

# 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 and Overview

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

### MET CS 601

#### Web Application Development

This course equips students with essential front-end development skills, starting with foundational JavaScript techniques such as DOM manipulation and event handling, and advancing to interactive web technologies like HTML's Drag and Drop, Canvas, and SVG. Students are exposed to asynchronous operations including AJAX, the Fetch API, and Web Workers, and will learn to craft responsive designs using Flexbox, CSS Grid, and advanced CSS selectors. A comprehensive exploration of TypeScript and its main feature, static typing, as well as other capabilities are also covered. The course concludes with a comprehensive dive into ReactJS, covering its core architectural concepts, component-based structure, and state management techniques.

#### Technical Notes

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

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

## Learning Objectives

By successfully completing this course, you will be able to do the following:

- Describe what happens behind the scenes on the World Wide Web.
- Explain web programming concepts.
- Develop multi-page websites.
- Integrate multimedia resources into web pages.
- Demonstrate a high level of competency with client-side technologies to include HTML, CSS, and JavaScript.
- Write valid code in accordance with the standardized grammar, vocabulary and syntax of each language.
- Understand the core concepts of TypeScript and be able to apply them for type-safe JavaScript development.
- Describe React's component-based architecture and its approaches to add functionality to web pages.
- Develop single-page applications (SPAs) using React.
- Integrate client-side code with prebuilt server-side resources.
- Build mobile friendly websites.
- Use various web development tools and resources.

## Course Outline

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Please continually check the Announcements area for updated information and additional resources.

- **Study Guide** – Refer to the Study Guide for all due dates and live classroom dates. You will stay current by checking announcements, discussions, and emails in the course.
- **Readings** – Each module will offer both online lectures and suggested supplemental and advanced readings. See the Course Materials page of this Syllabus.
- **Groups** –There are threaded discussions for each module.These group discussions are graded and moderated by your facilitator. Postings for each discussion should be completed by the assigned due dates. There are also general discussion boards, which are not graded, for you to use to discuss any issues with your classmates and facilitators, as well as boards that your instructors will use to communicate with you about common issues.
- **Assignments** –There are weekly assignments that are due throughout the course, as well as a Term Project due at the end of the course.
- **Live Classroom sessions** – One Live Classroom session will be provided for each module during this course. Days/times can be found in the Study Guide. Students are not required to attend and recordings will be provided when possible. Material presented during these sessions may be included in the final exam.
- **Self-Assessment Quizzes** – There is a non-graded practice quiz for each module. You can take each quiz multiple times to practice your skills.

- **CodePen Examples** – Each module includes a scenario to practice hands-on coding examples.

## Module 1 - The DOM and Intermediate JavaScript

- **The Document Object Model (DOM) and Events** – You will learn about the Document Object Model and how to handle events in JavaScript.
- **Intermediate JavaScript** – We will cover client-side form validation, high order functions, callbacks, closures, and inheritance.

## Module 2 - Advanced JavaScript and Asynchronous JavaScript

- **Advanced JavaScript** – You will learn more about the object-oriented programming (OOP) features of JavaScript, including namespaces, modules, drag and drop, graphics, and more.
- **Asynchronous JavaScript** – We will cover how to use JavaScript to make asynchronous requests to a server in order to change content dynamically without needing to reload the entire web page.

## Module 3 - Advanced CSS

- **Building Flexible and Responsive Web Designs** – You will learn to create a responsive webpage layout using CSS layout techniques, Flexbox and CSS grid.
- **Advanced CSS Selectors and Pseudo-classes** – You will learn to style web pages using advanced CSS selectors and pseudo-classes.

## Module 4 - Introduction to TypeScript

- **TypeScript Syntax and Data Types** – You will learn the fundamentals of TypeScript, including its syntax, data types, control flow statements, arrays, functions, and type annotations and inference.
- **Object-Oriented Programming and Tooling** – You will learn about the object-oriented programming features of TypeScript such as objects, classes, constructors, properties, and inheritance.

## Module 5 - Introduction to React

- **React Basics and Core Concepts** – You will learn about the React library and its core concepts like JSX, templates, data binding, event handling, and more.
- **Components and Conditional Rendering** – You will learn how to create reusable components, manage state and props, and render dynamic content in response to user interaction.

## Module 6 - React Component Communications, Routing, Hooks, and Forms

- **Routing and Component Communications** – You will learn how to create custom routes to render content and pass information between React components via props and hooks.
- **React Forms** – You will learn how to create controlled forms and uncontrolled forms, and explore unique feature of each.

