MET CS521 2017 Spring 2 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.

Description

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

MET CS 521

Information Structures with Python

This course covers the concepts of the object-oriented approach to software design and development using the Python programming language. It includes a detailed discussion of programming concepts starting with the fundamentals of data types, control structures methods, classes, arrays and strings, and proceeding to advanced topics such as inheritance and polymorphism, creating user interfaces, exceptions and streams. Upon completion of this course students will be capable of applying software engineering principles to design and implement Python applications that can be used in conjunction with analytics and big data.

Technical Note

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.

Learning Objectives

By successfully completing this course you will be able to:

- Write functional programs using the Python programming language

- Organize and modularize programs

- Understand and apply object-oriented program design and development

- Apply various data types and control structures

- Understand variable scoping

- Use class inheritance and polymorphism

- Handle exceptions and write customer exceptions

- Use python to write to and read from files and databases

- Understand and begin to implement secure, robust, and scalable code

Instructor

George Ultrino

Boston University

Metropolitan College

Computer Science Department

808 Commonwealth Avenue, Room 258

Boston, MA 02215

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George Ultrino studied Computer Information Systems Security at Boston University, and has been facilitating and teaching at BU since 2010. He also holds a CISSP verification. He has taught graduate courses in Database Security and facilitated CS521 and CS625. His experience includes quality

engineering, radar, telecommunications, networking, security and programming. His current research interests include network and data security.

Original Course Developer

Eric Braude, PhD

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Eric Braude received his Ph.D. from Columbia University in mathematics and Master's in Computer Science from the University of Miami. He taught at CUNY and Penn State, followed by twelve years in government and industry as a software engineer, scientist, and manager. He is an Associate Professor of Computer Science at Boston University's Metropolitan College where he has at times held the chairmanship and the acting associate deanship. His research concerns reliable program construction. Eric has written, co-written, or edited six books, including "Software Engineering" and "Software Design." His most recent papers appeared in *Science of Programming* in 2014 and at the *Learning@Scale* 2015 conference.

(For a complete resume, see http://www.bu.edu/csmet/files/2014/07/Professor-Eric-Braude_Resume.pdf.)

Materials

Required Book

Contemporary programming languages like Python enjoy rich online documentation. Indeed, they are built on the premise that programmers are continually in contact with such documentation, and are not expected to memorize any but a small fraction of it. The textbook for the course is below. There will be readings from the text weekly. The test will be used in conjunction with the online course modules and online Python documentation.
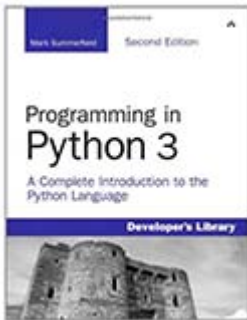
Summerfield, M. (2009). *Programming in Python 3: A Complete Introduction to the Python Language* **(2nd ed.).**

Addison-Wesley Professional.

ISBN-13: 978-0321680563

ISBN-10: 0321680561

This book can be purchased from Barnes and Noble at Boston University.

Recommended Book

Zelle, J. M. (2010). *Python programming: An introduction to computer science* **(2nd ed.).**

Wilsonville, OR: Franklin, Beedle & Associates.

ISBN-13: 978-1590282410

ISBN-10: 1590282418

This book can be purchased from Barnes and Noble at Boston University.

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 is displayed here

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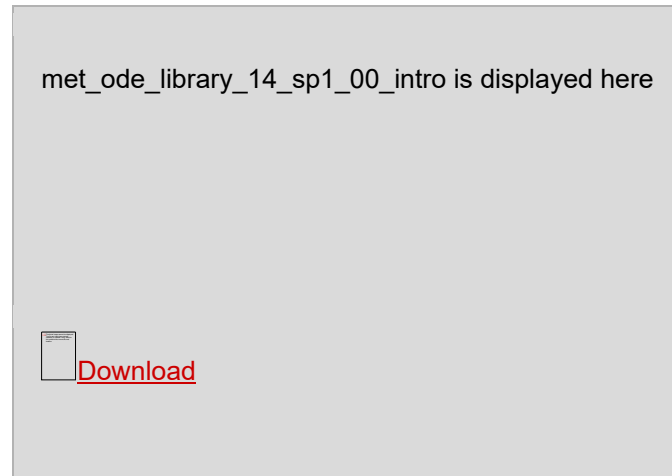
All of the videos in the series are available on the Online Library Resources page, which is also accessible from the Campus Bookmarks section of your Online Campus Dashboard. Please feel free to make use of them.

