. Kanabar has been consulting and teaching in the applied areas of IT and Project Management for more than 25 years in the US and Canada. He has authored two database books—An Introduction to Structured Query Language (Wm C Brown now McGraw-Hill) and XBase for the True Beginner (McGraw-Hill)—and has been recognized with awards for outstanding teaching and research. He has substantial business experience and is frequently invited to present seminars at conferences organized by corporations such as Fidelity, BEA, Staples, Fleet and State Street. Dr. Kanabar holds graduate degrees in Computer Science from Florida Tech and a Ph.D. in Information Systems from University of Manitoba. Professor Kanabar and is a certified Project Management Professional (PMP) and the author of a recent text on project management.

Study Guide

Module 1 Study Guide and Deliverables

Concept Readings:	Coronel & Morris, chapters 1 and 2
SQL Readings:	*12th Edition:* Coronel & Morris, sections 7.1 through 7.4 of chapter 7 *13th Edition:* Coronel & Morris, sections 7.1 through 7.3 of chapter 7, sections 8.1 and 8.2 in chapter 8
Assignments:	Concepts Assignment 1, SQL Lab 1 due March 20 at 6:00 AM ET
Term Project Milestones:	Read the term project specification. Decide if you are doing the default or student-defined term project and submit your decision in Iteration 1.
Assessments:	Quiz 1 due Tuesday, March 20 at 6:00 AM ET

Live Classrooms:	Wednesday, March 14, 7:30-9:30 PM ET - Live Classroom Thursday, March 15, 8:00-10:00 PM ET - Live Classroom Saturday, March 17, 12:00-1:00 PM ET - Live Office

Module 2 Study Guide and Deliverables

Concept Readings:	Coronel & Morris, chapters 3 and 4
SQL Readings:	*12th Edition:* Coronel & Morris, sections 7.5 through 7.7 of chapter 7, section 8.1 of chapter 8 *13th Edition:* Coronel & Morris, sections 7.4 through 7.6 of chapter 7, sections 8.3 and 8.4 in chapter 8 (note that 8.4b, subqueries, will be covered in more detail in week 5)
Assignments:	Concepts Assignment 2, SQL Lab 2 due March 27 at 6:00 AM ET
Term Project Milestones:	Submit structural business rules for your Term Project in Iteration 2.
Assessments:	Quiz 2 due Tuesday, March 27 at 6:00 AM ET
Live Classrooms:	Wednesday, March 21, 7:30-9:30 PM ET - Live Classroom Thursday, March 22, 8:00-10:00 PM ET - Live Classroom Saturday, March 24, 12:00-1:00 PM ET - Live Office

Module 3 Study Guide and Deliverables

Concept	Coronel & Morris, chapters 5 and 6

Readings:	
SQL Readings:	*12th Edition:* Coronel & Morris, section 8.3 and 8.4 of chapter 8. Note that section 8.2 will be read in module 5 *13th Edition:* Coronel & Morris, sections 7.7, 7.9, 7.10, and 7.11 of chapter 7 (note that section 7.8 regarding subqueries will be read in week 5). Section 8.5 of chapter 8.
Assignments:	Concepts Assignment 3, SQL Lab 3 due April 3 at 6:00 AM ET
Term Project Milestones:	Submit a conceptual entity-relationship diagram for your Term Project in Iteration 3.
Assessments:	Quiz 3 due Tuesday, April 3 at 6:00 AM ET
Live Classrooms:	Wednesday, March 28, 7:30-9:30 PM ET - Live Classroom Thursday, March 29, 8:00-10:00 PM ET - Live Classroom Saturday, March 31, 12:00-1:00 PM ET - Live Office

Module 4 Study Guide and Deliverables

Concept Readings:	Coronel & Morris, chapters 9 and 10
SQL Readings:	*12th Edition:* Coronel & Morris, sections 8.4 through 8.8 of chapter 8 *13th Edition:* Coronel & Morris, sections 8.6 through 8.8 of chapter 8
Assignments:	Concepts Assignment 4, SQL Lab 4 due Tuesday, April 10 at 6:00 AM ET

Term Project Milestones:	Submit a logical entity-relationship diagram, as well as SQL for the first two use cases, for your Term Project in Iteration 4.
Assessments:	Quiz 4 due Tuesday, April 10 at 6:00 AM ET
Live Classrooms:	Wednesday, April 4, 7:30-9:30 PM ET - Live Classroom Friday, April 5, 8:00-10:00 PM ET - Live Classroom Saturday, April 7, 12:00-1:00 PM ET - Live Office