## Module 7 - Prepare for and Take the Final Exam

At the end of the course, you will prepare for and take a the proctored final exam.

The course will remain open two weeks after the final exam so that you can continue ask any questions about your grades or the course. This is also a time when we enter into a dialogue where we endeavor to learn from you how we can modify the course so that it better meets your needs.

### Term Project

This course also features a comprehensive term project that is due in Module 6. Instructions for the term project along with a grading rubric can be found in the Assignments area. Further details will be shared in the Live Classroom sessions throughout the course.

## Instructor

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### Christian Hur

Computer Science Department

Metropolitan College

Boston University

Email: [mrhur@bu.edu](mailto:mrhur@bu.edu)

Office Hours: after live classroom via zoom



Christian is a multi-talented professional with over 25 years of experience in web technologies. He is a Software Development Engineer (SDE), an accomplished full-stack Web instructor, author, and indie filmmaker. Christian's expertise lies in web, software, and mobile application development. Throughout his career, he has built websites and web-based applications using various web technologies. In addition to his work as an educator and industry expert, he has authored courses for several e-learning platforms, including LinkedIn Learning, Packt, Udemy, E-C Council, and MC Press. Christian, together with his wife, co-founded a production company to produce movies and mobile apps. During his free time, he enjoys traveling, exploring new web technologies, and contributing to Stack Overflow.

## **Web Applications Faculty Coordinator, Vijay Kanabar, Ph.D.**

**Vijay Kanabar** is the original designer of this course. He is a professor at Boston University and 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