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

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

Go to http://www.bu.edu/library/research/collections to access eBooks and eJournals directly.

If you have questions about library resources, go to http://www.bu.edu/library/help/ask-a-librarian to email the library or use the live-chat feature.

To locate course eReserves, go to http://www.bu.edu/library/services/reserves.

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

Free Tutoring Service

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

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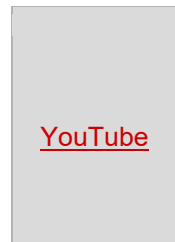
Please Note

The SMARTHINKING service can be used for Boston University online class work only. Use of this service for personal purposes or for anything other than Boston University online class work will result in deactivation of your SMARTHINKING account.

Grading Information

The grade for the course is determined by the following:

Overall Grading Percentages	
Assignments 1-3	15%
Quizzes 1-5	10%
Project 1-3	45%
Final Exam	30%

The evaluation criteria for assignments are shown below--otherwise, stated with the assignment.

Letter Grade	Approximate Percentage Grade Range	When To Give

A	95-100	The student's submission is excellent and without defect. The submission demonstrates mastery of the material.
A-	90-94.9	The student's submission is excellent with some minor defects. The submission demonstrates a solid grasp of the material.
B+	85-89.9	The student's submission is good with a few defects. The submission demonstrates a solid grasp of most but not all of the material.
B	80-84.9	The student's submission is above average with some defects. The submission demonstrates a solid grasp of some aspects of the material.

B-	75-79.9	The student's submission is approaching average. The submission demonstrates a grasp and understanding of some aspects of the material.
C+	70-74.9	The student's submission is average and has some moderate defects. The submission demonstrates a minimal grasp and understanding of the material.
C	65-59.9	The student's submission is average and has some major defects. The submission demonstrates a basic understanding of the material but nothing more.
C-	60-64.9	The student's submission is below average and has some major defects. The submission demonstrates a barebones understanding of the material but nothing more.

D	50-60	The student's submission is poor. Sections may be missing from the submission. The submission does not demonstrate an understanding of the material at even a basic level.
F	0-49.9	The student's submission is unacceptable. Sections may be missing from the submission. The submission does not demonstrate an understanding of the material in any fashion.

Assignments

Homework assignments are focused on applying theory learned in the week's module by writing Python programs. Assignment submissions should be a single .py file of your Python code.

Quizzes

Quizzes are designed to assess your understanding of the material, on a week by week, basis. This will allow the teaching team, and yourself, to assess where you are and how we can help. These are open book, but I recommend not using the text or internet, or PyCharm to answer. You will see similar questions on the final, which is closed book.

Project

There will be a cumulative project that will demonstrate your python skill level and understanding of all of the topics covered in the course. The project will be given in three iterations and each will build on the previous assignment. The iterations will be release in a staggered method.

Proctored Final Exam

The final exam will cover concepts from modules 1–6. The final exam is open ~~exam `is closed~~ book with 24 multiple choice questions, worth 3 points each, 1 code output worth 3 points. There are an additional 25 questions that use two different code examples. Each of these questions are worth 1 point each. You will be allowed scratch paper and the required text. You will not be allowed access to PyCharm or the web.

Expectations

Due dates will be indicated for each assignment in the assignments section of the course and in the Study Guide. If, for any reason, you are unable to meet any assignment deadline, contact your facilitator. All times mentioned in the course (unless otherwise specified) are in Eastern Time. All assignments must be turned in by their due dates and due times. 10 points will be deducted from your grade, for each late day, up to 48 hours past the due date. After 48 hours, a grade of 0 will be assessed. Extensions may be granted for extenuating circumstances if approved PRIOR to the due date. Contact your facilitator. Too busy, difficult assignments etc. ARE NOT considered extenuating circumstances.