Module 5 Study Guide and Deliverables

Concept Readings:	Coronel & Morris, sections 11.1 to 11.7 of chapter 11, and chapter 12
SQL Readings:	*12th Edition:* Coronel & Morris, section 8.2 of chapter 8 *13th Edition:* Coronel & Morris, section 7.8 of chapter 7
Assignments:	Concepts Assignment 5, SQL Lab 5 due Tuesday, April 17 at 6:00 AM ET
Term Project Milestones:	Submit SQL for use cases 2a, 2b, 3a, and 3b, and define your own use cases for 5a and 5b, for your Term Project in Iteration 5.
Assessments:	Quiz 5 due Tuesday, April 17 at 6:00 AM ET
Live Classrooms:	Wednesday, April 11, 7:30-9:30 PM ET - Live Classroom Thursday, April 12, 8:00-10:00 PM ET - Live Classroom Saturday, April 14, 12:00-1:00 PM ET - Live Office

Module 6 Study Guide and Deliverables

Concept Readings:	*12th edition:* Coronel & Morris, chapter 13, chapter 14, chapter 15, sections 16-1 through 16-7a of chapter 16 *13th edition:* Coronel & Morris, sections 13.1 through 13.8 of chapter 13, sections 14.1 through 14.5 of chapter 14, chapter 15, sections 16.1 through 16.9 of chapter 16.
SQL Readings:	There are no SQL readings this week
Assignments:	There are no assignments
Term Project Milestones:	Your final term project submission is due Tuesday, **April 24** at 6:00 AM ET. Please be sure include all items mentioned in the "Deliverables" page in the Term Project document.
Assessments:	Quiz 6 due Tuesday, April 24 at 6:00 AM ET
Live Classrooms:	Wednesday, April 18, 7:30-9:30 PM ET - Live Classroom Thursday, April 19, 8:00-10:00 PM ET - Live Classroom Saturday, April 21, 12:00-1:00 PM ET - Live Office

Final Exam Details

The Final Exam is a proctored exam available from **April 25 at 6:00 AM ET to April 28 at 11:59 PM ET**. The Computer Science department requires that all final exams be proctored.

The exam is only accessible 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. Please see the Final Exam Instructions in the Final Exam module for more information.

You will receive a technical support hotline number before the start of the exam. Please bring this number with you to the exam.

Course Resources

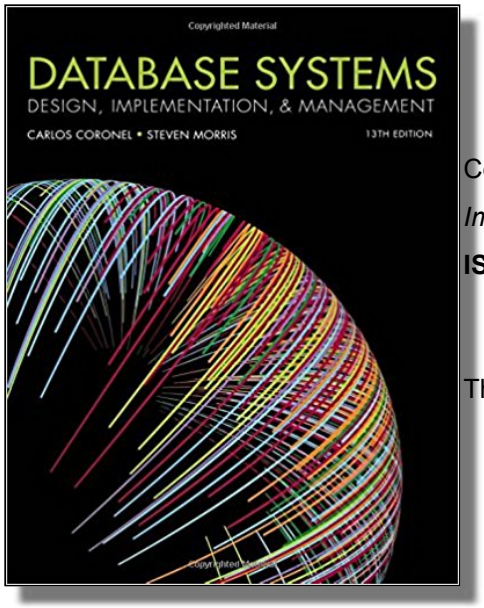
Required Textbook

You may use **either the 12th or 13th edition** of the textbook. Different page numbers for each edition will be indicated in the Study Guide.

Coronel, C. M., & Morris, S. (2017) *Database Systems: Design, Implementation, & Management* (12th ed). Boston: Cengage Learning. **ISBN:** 9781305627482

This textbook can be purchased from Barnes & Noble at Boston University.

OR



Coronel, C. M., & Morris, S. (2018) *Database Systems: Design, Implementation, & Management* (13th ed). Boston: Cengage Learning. **ISBN:** 9781337627900

This textbook can be purchased from Barnes & Noble at Boston University.

Required Software: Oracle, Microsoft SQL Server, or PostgreSQL

You will need Oracle, Microsoft SQL Server, or PostgreSQL to complete the labs and the Term Project. There is full support for these databases in the course, and Oracle is the default if you do not have a preference. Your choice of database for this course does not limit your options for other courses in the BU program, as material for other courses is not designed with an assumption that you select any particular database in this course. Please be sure to follow the instructions in the appropriate install guide listed below, because database installs are more complex than typical application installs.