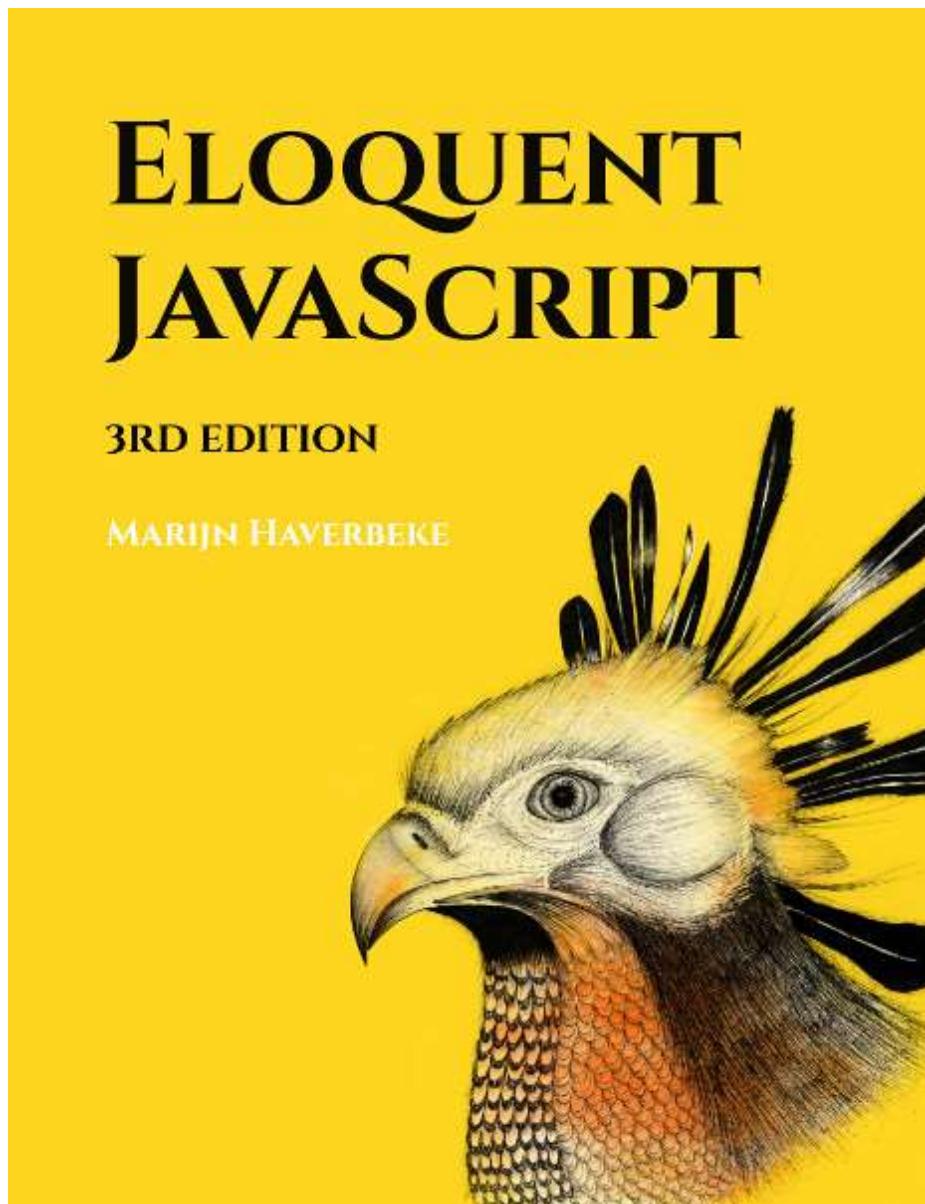


Brown now McGraw-Hill) and *XBase for the True Beginner* (McGraw-Hill)—and has been recognized with awards for outstanding teaching and research. He has substantial business experience and is frequently invited to present seminars at conferences. Dr. Kanabar holds graduate degrees in Computer Science from Florida Tech and a Ph.D. in Information Systems from University of Manitoba and is a certified Project Management Professional (PMP).

## Course Materials

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### Supplementary and Advanced Materials



Haverbeke, M. (2024).  
*Eloquent JavaScript: A Modern Introduction to Programming* (4th ed.). No Starch Press.  
ISBN: 9781593279509

[Download the free book as a PDF.](#)

### Required Course Software

At a minimum, you will need a plain text editor and at least two different web browsers installed on your Internet connected computer. Grading will be performed by viewing student work in Mozilla Firefox.

We recommend that you use free software choices for this course. Software with a monetary cost associated with it is not necessary but may be helpful if you anticipate doing extensive web development work after this course ends.

## Text Editors

The table below lists a few *plain* text editors you can use in this course (you only need one). You should *not* use a word processor such as Microsoft Word or OpenOffice Writer for writing web page content/code.

Name	Platform	Cost
Notepad	Windows	Free - built in
TextEdit	Mac	Free - built in
Vim	Windows, Mac, Linux	Free
gedit	Windows, Mac, Linux	Free
GNU Emacs	Windows, Mac, Linux	Free
Brackets	Windows, Mac, Linux	Free
Editpad.org	Online	Free
Notepad++	Windows	Free
Atom	Windows, Mac, Linux	Free
Sublime Text	Windows, Mac, Linux	Free trial

## Web Browsers

The latest version of Mozilla Firefox should serve as your primary web browser for course work and navigating around Online Campus. Secondary web browsers can include the latest versions of Microsoft Edge, Apple Safari, Google Chrome, and Opera.

## Recommended Software

You will find that an Integrated Development Environment (IDE) provides many benefits over a plain text editor for the work you will be completing in this course.

You may also need an FTP client if you plan to upload your assignments to a web server. We recommend FileZilla as a free FTP client.

Again, we recommend that you utilize free software choices for this course. Software with a monetary cost associated with it is not necessary but may be helpful if you anticipate doing extensive web development work after this course ends.

Recommended IDEs are listed in the following table (you only need one):

Name	Platform	Cost
Aptana	Windows, Mac, Linux	Free
Eclipse	Windows, Mac, Linux	Free
NetBeans	Windows, Mac, Linux	Free
Komodo Edit	Windows, Mac, Linux	Free
Visual Studio Code	Windows, Mac, Linux	Free
WebStorm	Windows, Mac, Linux	\$, but free for students
Coda 2	Mac	\$