Study Guide

Module 1 Study Guide and Deliverables

Readings:
- Online lectures
- **Summerfield** – Chapter 1; Chapters 2; Chapter 3 - Lists, tuples, dictionaries (basics); Chapter 4 – Control Structures only

Discussions: Optional Discussion 1 postings end March 21 at 5:00 AM ET

Assessments: Quiz 1 due Saturday, March 18 at 5:00 AM ET

Assignments: Assignment 1 due Tuesday, March 21 at 5:00 AM ET

Live   Tuesday, March 14 from 8:00-9:30 PM ET

Classrooms: Thursday, March 16 from 8:00-9:30 PM ET

Module 2 Study Guide and Deliverables

Readings:
- Online lectures
- **Summerfield** – Chapter 4 – pgs. 170-191; Chapter 5 - pgs. 195-202; and Chapter 7 - pgs. 305-309
- Online notes and references cited there

Discussions: Optional Discussion 2 postings end March 28 at 5:00 AM ET

Assessments: Quiz 2 due Saturday, March 25 at 5:00 AM ET

Assignments: Assignment 2 due Tuesday, March 28 at 5:00 AM ET

Live   Tuesday, March 21 from 8:00-9:30 PM ET

Classrooms: Thursday, March 23 from 8:00-9:30 PM ET

Module 3 Study Guide and Deliverables

Readings:
- Online lectures
- **Summerfield** – Chapter 6 - pgs. 233-245

Discussions: Optional Discussion 3 postings end April 4 at 5:00 AM ET

Assessments: Quiz 3 due Saturday, April 1 at 5:00 AM ET

Assignments: Assignment 3 due Tuesday, April 4 at 5:00 AM ET

Live Classrooms: Tuesday, March 28 from 8:00-9:30 PM ET

Thursday, March 30 from 8:00-9:30 PM ET

Module 4 Study Guide and Deliverables

Readings:
- Online lectures
- **Summerfield** – Chapter 4 Exception Handling - pgs. 163-171
- References cited in notes

Discussions: Optional Discussion 4 postings end April 11 at 5:00 AM ET

Assessments: Quiz 4 due Saturday, April 8 at 5:00 AM ET

Assignments: Project Part 1 due Tuesday, April 11 at 5:00 AM ET.

Available Tuesday of Module 3, March 28

Live Classrooms: Tuesday, April 4 from 8:00-9:30 PM ET

Thursday, April 6 from 8:00-9:30 PM ET

Module 5 Study Guide and Deliverables

Readings:
- Online lectures
- References cited in notes
- **Summerfield** – Chapter 12 – pgs. 480-487
- https://docs.python.org/3/tutorial/datastructures.html section 5.1.1 and 5.1.2

Discussions: Optional Discussion 5 postings end April 18 at 5:00 AM ET

Assessments: Quiz 5 due Saturday, April 15 at 5:00 AM ET

Assignments: Project Part 2 due Tuesday, April 18 at 5:00 AM ET.

Available Tuesday of Module 4, April 4

Live	Tuesday, April 11 from 8:00-9:30 PM ET
Classrooms:	Thursday, April 13 from 8:00-9:30 PM ET

Module 6 Study Guide and Deliverables

Readings:
- Online lectures
- References cited in notes
- https://docs.python.org/2/tutorial/stdlib2.html#multi-threading
- **Summerfield** – Chapter 3 – Mapping types and Sets; pgs. 120-158

Discussions: Optional Discussion 6 postings end April 25 at 5:00 AM ET

Assessments: none

Assignments: Project Part 3 due Tuesday, April 25 at 5:00 AM ET

Available Tuesday of Module 5, April 11

Live Classrooms: Tuesday, April 18 from 8:00-9:30 PM ET

Thursday, April 20 from 8:00-9:30 PM ET

Final Exam Details

The Final Exam is a proctored exam available from **Wednesday, April 26 at 6:00 AM ET to Saturday, April 29 at 11:59 PM ET**. The Computer Science department requires that all final exams be proctored.

You will be responsible for setting up your own appointment with an approved proctoring option. Further information about the testing centers will be forthcoming from the exam coordinator.