Installation

Use the links below to download a PDF with the most recent version of the detailed instructions:

- Oracle Express Installation Guide
- SQL Server Express Installation Guide
- PostreSQL Installation Guide
- If would prefer to install the full version rather than the Express version, access the Oracle Installation Guide or SQL Server Installation Guide instead
- If you would prefer to install Oracle on Linux, access the Oracle on Linux Installation Guide

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Download

Recommended Software: LucidChart or Microsoft Visio Pro

In this class we will demonstrate the use of LucidChart and Microsoft Visio Pro to create entity-relationship diagrams. You can sign up for a free, full-featured account on LucidChart by using your BU email address. You can obtain Visio Pro free of charge from the Microsoft DreamSpark for Academic Institutions program. Many students use LucidChart or Microsoft Visio to create their diagrams, but you are not required to do so. Any capable database diagramming application will suffice.

Supplemental Live Sessions

In this class there will be Supplemental Live Sessions every week. Live Sessions provide you with an opportunity to listen to the course instructor or lead facilitator, and to ask questions in real-time. In many cases, the Live Sessions also provide you with step-by-step demonstrations of diagramming database designs, or writing specific kinds of SQL. The Live Sessions supports chat, voice conferencing over telephone or internet, and a variety of visual interaction facilities, including PowerPoint slides and even video if we choose to use it. All Live Sessions are recorded so that you will not miss a session if you are not able to attend.

I look forward to talking with you, discussing the material, and answering your questions, and encourage you to attend as many supplemental live sessions as you are able, to assist in your learning.

Live Classroom Instructions and Procedures

Complete instructions and procedures, as well as description of features and tools, go to the "Live Classroom/Offices" link in the left-hand menu.

Live Offices

This course includes a “Live Office” for each facilitator, one for the course instructor, and one for student use. Live Offices are similar to Live Classroom, except for a few minor configuration differences. Live Offices are a good way for facilitators and students to go over their assignments or other course material, because it supports convenient document or web sharing and voice. If you plan to take advantage of Live Office sessions, I recommend that you purchase a headset designed to plug into the audio jacks or USB port on your computer. This will give you the ability to talk directly with your facilitator. These headsets are available from many vendors. The price ranges from $10 for a basic but serviceable model up to $50 for a professional model. You may alternatively telephone into the Live Classroom as you would to a conference call.

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:

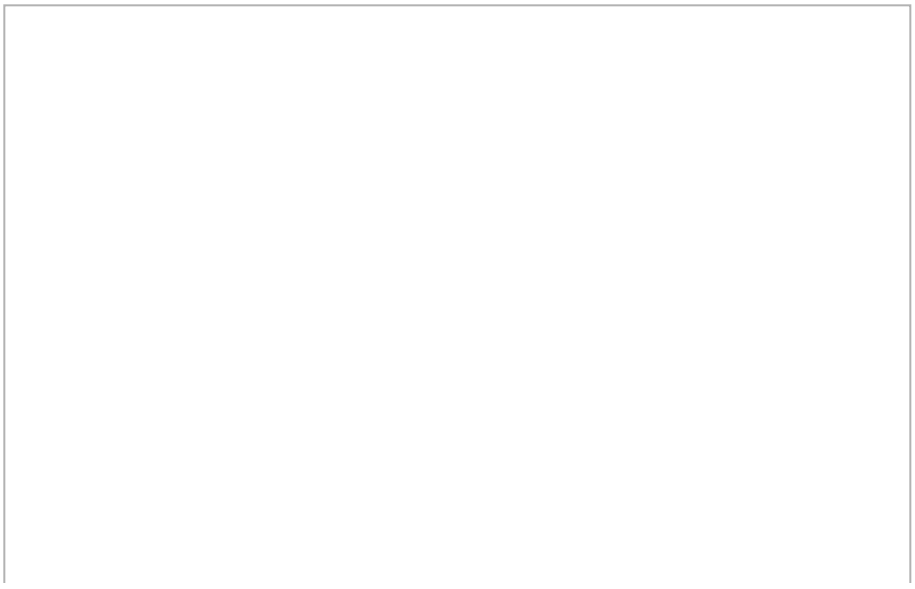
> Go to http://www.bu.edu/library/research/collections to access eBooks and eJournals directly.
>
> If you have questions about library resources, go to http://www.bu.edu/library/help/ask-a-librarian to email the library or use the live-chat feature.
>
> To locate course eReserves, go to http://www.bu.edu/library/services/reserves.