## Helpful Resources on the Web

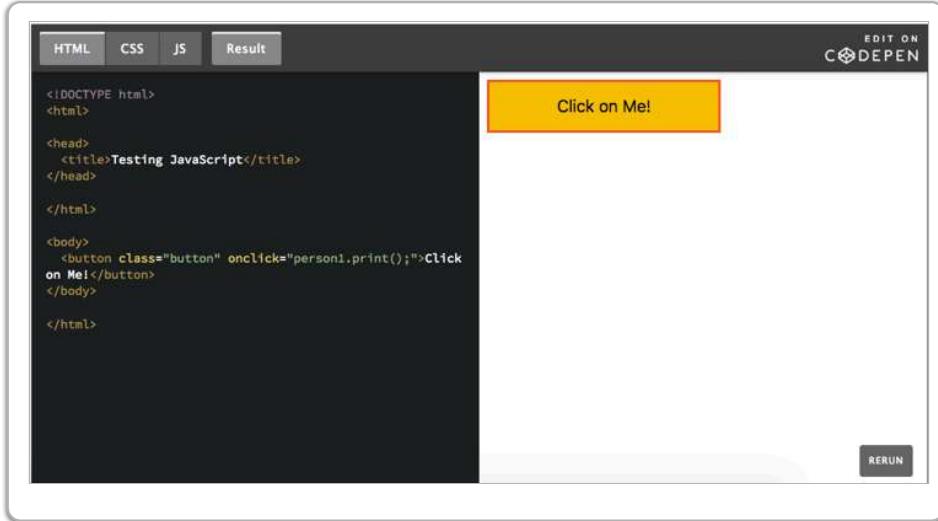
- [Mozilla Developer Network \(MDN\)](#) - Free web technology tutorials and documentation.
- [validator.w3.org](#) – Validate your HTML.
- <https://jigsaw.w3.org/css-validator/> - Validate your CSS.
- <http://jslint.com/> - Code quality tool for JavaScript.
- <https://regexone.com/> - Helpful resource on learning and using regular expressions.

## CodePen Examples

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At the end of each module, you will find a CodePen example. This is a code editor embedded in the Blackboard page. You can modify the code and see the results in the Results window. If you reload the page, the code will return to the original. If you wish to save your changes, click “Edit on CodePen” in the upper

right-hand corner. You will go to the CodePen site where you can create an account and save your own Pens. These examples are intended for you to experiment and are not required assignments.



The screenshot shows the CodePen interface. On the left, the 'HTML' tab is selected, displaying the following code:

```
<!DOCTYPE html>
<html>
<head>
  <title>Testing JavaScript</title>
</head>
</html>
<body>
  <button class="button" onclick="person1.print();">Click on Me!</button>
</body>
</html>
```

On the right, under the 'Result' tab, there is a yellow button with the text "Click on Me!". Below the result area, there is a "RERUN" button.

## Boston University Library Information

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

met\_ode\_library\_14\_sp1\_00\_intro video cannot be displayed here. Videos cannot be played from Printable Lectures. Please view media in the module.

All of the videos in the series are available on the [Online Library Resources](#) page, which is also accessible from the Campus Bookmarks section of your Online Campus Dashboard. Please feel free to make use of them.

As Boston University students, you have full access to the BU Library. From any computer, you can gain access to anything at the library that is electronically formatted. To connect to the library, use the link

<http://www.bu.edu/library>. You may use the library's content whether you are connected through your online course or not, by confirming your status as a BU community member using your Kerberos password.

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

Go to [Collections](#) to access eBooks and eJournals directly.

If you have questions about library resources, go to [Ask A Librarian](#) 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 services by Tutor.com are available to BU online students for the duration of their eligible online course. Tutor.com is a web-based service that provides an online writing lab and access to on-demand and scheduled tutoring sessions for writing, math, business, coding languages, and other subjects. Students can submit a question to a tutor, submit a paper for feedback about writing and grammar, or schedule a live session with a tutor.

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

### Please Note

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

## Study Guide

## Module 1 Study Guide and Deliverables

October 29 - November 4

**Readings:** Module 1 Online Lecture

*Eloquent JavaScript*, Haverbeke

- This optional text covers supplementary and more advanced materials related to this week's topics.

**Discussions:** Discussion 1 postings end **Tuesday, November 5, at 6:00 AM ET**

**Self-Assessment:** Practice Quiz 1

**Assessment:**

**Assignments:** Assignment 1 due **Tuesday, November 5, at 6:00 AM ET**

**Live** • **Wednesday, October 30, 7:00-9:00 PM ET.**

**Classrooms:** Instructor office hour: right after the live classroom

- Facilitator live session: TBD
- Join the live sessions from “Live Classroom/Offices” on the left-hand course menu

## Module 2 Study Guide and Deliverables

November 5 - November 11

**Readings:** Module 2 Online Lecture

*Eloquent JavaScript*, Haverbeke

- This optional text covers supplementary and more advanced materials related to this week's topics.

