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 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

Warren Mansur

Computer Science Department

Metropolitan College

Boston University

Email: mansur@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 Warren Mansur, and I am your instructor. I welcome the opportunity to teach and interact with all of you. One of my goals in this course is to show you how exciting database design and implementation is, and how important it is for business today. I am passionate about teaching and course development, and I look forward to interacting with you in the many ways supported by this course.

I received a master's degree in computer science from Boston University, and my master's thesis was in the area of relational database design patterns. Since 2005, I have been heavily involved both with teaching and course development for a variety of courses in Boston University's online MSCIS, MSSD, MSCS degrees and technical certificates. I have worked as an enterprise database and software architect and developer for several organizations, including Lockheed Martin, Hewlett Packard, and the New York State Court System.

The best way to reach me outside of our many Live Classroom sessions is to email me at mansur@bu.edu. I normally check BU email many times per day.

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

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

Module 1 Study Guide and Deliverables

Background Concepts Readings:	• Coronel & Morris, chapters 1 and 2
Optional 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:

- Term Project Interation 1 due **Tuesday, May 17 at 6:00 AM ET**
- Lab 1 due **Tuesday, May 17 at 6:00 AM ET**

Live Classroom:

- **Tuesday, May 10 from 8:00-9:30 PM ET**
- **Wednesday, May 11 from 8:00-9:30 PM ET**

Module 2 Study Guide and Deliverables

Background Concepts Readings:

- Coronel & Morris, chapters 3 and 4

Optional 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:

- Term Project Iteration 2 due **Tuesday, May 24 at 6:00 AM ET**
- Lab 2 due **Tuesday, May 24 at 6:00 AM ET**

Live Classroom:

- **Tuesday, May 17 from 8:00-9:30 PM ET**
- **Wednesday, May 18 from 8:00-9:30 PM ET**

Module 3 Study Guide and Deliverables

Background Concepts Readings:

- Coronel & Morris, chapter 5

Optional 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:	• Term Project Iteration 3 due **Tuesday, May 31 at 6:00 AM ET** • Lab 3 due **Tuesday, May 31 at 6:00 AM ET**
Live Classroom:	• **Tuesday, May 24 from 8:00-9:30 PM ET** • **Wednesday, May 25 from 8:00-9:30 PM ET**

Module 4 Study Guide and Deliverables

Background Concepts Readings:	• Coronel & Morris, chapter 6 and chapter 9 (only sections 9-1 through 9-3, and 9-8 through 9-9)
Optional 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:	• Term Project Iteration 4 due **Tuesday, June 7 at 6:00 AM ET** • Lab 4 due **Tuesday, June 7 at 6:00 AM ET**
Live Classroom:	• **Tuesday, May 31 from 8:00-9:30 PM ET** • **Wednesday, June 1 from 8:00-9:30 PM ET**

Module 5 Study Guide and Deliverables

Background Concepts Readings:	• Coronel & Morris, chapter 10 and chapter 11 (only sections 11.1 to 11.7)
Optional SQL Readings:	• *12th Edition:* Coronel & Morris, section 8.2 of chapter 8 • *13th Edition:* Coronel & Morris, section 7.8 of chapter 7
Assignments:	• Term Project Iteration 5 due **Tuesday, June 14 at 6:00 AM ET** • Lab 5 due **Tuesday, June 14 at 6:00 AM ET**
Live Classroom:	• **Tuesday, June 7 from 8:00-9:30 PM ET** • **Wednesday, June 8 from 8:00-9:30 PM ET**

Module 6 Study Guide and Deliverables

Background Concepts Readings:	• *12th edition:* Coronel & Morris, chapters 12 through 14 and chapter 15 (only section 15.1) • *13th edition:* Coronel & Morris, chapter 12, chapter 13 (only sections 13.1 through 13.8), chapter 14 (only sections 14.1 through 14.5), chapter 15 (only section 15.1)
Optional SQL Readings:	• There are no SQL readings this week.
Assignments:	• Term Project Iteration 6 due **Tuesday, June 21 at 6:00 AM ET** • Lab 6 due **Tuesday, June 21 at 6:00 AM ET**
Course Evaluation:	Course Evaluation opens on Tuesday, June 14, at 10:00 AM ET and closes on Tuesday, June 21, at 11:59 PM ET. Please complete the course evaluation. Your feedback is important to MET, as it helps us make improvements to the program and the course for future students.
Live Classroom:	• **Tuesday, June 14 from 8:00-9:30 PM ET** • **Wednesday, June 15 from 8:00-9:30 PM ET**

Final Exam Details

The Final Exam is a proctored exam available from **Wednesday, June 22 at 6:00 AM ET to Saturday, June 25 at 11:59 PM ET**. The exam is only accessible during the final exam period. You can access it from the Assessments section of the course.