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 with SMARTHINKING is available to BU online students for the duration of their courses. The tutors do not rewrite assignments, but instead teach students how to improve their skills in the following areas: writing, math, sciences, business, ESL, and Word/Excel/PowerPoint.

You can log in directly to SMARTHINKING from Online Campus by using the link in the left-hand navigation menu of your course.



YouTube

Please Note

SMARTHINKING 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 SMARTHINKING account.

Course Grading Information

Course Structure

The course is organized as a sequence of six main weekly modules, plus a seventh module for the proctored final exam. Each of the six main modules includes assigned textbook readings and online lectures in text, graphic, and video formats. Students have an opportunity each week to participate in synchronous Live Classroom sessions where students interact with their faculty in real time; these live sessions are recorded for students who can't make the live sessions. Each of the first six modules includes graded homework assignments, graded discussions, a review quiz and a graded quiz. There is a term project which helps you integrate everything that you learn in the course, and apply that learning to the development of a significant database system. During each week of the course you will implement the aspects of the term project that are based on the database technology that you are studying that week.

Grade Weighting

The following table summarizes the five kinds of graded items and the default percentage of grades determined by each of these kinds of graded items. Each of these graded items is explained below.

Deliverable	Weight
Concepts Assignments	15%
SQL Labs	15%
Quizzes	20%
Term Project	20%
Final Exam	30%

Assignments

In each of the first five weekly modules you will have homework assignments. 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 you are stuck, and just can't complete part of an assignment, send what you have completed to your facilitator via Online Campus email, asking for help. Your facilitator can then provide you with guidance in the areas where you are stuck, and return the partial assignment to you for further work.

Occasionally your facilitator may opt to give you a chance to resubmit an assignment, particularly if you are struggling. The second submission will be graded fairly, and the facilitator may choose to deduct from your score any portion of the solution provided by the facilitator.

Quizzes

There is a review quiz in each of the first six modules. These review quizzes are primarily to help you prepare you for the module quizzes. When you finish a review quiz you will see the questions, your answer, the correct answers and tutorial material for each question, as well as grading rubrics for paragraph questions and references in the text. The review quizzes do not count in your grade. You can take the review quizzes at any time, as many times as you want.

There is one graded quiz in each of the first six modules. The results for your quiz will be released as soon as possible after the quiz closes. When the quizzes are released you will be able to see the questions, your answers, the correct answers, and tutorial material, just as in the review quizzes. Your professor releases the quiz results. Quizzes may be taken after the results have been released, with permission, but the scores on late quizzes do not count on your grade.

The Final Exam

Your final exam will be offered in the last week of the course. You will have three hours to complete it; there should be plenty of time. Your final exam will be proctored and you may use remote proctoring to take it at home, work, or elsewhere. If you live near to BU you may take it on campus as well. 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.

Note that your overall final exam score will be released to you, but the questions and answers will not be released. This is to maintain the integrity of the final exam for concurrent and future online and on-campus runnings of this course.

The Term Project

For the term project, you will design and implement a database schema, and write SQL that uses the schema you create. Additional details in the Term Project inbox in the Assignments area of the course. Satisfactory completion of the Term Project is required to pass the course, and *failure to complete the Term Project will result in an F for the course*.

Grading Structure

Your assignments, quizzes, term project, 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.

Letter Grade	Approximate percentage grade range	Grade Points
A	95–100	4.0
A−	90–94.9	3.7
B+	87–89.9	3.3
B	83–86.9	3.0
B−	80-82.9	2.7
C+	77–79.9	2.3
C	73–76.9	2.0
C−	70-72.9	1.7
D	60–69.9	1.0
F	0–59.9	0

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. For more information, see the MSCIS Academic Policies online manual.

The percentage ranges above are approximate. Your letter grade is determined by your 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, term project, and final exam. Additional grading criteria include any substantial difference in your performance on 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.

How We Help You Succeed

We on the teaching team are eager to see you learn and succeed in the course. We treat each person with respect and professionalism, work hard to give everyone a great learning experience, and strive to be fair to everyone in the course. To these ends, the following describes how we structure the course to best help you.