**Discussions:** Discussion 2 postings end **Tuesday, November 12, at 6:00 AM ET**

**Self-Assessment:** Practice Quiz 2

**Assessment:**

**Assignments:** Assignment 2 due **Tuesday, November 12, at 6:00 AM ET**

**Live** • **Wednesday, November 6, 7:00-9:00 PM**

**Classrooms:** **ET.** Instructor office hour: right after the live classroom

- Facilitator live session: TBD

## Module 3 Study Guide and Deliverables

November 12 - November 18

**Readings:** Module 3 Online Lecture

*Eloquent JavaScript*, Haverbeke

- This optional text covers supplementary and more advanced materials related to this week's topics.

**Discussions:** Discussion 3 postings end **Tuesday, November 19, at 6:00 AM ET**

**Self-Assessment:** Practice Quiz 3

**Assessment:**

**Assignments:** • Assignment 3 due **Tuesday, November 19, at 6:00 AM ET**

**Live** • **Wednesday, November 13, 7:00-9:00 PM**

**Classrooms:** **ET.** Instructor office hour: right after the live classroom

- Facilitator live session: TBD

## Module 4 Study Guide and Deliverables

November 19 - November 25

**Readings:** Module 4 Online Lecture

*Eloquent JavaScript*, Haverbeke

- This optional text covers supplementary and more advanced materials related to this

week's topics.

**Discussions:** Discussion 4 postings end **Tuesday, November 26, at 6:00 AM ET**

**Self-Assessment:** Practice Quiz 4

**Assessment:**

- Assignments:**
- Assignment 4 due **Tuesday, November 26, at 6:00 AM ET**
  - Optional: Term Project mid-term review due **Tuesday, November 26, at 6:00 AM ET** (submit at the "Assignments" section at the left-hand course menu.)

**Live Classrooms:**

- Wednesday, November 20, 7:00-9:00 PM ET.** Instructor office hour: right after the live classroom

- Facilitator live session: TBD

## Module 5 Study Guide and Deliverables

November 26 - December 2

**Readings:** Module 5 Online Lecture

*Eloquent JavaScript*, Haverbeke

- This optional text covers supplementary and more advanced materials related to this week's topics.

**Discussions:** Discussion 5 postings end **Tuesday, December 3, at 6:00 AM ET**

**Self-Assessment:** Practice Quiz 5

**Assessment:**

**Assignments:** Assignment 5 due **Tuesday, December 3, at 6:00 AM ET**

**Live Classrooms:**

- Wednesday, November 27, 7:00-9:00 PM ET.** Instructor office hour: right after the live classroom

- Facilitator live session: TBD

## Module 6 Study Guide and Deliverables

December 3 - December 9

**Readings:** Module 6 Online Lecture

*Eloquent JavaScript*, Haverbeke

- This optional text covers supplementary and more advanced materials related to this week's topics.

**Discussions:** Discussion 6 postings end **Tuesday, December 10, at 6:00 AM ET**

**Self-Assessment:** Practice Quiz 6

**Assignments:**

- Assignment 6 due **Tuesday, December 10, at 6:00 AM ET**
- Term Project due **Tuesday, December 10, at 6:00 AM ET**

**Live** • **Wednesday, December 4, 7:00-9:00 PM**

**Classrooms:** ET. Instructor office hour: right after the live classroom  
• Facilitator live session: TBD

**Course Evaluation:** Please complete the [course evaluation](#) once you

receive an email or Blackboard notification indicating the evaluation is open. Your feedback is important to MET, as it helps us make improvements to the program and the course for future students

## Final Exam Details

The Final Exam is a proctored exam available from **Wednesday, December 11, at 6:00 AM ET to Saturday, December 14, at 11:59 PM ET**.

The Computer Science department requires that all final exams be administered using an online proctoring service that you will access via your course in Blackboard. Additional information 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 exam is accessible only during the final exam period. You can access it from the Assessments section of the course. Your proctor will enter the password to start the exam.

Final Exam Duration: 3 hours.

The exam is open book/open notes. It features multiple-choice, true/false, and essay questions. Some of the essay questions will require you to write code examples.

Here are the options regarding materials that can be used during the exam:

- Use of any printed and/or electronic materials (such as PDFs) is allowed. Electronic lecture notes from the course are permitted.
- Use of a standard handheld and/or desktop calculator is allowed. Online calculators are not permitted.
- Use of three pieces of blank scratch paper is allowed.

## Course Grading Information

The course grade will be based on active class participation and discussions, weekly assignments, a proctored final exam, and a term project. Assignments are expected to be submitted by their respective due dates. Late submissions may carry a penalty.