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. In order to take the exam, you are required to have a working webcam and computer that meets Examity's system requirements. A detailed list of those requirements can be found on the How to Schedule page. 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 is **closed book** and is accessible only during the final exam period. You cannot access any web-based content other than the course exam during the three hour period. You may bring 2 pages of notes front and back or 4 pages of notes front only. This can contain any notes except for a copy of the exam.

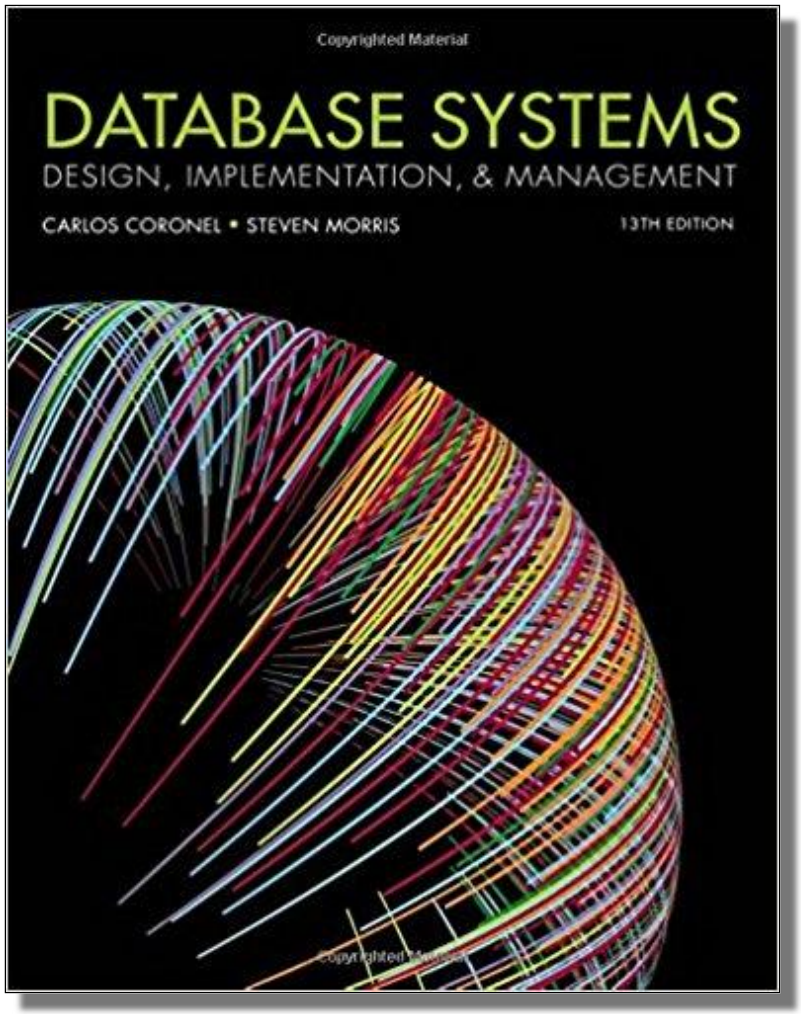
You can take the exam only once.

Final Exam Duration: **3 hours**. There is a clock in the upper right corner of the screen keeping time for 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.

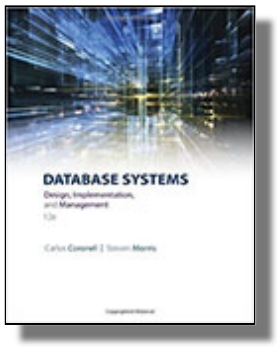


Coronel, C. M., & Morris, S. (2018) *Database Systems: Design, Implementation, & Management* (13th ed). Boston: Cengage Learning.
ISBN: 9781337627900

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

OR

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



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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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 Imagine 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 Collections to access eBooks and eJournals directly.

If you have questions about library resources, go to Ask a Librarian: Help & FAQs to email the library or use the live-chat feature.

To locate course eReserves, go to 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.

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

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

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 week's module includes labs and term project iterations. The term project is completed incrementally and integrates the significant course elements through development of your own database.

Grade Weighting

The following table summarizes the 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
Term Project	40%
Labs	30%
Final Exam	30%

The Term Project

For the term project, you will design and implement your very own database. You decide the direction of and kind of data your database will support. You do this incrementally by completing weekly term project iterations. Each term project iteration will be evaluated with a rubric specific to the iteration, which is available in each iteration's document. Additional details are available in the Assignments area of the course. Satisfactory completion of the Term Project is required to pass the course: *failure to complete the Term Project will result in an F for the course.*

Labs

There are weekly labs that teach you how to write code to interact with your database, and help you apply learned concepts. The labs begin with the assumption that you have not used SQL or databases before, and

teach you step-by-step with numerous examples. Each lab will be evaluated with a rubric specific to the lab, which is available in each lab document.