The exam will only be accessible during the final exam period. You can access it from the Assessments section of the course. Your proctor will enter the password to start the exam.

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

Academic Conduct Policy

For the full text of the academic conduct code, please go to http://www.bu.edu/met/for-students/met-policies-procedures-resources/academic-conduct-code/.

A Definition of Plagiarism

"The academic counterpart of the bank embezzler and of the manufacturer who mislabels products is the plagiarist: the student or scholar who leads readers to believe that what they are reading is the original work of the writer when it is not. If it could be assumed that the distinction between plagiarism and honest use of sources is perfectly clear in everyone's mind, there would be no need for the explanation that follows; merely the warning with which this definition concludes would be enough. But it is apparent that sometimes people of goodwill draw the suspicion of guilt upon themselves (and, indeed, are guilty) simply because they are not aware of the illegitimacy of certain kinds of "borrowing" and of the procedures for correct identification of materials other than those gained through independent research and reflection."

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

"Between these poles there are degrees and degrees, but they may be roughly placed in two groups. Close to outright and blatant deceit-but more the result, perhaps, of laziness than of bad intent-is the patching together of random jottings made in the course of reading, generally without careful identification of their source, and then woven into the

text, so that the result is a mosaic of other people's ideas and words, the writer's sole contribution being the cement to hold the pieces together. Indicative of more effort and, for that reason, somewhat closer to honest, though still dishonest, is the paraphrase, and abbreviated (and often skillfully prepared) restatement of someone else's analysis or conclusion, without acknowledgment that another person's text has been the basis for the recapitulation."

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

Academic Conduct Code

I.   **Philosophy of Discipline**

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

II.   **Academic Misconduct**

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

III.   **Violations of this Code**

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

A. **Cheating on examination**. Any attempt by a student to alter his or her performance on an examination in violation of that examination's stated or commonly understood ground rules.

B. **Plagiarism.** Representing the work of another as one's own. Plagiarism includes but is not limited to the following: copying the answers of another student on an examination, copying or restating the work or ideas of another person or persons in any oral or written work (printed or electronic) without citing the appropriate source, and collaborating with someone else in an academic endeavor without acknowledging his or her contribution. Plagiarism can consist of acts of commission-appropriating the words or ideas of another- or omission failing to acknowledge/document/credit the source or creator of words or ideas (see below for a detailed definition of plagiarism). It also includes colluding with someone else in an academic endeavor without acknowledging his or her contribution, using audio or video footage that comes from another source (including work done by another student) without permission and acknowledgement of that source.

C. **Misrepresentation or falsification of data** presented for surveys, experiments, reports, etc., which includes but is not limited to: citing authors that do not exist; citing interviews that never took place, or field work that was not completed.

D. **Theft of an examination**. Stealing or otherwise discovering and/or making known to others the contents of an examination that has not yet been administered.

E. **Unauthorized communication during examinations**. Any unauthorized communication may be considered prima facie evidence of cheating.

F. **Knowingly allowing another student to represent your work as his or her own**. This includes providing a copy of your paper or laboratory report to another student without the explicit permission of the instructor(s).

G. **Forgery, alteration, or knowing misuse of graded examinations, quizzes, grade lists, or official records of documents**, including but not limited to transcripts from any institution, letters of recommendation, degree certificates, examinations, quizzes, or other work after submission.

H. **Theft or destruction of examinations or papers** after submission.

I. **Submitting the same work in more than one course** without the consent of instructors.

J. **Altering or destroying another student's work or records**, altering records of any kind, removing materials from libraries or offices without consent, or in any way interfering with the work of others so as to impede their academic performance.

K. **Violation of the rules governing teamwork**. Unless the instructor of a course otherwise specifically provides instructions to the contrary, the following rules apply to teamwork: 1. No team member shall intentionally restrict or inhibit another team member's access to team meetings, team work-in-progress, or other team activities without the express authorization of the instructor. 2. All team members shall be held responsible for the content of all teamwork submitted for evaluation as if each team member had individually submitted the entire work product of their team as their own work.