### Grading Policy

All students will be expected to demonstrate competency of the languages and concepts covered in this course.

### Grading Structure and Distribution

The grade for the course is determined by the following:

Final Exam:	30%
Term Project:	30%
Assignments:	30%
Discussions:	10%

# Final Course Grade

The following ranges determine the final course grade:

Letter Grade	Final Percentage Score
A	96–100
A–	91–95.99
B+	86–90.99
B	81–85.99
B–	76–80.99
C+	71–75.99
C	66–70.99
C–	61–65.99
D	56–60.99
F	0–55.99

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 with the assignments, term project, discussions and final exam. The final grade *may* be curved at the discretion of the Instructor.

## Assignments, Exams and Discussions

### Live Classrooms

A Live Classroom session will be provided weekly during this course. Days/times will be posted in the announcements area. Students are not required to attend and recordings will be provided when possible. Material presented during these sessions may be included in the final exam.

### Participation

Graded Discussions – Students will be participating in discussions that will be graded on a 100-point scale: [go to the Discussion Rubric](#). To participate discussions, go to the "My Group" section (left-hand course menu).

## Assignments

Students will complete one assignment each module. Check each assignment's directions and submit via the "Assignments" section (left-hand course menu).

## Term Project: Online Portfolio

Students will deliver an online portfolio application built by utilizing the technologies presented in this course. Students may elect to work on a different project as long as it is approved in advance by their facilitator. Check the Term Project direction and submit via the "Assignments" section (left-hand course menu).

## Proctored Final Exam

There will be a proctored Final Exam in this course. Detailed instructions regarding your proctored exam will be forthcoming from the Assessment Administrator. You will be responsible for scheduling your own appointment. Access from the "Assessments" section (left-hand course menu).

## Course Expectations

Many learning activities require sharing your assignments and opinions with your classmates. For example, you may be given a set of criteria on the basis of which to evaluate other classmates' assignments, and asked to submit the results to your facilitator by a specified day of the week. It is, therefore, very important that you, as well as your classmates, submit your assignments on a timely basis. Timely submission by all will result in each of you being able to evaluate each other's assignments. Due dates will be indicated for each assignment in the Assignments section of the course.

## Delays

If, for any reason, you are unable to meet any assignment deadline, contact your Course Facilitator. All times mentioned in the course (unless otherwise specified) are in Eastern Time. All assignments must be completed and must be turned in by their due dates and due times. Extensions may be granted, though only under mitigating circumstances.

### Late Work Policy:

Each assignment has a strict deadline. However, you are still allowed to submit your assignment within 2 days after the deadline with a penalty; 15%

of the credit will be deducted unless you made previous arrangements with your facilitator and professor. Assignments submitted more than 2 days after the deadline will not be graded.

## Discussion Grading Rubric

Graded discussion periods are held Day 1 of each module until 6:00 a.m. ET on Day 1 of the following module. You're certainly welcome to continue a discussion past the grading period, but that additional posted material will not affect your discussion grade. The discussion grading rubric below is the guide we use to evaluate your discussion contributions.

Discussion Grading Rubric					
Criteria	51–60	61–70	71–80	81–90	91–100
<b>Participation</b>	Very limited participation	Participation generally lacks frequency or relevance	Reasonably useful relevant participation during the discussion period	Frequently relevant and consistent participation throughout the discussion period	Continually relevant and consistent participation throughout the discussion period
<b>Community</b>	Mostly indifferent to discussion	Little effort to keep discussions going or provide help	Reasonable effort to respond thoughtfully, provide help, and/or keep discussions going	Often responds thoughtfully in a way that frequently keeps discussions going and provides help	Continually responds thoughtfully in a way that consistently keeps discussions going and provides help
<b>Content</b>	No useful, on-topic, or interesting information, ideas or analysis	Hardly any useful, on-topic, or interesting information, ideas or analysis	Reasonably useful, on-topic, and interesting information, ideas and/or analysis	Frequently useful, on-topic, and interesting information, ideas and analysis	Exceptionally useful, on-topic, and interesting information, ideas and analysis

<b>Reflection and Synthesis</b>	No significant effort to clarify, summarize or synthesize topics raised in discussions	Contributes to group's effort to clarify, summarize or synthesize topics raised in discussions	Leads group's effort to clarify, summarize or synthesize topics raised in discussions
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In addition to the rubric above, please read the Discussion Grading Guidelines below, which will be used in conjunction with the grading rubric above. The following guidelines are a bit more objective and quantifiable to understanding how your discussion efforts will be scored. The intention of sharing these guidelines is to provide some additional transparency to the grading process and to allow you to understand what some of our minimum expectations are regarding weekly discussions.