Getting Help

The teaching team is here to help you. We are happy to answer your questions about the course material, course administration, course structure, and where to find the material for specific assignment and lab problems. We have an Ask the Facilitators forum monitored by all facilitators where you may ask questions. We have many live sessions that help explain the material and give you a chance to ask questions in real-time. If you find that something is not covered in the material adequately, ask away! We are happy to help.

We do follow a policy whereby all items you submit (assignments, labs, quizzes, projects, and so on) must be authored by you. Facilitators do not provide solutions before submission. We do however offer live sessions with problems similar to the assignments and labs, and show you step-by-step how to solve them.

Researching

We strive to provide you many resources in the course, so that course materials provide for the bulk of your research. This includes the textbook, online lectures, live sessions, email communications, and your questions in the forum. You are free to use quality external sources are used as needed to fill in extra details. We do follow a policy that research should not include submissions from current or prior students on the same assignment or lab. We want each person in the course to go through the healthy struggle of answering each question, for the sake of learning, and do not want anyone to bypass the learning process by copying from others.

Including Others' Material

While most of your work will be written in your own words, it is reasonable to include others' work where it provides benefit. While we ask that there be a clear delineation between your own work and others' work through citations

(such as APA style citations), we do not expect you to cite everything you write. It is only necessary to cite information that is not common knowledge in the field, or when you use verbatim quotes from others' material.

Interacting With Your Facilitator

Your facilitator is here to help you. We carefully select facilitators based upon their academic and industry experience, as well as their ability to positively interact with students. We also continually vet facilitators based upon feedback in course evaluations. Many of our facilitators have years of experience and a proven track record.

We follow a policy where each person in the course is assigned to a facilitator through a random assignment process, to help ensure fairness. We want to give you the best experience possible in the course, so if despite our efforts and process your facilitator engages in what you see as misconduct, please let the course instructor know. While course enrollees are not able to switch facilitators upon request, your instructor will work with you to remedy the situation in other ways.

Review Of Your Submissions

Your facilitator uses a grading rubric in combination with course and field experience to thoughtfully assign each item a fair and objective grade. The grades are calculated carefully with a grading rubric developed by the instructor and vetted over time, and this is combined with the course and field experience of your facilitator. Due to their experience, facilitators will see both areas needing improvement and areas the exhibit excellence in most submissions. You will receive feedback on both. We instruct facilitators to be respectful and kind in their words, and to accurately point out both areas. Dialoging about the review of your submissions is a great way to learn what worked well and what could be improved, and this is encouraged. Your facilitator is happy to further explain their comments and the reason for a grade determination, should something be unclear.

To be fair to all, the same grading process is used for every person in every group. Facilitators are not allowed to negotiate grades individually (unless something is really off, of course).

Submission Schedule

To keep the course running smoothly for everyone, we have a schedule of when assignments, labs, quizzes, and so on should be submitted. If you find yourself unable to complete an item by its deadline due to circumstances out of your control, please dialog with your facilitator about this in advance of the deadline (unless it is an emergency which makes this impossible, of course). We may request additional documentation, but are happy to accommodate your situation as much as we are able.

We endeavor to be both reasonable and equitable to everyone, since each person in the course sacrifices much to keep pace with this demanding schedule. If an item is submitted after its deadline without approval, the item will still be reviewed and graded; however, 5 points per day, for a maximum of 20 points, will be deducted from its grade.

Life-Impacting Events

While we wish for each person enrolled in the course to enjoy a regular, uninterrupted course term, we recognize that emergencies and other life-impacting events can happen while the course is running. Examples of such events are car accidents, a death in the family, the loss of a job, and other difficult events. We will do everything we can to support you in the course if this happens and we do have some options. Please reach out to the teaching team as soon as you are able to explain your situation and to open a dialog about your best course options. For some situations, we may be able to offer a flexible schedule to enable you to catch up on the course deliverables. For others, we may be able to offer an incomplete grade and allow you to finish a few items after the course term is over. While we do not systematically require documentation for all situations, we may require it for some at our discretion.

Incompletes, while helpful when the situation merits it, carry some disadvantages as well, especially the fact that those who take incompletes do not have access to peers, facilitators, and live sessions in the same capacity as when the course is running. We prefer to use other options when possible, and rely on incompletes as a last resort. Should a life impacting event occur affecting your ability to proceed with the course, please contact us to open a dialog to explore your options.

Concepts Assignment Grading Rubric

All assignment submissions are evaluated on the quality of the original content, and on how well the content is expressed.