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 three hours to complete it, which is 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.

Grading Structure

Your term project iterations, labs, 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	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.

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 term project iteration and lab problems. We have an Ask the Teaching Team 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 must be authored by you. Facilitators do not provide solutions before submission, nor do they pre-grade submissions. We do however offer live sessions and recordings with problems similar to the term project iterations and labs, and we 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 experience to thoughtfully assign each item a fair and objective grade. The grades are calculated carefully with grading rubrics developed by the instructor and vetted over time, and this is combined with the course experience of your facilitator. 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 (contact your instructor if something is really off, of course).

Submission Schedule

To keep the course running smoothly for everyone, we have a schedule of when term project iterations and labs must be submitted. We endeavor to be both reasonable and equitable to everyone, since each person in the course sacrifices much to keep pace with the demanding schedule. If an item is submitted after its deadline, 5 points per day late will be deducted. Barring exceptional circumstances, submissions will not be accepted more than two days after they are due.

If you find yourself unable to complete an item by its deadline due to circumstances out of your control, please contact your facilitator as soon as practicable, and provide the particulars. We may request additional

documentation.

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. 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. While we do not systematically require documentation for all situations, we may require it for some at our discretion.

Final Exam Overview

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 is **closed book** and is accessible only during the final exam period. You cannot access any web-based content other than the course exam during the three hour period.

You can take the exam only once.

Final Exam Duration: **3 hours**. There is a clock in the upper right corner of the screen keeping time for the exam.

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.

Saving Your Answers

- 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.

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 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 the Office of Distance Education. 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, 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 Crosta. 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 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

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 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 Student Link, 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

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

Recommended Hardware

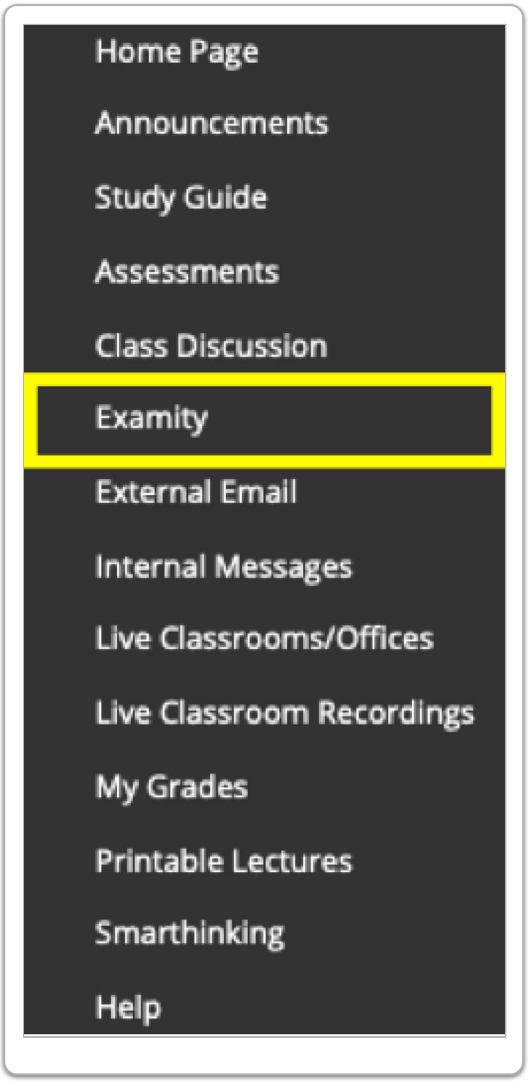
- Desktop or laptop computer recommended for best experience, some course functionality including proctored exams are not compatible with phones or tablets
- Headset with built-in microphone for high quality audio during live classroom sessions
- Webcam (required for proctored exams)
- Working computer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