## Discussion Grading Guidelines

1. Initial discussion posts by students should be *at least* one paragraph in length (four to five sentences). Posts smaller than this will not be counted towards your grade. Replies and responses to other students are not subject to this minimum length requirement, but should be *meaningful*, see below.
2. All posts should be *meaningful*, which means:
  - a. What you post should be worthwhile, don't just post something to try to meet the requirements.
  - b. Posts should be well developed. The content of your post must demonstrate an understanding of the subject.
  - c. You should be providing information that is helpful in facilitating discussion. Simple statements such as "Good job!" or "I agree with you" does not contribute to the discussion in a meaningful way.
  - d. Give reasons for any opinions that you share.
  - e. Posts should be to the point and clearly stated with correct spelling and grammar.
  - f. Be sure to include outside resources if applicable.
3. **Answer, respond, and reply.** Students should post at a minimum:
  - a. An original, *meaningful answer* to the discussion prompt
  - b. A *meaningful response* to another student's original response
  - c. A *meaningful reply* to another student's response to their discussion
  - d. Doing only this, all on one day: 70%. Score can be lower if there are quality concerns for any of the parts a-f above.
  - e. Doing only this, over two or more days: 80%. Score can be lower if quality is low for any of the parts a-f above.
  - f. The original answer should be provided before midnight on Friday (EST) of each week, if not, subtract 5% from their score for late participation involvement.
4. To score higher than an 80%, students must exceed the minimum requirements outlined in parts 1-3 above. Factors that can raise a student's discussion score include:
  - a. Quality of posts

- b. Number of posts
- c. Frequency of posts
- d. Posts that have resulted in a significant number of responses
- e. Above average effort (size, significant research, etc.)

## Academic Conduct Policy

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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

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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

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

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

## Who's Who: Roles and Responsibilities

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

## People in Your Online Course in Addition to Your Fellow Students

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

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

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

## People Not in Your Online Course

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

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

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

**Professor Guanglan Zhang, Computer Science Department Chairman.** You can reach Professor Zhang at [guanglan@bu.edu](mailto:guanglan@bu.edu) or at 617-358-5688.

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

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

## Disability and Access Services

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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](mailto: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

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

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

### Ask Yourself...

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

## Writing

When you are writing, please follow these rules:

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

- **When appropriate, cite sources.** When referencing the work or opinions of others, make sure to use correct citations.

## Reading

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

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

### Important Note

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

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

## Registration Information and Important Dates

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

[Withdraw or drop your course.](#)