Your facilitator will grade your assignment submissions with the grading rubric below. When mapping the letter grade to a corresponding number grade, your facilitator will use the following letter-to-number mappings:

A+	A	A−	B+	B	B−	C+	C	C−	D	F
100	96	92	88	85	82	78	75	72	67	0

To avoid subjectivity and to maintain consistency across facilitator groups, facilitators will use only the letter to number mappings given above, and will not attempt to further distinguish the number grade. For example, if you receive an A for both criteria, then your assignment grade will be a 96, and facilitators will not attempt to distinguish between a 97, 96, or 95. If you receive an A− for both criteria, your assignment grade will be a 92, and facilitators will not attempt to distinguish between a 93, 92, or 91.

	Grade	Qualities Demonstrated by the Assignment Submission
Content (70%) Measures the quality of the	A+	The content demonstrates exceptional understanding of all relevant subject matter and its inter-relationships. All major relevant issues are thoroughly covered, and all content is very focused and on-topic. There is no known way to improve the content, and there are absolutely no technical or coverage errors present.
	A	The content demonstrates exceptional understanding of all relevant subject matter

content in the assignment		and its inter-relationships. All major relevant issues are thoroughly covered, and all content is very focused and on-topic. At most one insignificant technical or coverage error may be present
	A−	The content demonstrates deep understanding of all relevant subject matter and its inter-relationships. All major relevant issues are covered, and all content is on-topic.
	B+	The content demonstrates understanding of all relevant subject matter and its inter-relationships. Almost all major relevant issues are covered, and the content is at least reasonably on-topic.
	B	The content demonstrates understanding of most relevant subject matter and its inter-relationships. Almost all major relevant issues are covered, and all content is at least reasonably on-topic.
	B−	The content demonstrates moderate understanding of much relevant subject matter and its inter-relationships. There is reasonable coverage of major relevant issues, and the content is at least reasonably on-topic.
	C+	The content demonstrates some understanding of relevant subject matter and its inter-relationships. Some major relevant issues are covered, and at least some content is on-topic.
	C	The content demonstrates understanding of a small portion of the relevant subject matter and its inter-relationships. Some major relevant issues are covered, and at least a small portion of the content is on-topic.
	C−	The content demonstrates little understanding of and insight into the relevant subject matter and its inter-relationships. A small portion of the major relevant issues are covered. The focus of the content may be off topic or on insubstantial or secondary topics
	D	The content demonstrates almost no understanding of or insight into the relevant subject matter and its inter-relationships. Almost none of the major relevant issues are covered, and the content may be almost entirely off-topic.
	F	The content demonstrates no understanding of or insight into the relevant subject matter and its inter-relationships. No major relevant issues are covered, and the content is entirely off-topic.
Exposition (30%)	A+	The presentation of all ideas and designs is exceptionally clear and persuasive; the entire submission is exceptionally organized. There is no known way to improve the

Measures how well the content is expressed		clarity or organization of the submission.
	A	The presentation of all ideas and designs is exceptionally clear and persuasive; the entire submission is exceptionally organized. There may be at most one insignificant way to improve the clarity or organization of the submission.
	A−	The presentation of all ideas and designs is very clear and persuasive; the entire submission is very organized.
	B+	The presentation of all ideas and designs is clear and persuasive; the entire submission is organized.
	B	The presentation of most ideas and designs is clear and persuasive; most of the submission is organized.
	B−	The presentation of most ideas and designs is generally clear; most of the submission is reasonably organized.
	C+	Some parts of the submission are hard to understand; some parts are disorganized.
	C	About half of the submission is hard to understand; about half is disorganized.
	C−	Most parts of the submission are hard to understand; most parts are disorganized.
	D	Almost all of the submission is hard to understand and disorganized.
	F	The entire submission is hard to understand and disorganized.

Lab Grading Rubric

Your lab submissions will be evaluated according to the rubric given below. All lab submissions are evaluated on the completeness and correctness of the results and explanations, as well as the quality of the constitution of the SQL constructs used.