L. **Failure to sit in a specifically assigned seat during examinations.**

M. **Conduct in a professional field assignment that violates the policies and regulations of the host school or agency.**

N. **Conduct in violation of public law occurring outside the University that directly affects the academic and professional status of the student, after civil authorities have imposed sanctions.**

O. **Attempting improperly to influence the award of any credit, grade, or honor.**

P. **Intentionally making false statements to the Academic Conduct Committee or intentionally presenting false information to the Committee.**

Q. **Failure to comply with the sanctions imposed under the authority of this code.**

Important Message on Final Exams

Dear Boston University Computer Science Online Student,

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

By requiring proctored finals, we are ensuring the excellence and fairness of our program. The final exam is administered online, and the access will be available at the exam sites.

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

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

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

Regards,

Professor Lou Chitkushev, Ph.D.

Associate Dean for Academic Affairs

Boston University Metropolitan College

Who's Who: Roles and Responsibilities

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

People in Your Online Course in Addition to Your Fellow Students

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

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

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

People Not in Your Online Course

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

Your Computer Science Department Online Program Coordinator, Peter Mirza. Peter administers the academic aspects of the program, including admissions and registration. You can ask him questions

about the program, registration, course offerings, graduation, or any other program-related topic. He can be reached at metcsol@bu.edu or (617) 353-2566.

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

Andrew Gorlin, Academic Advisor. Reviews requests for transfer credits and waivers and advises students on which courses to take to meet their career goals. He can be reached at asgorlin@bu.edu.

Your Faculty Coordinator of the MSCIS Online Program, Andrew Wolfe. Andrew is responsible for the MSCIS online program. Feel free to contact him at awolfe@bu.edu or (617) 358-1984.

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 Andrew Wolfe, then Professor Temkin, and then Professor Chitkushev.

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

Disability Services

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

Netiquette

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

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

Ask Yourself...

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

Writing

When you are writing, please follow these rules:

- **Stay polite and positive in your communications**. You can and should disagree and participate in discussions with vigor; however, when able, be constructive with your comments.

- **Proofread your comments before you post them.** Remember that your comments are permanent.

- **Pay attention to your tone.** Without the benefit of facial expressions and body language your intended tone or the meaning of the message can be misconstrued.

- **Be thoughtful and remember that classmates' experience levels may vary.** You may want to include background information that is not obvious to all readers.

- **Stay on message.** When adding to existing messages, try to maintain the theme of the comments previously posted. If you want to change the topic, simply start another thread rather than disrupt the current conversation.

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

Reading

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

- **Respect people's privacy.** Don't assume that information shared with you is public; your peers may not want personal information shared. Please check with them before sharing their information.

- **Be forgiving of other students' and instructors' mistakes.** There are many reasons for typos and misinterpretations. Be gracious and forgive other's mistakes or privately point them out politely.

- **If a comment upsets or offends you, reread it and/or take some time before responding.**

Important Note

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

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

Registration Information and Important Dates

View the drop dates for your course.

Withdraw or drop your course.

- If you are dropping down to zero credits for a semester, please contact your college or academic department.
- **Nonparticipation in your online course does not constitute a withdrawal from the class.**
- If you are unable to drop yourself on student link please contact your college or academic department.

* The Student Services fee is nonrefundable.

Technical Support

Experiencing issues with BU websites or Blackboard?

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

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

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

- Problems viewing or listening to sound or video files

- Problems accessing internal messages

- Problems viewing or posting comments

- Problems attaching or uploading files for assignments or discussions

- Problems accessing or submitting an assessment

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

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

# Navigating Courses

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

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

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

Navigation tools for the Table of Contents are shown in the image below:
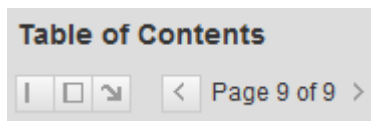
Clicking on the space between the Course Menu and the Table of Contents allows you to show or hide the Course Menu on the left:
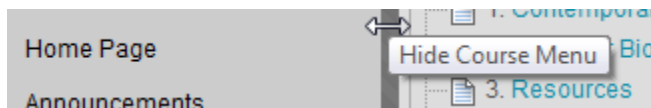
Web Resources/Browser Plug-Ins

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

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

How to Clear Your Browser Cache

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

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