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

## Technical Support

## Help Desk

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

# Technology Requirements and Resources

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

## System Requirements

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

## Downloads

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

## Recommended Hardware

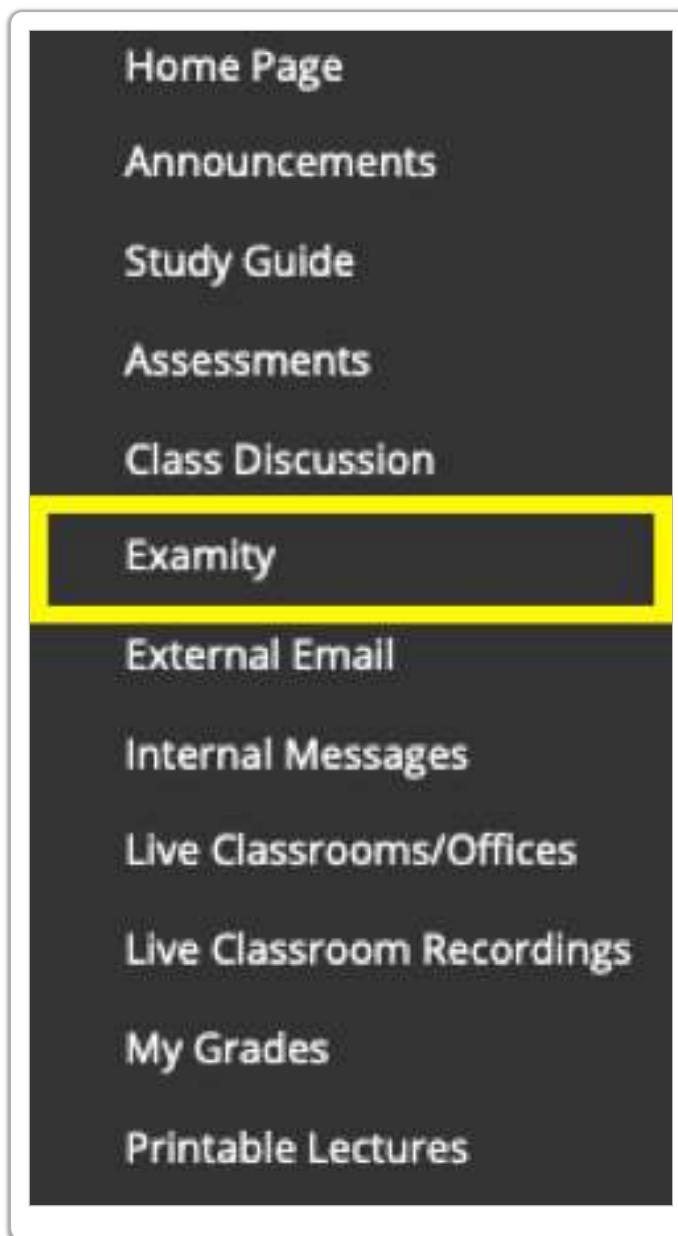
- Desktop or laptop computer recommended for best experience, some course functionality including proctored exams are not compatible with phones or tablets
- Headset with built-in microphone for high quality audio during live classroom sessions
- Webcam (required for proctored exams)
- Working computer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

# Clearing Your Browser Cache

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

## Proctored Exams

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



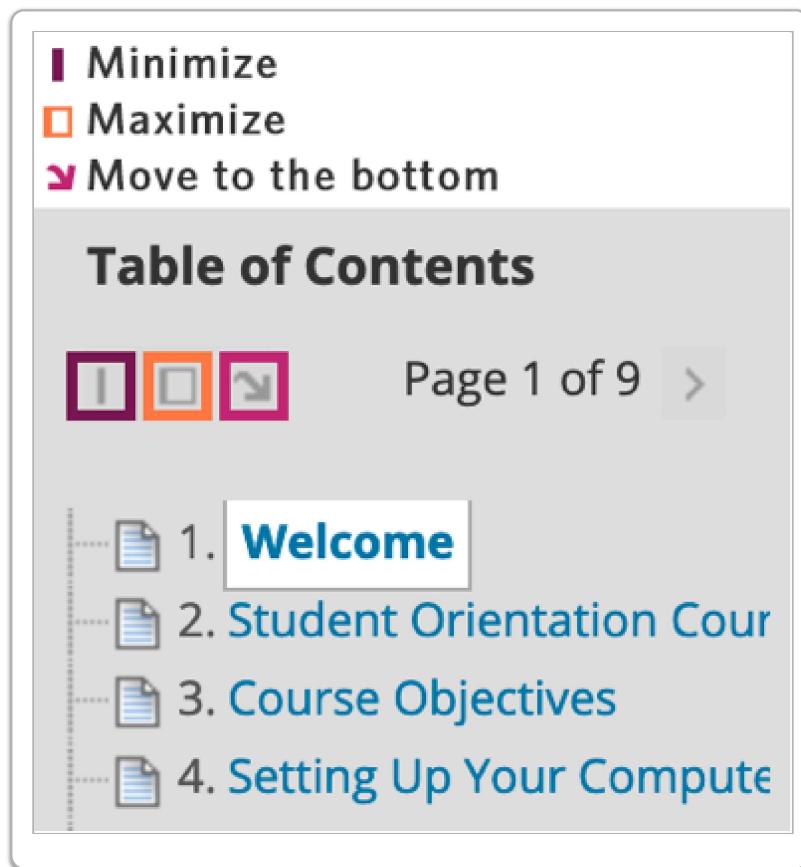
# Navigating Courses

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

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

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

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



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

**DE Student Orientation** 

**(2020 Spring 2)**

Home Page

Announcements

Assessments

Assignments

Calendar

Class Discussion

External Email

Internal Messages

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	<a href="#">6. Disability Services</a>
	<a href="#">7. Netiquette</a>
	<a href="#">8. Registration Information</a>
	<a href="#">9. Technical Support</a>

Boston University Metropolitan College