When mapping the letter grade to a corresponding number grade, your facilitator will use the same letter to number mappings as for assignments:

A+	A	A−	B+	B	B−	C+	C	C−	D	F
100	96	92	88	85	82	78	75	72	67	0

	Letter Grade	Qualities Demonstrated by the Lab Submission
Correctness, completeness, and constitution Measures the correctness and completeness of the results, and the quality of the constitution of the SQL constructs	A+	The results and explanations are entirely complete and correct for all steps. There are absolutely no technical or other errors present. There is no known way to improve the logic and makeup of any of the SQL constructs.
	A	One insignificant technical or other error is present, but otherwise the results and explanations are entirely complete and correct for all steps. Excluding the insignificant error, there is no known way to improve the makeup of any of the SQL constructs.
	A−	One or two consequential technical or other errors are present, but otherwise the results and explanations are entirely complete and correct for all steps. Excluding the one or two errors, there is no known way to improve the makeup of any of the SQL constructs.
	B+	A few steps have significantly incomplete or incorrect results or explanations. The results and explanations are complete and correct for the remainder of the steps. The logic and makeup of most SQL constructs are sound.
	B	A few steps have significantly incomplete or incorrect results or explanations. The results and explanations are mostly complete and correct for the remainder of the steps, with the exception of a few insignificant technical or other errors. The logic and makeup of most SQL constructs are sound.
	B−	About ¼ of the steps have significantly incomplete or incorrect results or explanations. The results and explanations are complete and correct for the remainder of the steps. The logic and makeup of at least ¾ of the SQL constructs are sound.
	C+	About ¼ of the steps have significantly incomplete or incorrect results or explanations. The results and explanations are mostly complete and correct for the remainder of the steps, with the exception of a few insignificant technical or other errors. The logic and makeup of at least ¾ of the SQL constructs are sound.
	C	About half of the steps have significantly incomplete or incorrect results or explanations. The results and explanations are complete and correct

		for the remainder of the steps. The logic and makeup of at least half of the SQL constructs are sound.
	C−	About half of the steps have significantly incomplete or incorrect results or explanations. The results and explanations are mostly complete and correct for the remainder of the steps, with the exception of a few insignificant technical or other errors. The logic and makeup of at least half of the SQL constructs are sound.
	D	About ¾ of the steps have significantly incomplete or incorrect results or explanations. The results and explanations are complete and correct for the remainder of the steps. The logic and makeup of at least ¼ of the SQL constructs are sound
	F	All or almost all of the steps have incomplete or incorrect results or explanations. The logic and makeup of all or almost all of the SQL constructs are unsound.

Quiz Instructions

Accessing the Quiz

You will have access to the quiz at the beginning of the module. However you should not access the quiz until you have completed all learning activities for the module and are prepared to meet the objectives for that module.

Quiz Details

- All six quizzes have twenty questions. You can access the quiz details from the assessments menu.
- The questions are either choose multiple, multiple choice (choose one), or True/False.
- All questions are randomized.
- 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 90 minutes to complete the quiz. You should have enough time so that you aren't rushed.
- You can take each graded 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 instructor immediately.

The Quiz Feedback Questions

There is one true/false question at the end of each quiz. It is worth 0 points and so does not affect your grade, but allows you to indicate whether you intend to give feedback to your facilitator for your quiz taking. If you indicate you are going to give feedback, you can then email feedback to your facilitator about the quiz as a whole or comment upon a particular quiz question, the way that you might write comments in the margins of a paper quiz. Be sure to reference the question number and include the question text, because question order is randomized. Your facilitator will respond to your comments.

Other Questions

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

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/help/tech/learn
Phone	(888) 243-4596

Final Exam Overview

The Computer Science department requires that all exams be proctored.

The exam is a three-hour, closed-book exam consisting of a combination of 50 choose multiple, multiple choice (choose one), and True/False questions. The exam is only accessible during the final exam period. You will access it from either the Assessments section of the course or from the Final Exam module on the home page.

If you have any technical problems during the exam that prevent you from continuing or completing the exam, please have your proctor call the exam hotline immediately. You will receive this important phone number from Student Services before the exam.

Note

A page instructing how to schedule your proctored final exam will be visible by the third week of this course.

Format

metcs669_finalexam is displayed here

Download

- You will have three hours to complete the final exam. There is a clock in the upper right corner of the screen keeping time for the exam.
- There are 50 questions.
- This is a **closed book/closed notes exam**. You cannot bring any materials into the exam. You cannot access any web based content other than the course exam during the three hour period.
- You can take the exam only once.
- Each question will be delivered one at a time.
- You can revisit the questions and change your answers as many times as you want before submitting the exam.

Saving Your 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.

Opening the Exam

Go to the Assessments Menu or the Final Exam Module on your course home page to access the exam. Your proctor will enter the required password to start the exam.

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/help/tech/learn
Phone	(888) 243-4596

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, and the access will be available at the exam sites.