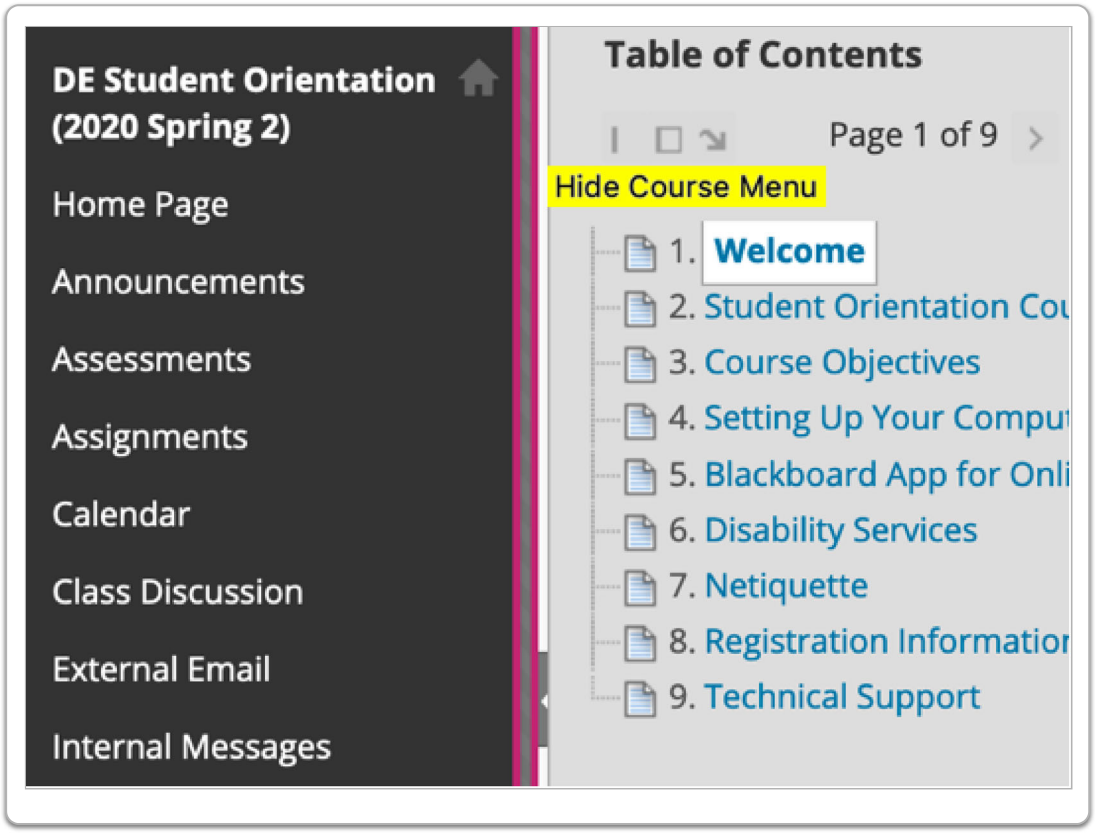
Navigating Courses

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

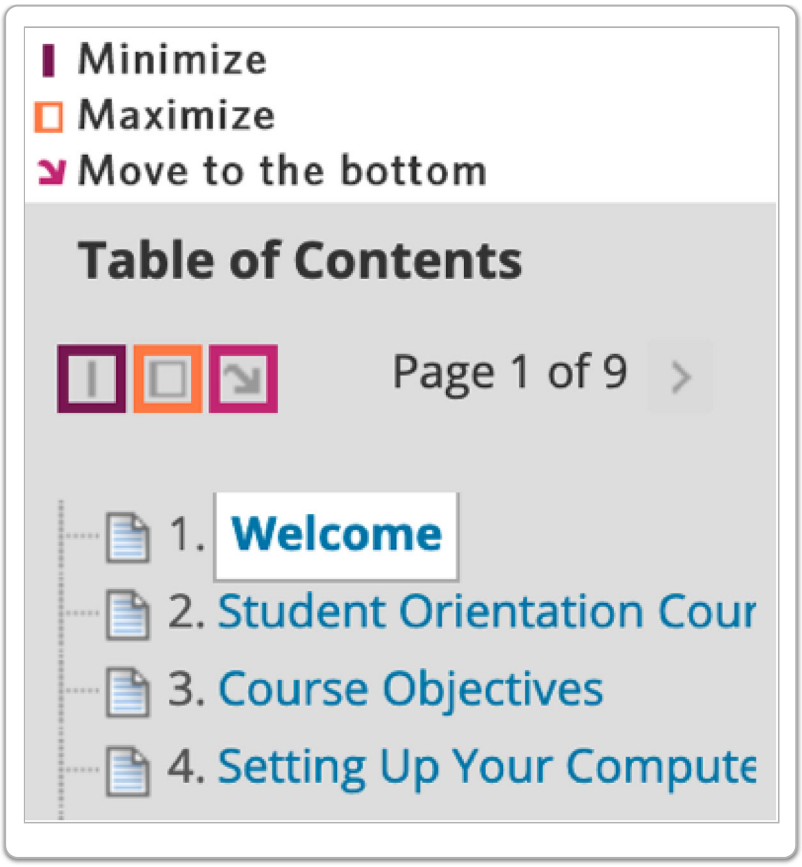
The Blackboard navigation tools, as shown in the images below; allow you to show and hide both the Course Menu and the Table of Contents which can free up space when moving through weekly lecture material.

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:



Boston University Metropolitan College