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 Imagine for Academic Institutions

Metropolitan College is a member of Microsoft Imagine for Academic Institutions (formerly DreamSpark), 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: http://www.bu.edu/metit/hw-and-sw/msdn-academic-alliance-software-center/.

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 Faculty and Student Support Administrator, Jeff Behn. Jeff is here to ensure you have a positive online experience. You will receive emails and announcements from him throughout the semester. Jeff represents Boston University's university services and works for the Office of Distance Education. He prepares students for milestones such as course launch, final exams, and course evaluations. He is a resource to both students and faculty. For example, he can direct your university questions and concerns to the appropriate party. He also handles general questions regarding Online Campus functionality for students, faculty, and facilitators, but he does not provide tech support. He is enrolled in all classes and can be contacted within the course through Online Campus email as it is running. You can also contact him by external email at jeffbehn@bu.edu or call (617) 358-1985.

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, Peter Mirza. Peter administers the academic aspects of the program, including admissions and registration. You can ask him questions about the program, registration, course offerings, graduation, or any other program-related topic. He can be reached at metcsol@bu.edu or (617) 353-2566.

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

Andrew Gorlin, Academic Advisor. Reviews requests for transfer credits and waivers. Advises students on which courses to take to meet their career goals. You can reach Andrew at asgorlin@bu.edu, or (617)-353-2566.

Professor Anatoly Temkin, Computer Science Department Chairman. You can reach Professor Temkin at temkin@bu.edu or at 617-353-2566.

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 Temkin, 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 Services

In accordance with University policy, every effort will be made to accommodate unique and special needs of students with respect to speech, hearing, vision, or other disabilities. Any student who feels he or she may need an

accommodation for a documented disability should contact the Office of Disability Services at (617) 353-3658 or at access@bu.edu for review and approval of accommodation requests.

Netiquette

The Office of Distance Education has produced a netiquette guide to help you understand the potential impact of your communication style.

Before posting to any discussion forum, sending 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 privately point them out 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 student link please contact your college or academic department.

Technical Support

Experiencing issues with BU websites or Blackboard?

It may be a system-wide problem. Check the BU Information Services & Technology (IS&T) news page for announcements.

Boston University technical support is available via email (ithelp@bu.edu), the support form, and phone (888-243-4596). Please note that the IT Help Center has multiple locations. All locations can be reached through the previously mentioned methods. For IT Help Center hours of operation please visit their contact page. For other times, you may still submit a support request via email, phone, or the support form, but your question won't receive a response until the following day. If you aren't calling, it is highly recommended that you submit your support request

via the technical-support form as this provides the IS&T Help Center with the best information in order to resolve your issue as quickly as possible.

Examples of issues you might want to request support for include the following:

- Problems viewing or listening to sound or video files
- Problems accessing internal messages
- Problems viewing or posting comments
- Problems attaching or uploading files for assignments or discussions
- Problems accessing or submitting an assessment

To ensure the fastest possible response, please fill out the online form using the link below:

IT Help Center Support
888-243-4596 or 617-353-4357 or Web
Check your open tickets using BU's ticketing system.

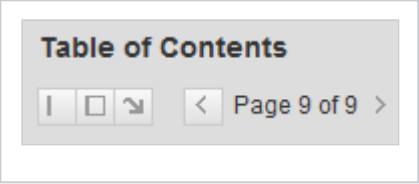
Navigating Courses

For best results when navigating courses, it is recommended that you use the Mozilla Firefox browser.

The Table of Contents may contain folders. These folders 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.

Please also familiarize yourself with the navigation tools, as shown below; these allow you to show and hide both the Course Menu and the Table of Contents on the left. This will be helpful for freeing up screen space when moving through the weekly lecture materials.

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



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

Web Resources/Browser Plug-Ins

To view certain media elements in this course, you will need to have several browser plug-in applications installed on your computer. See the Course Resources page in the syllabus of each individual course for other specific software requirements.

- Check your computer's compatibility by reviewing Blackboard's System Requirements
- Check your browser settings with Blackboard's Connection Test
- Download most recent version of Adobe Flash Player
- Download most recent version of Adobe Acrobat Reader

How to Clear Your Browser Cache

The IT Help Center recommends that you periodically clear your browser cache to ensure that you are viewing the most current content, particularly after course or system updates.

This page is also found within the "How to…" section of the online documentation, which contains a list of some of the most common tasks in Blackboard Learn.

Boston University Metropolitan College