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 767

Machine Learning

Theories and methods for automating and representing knowledge with an emphasis on learning from input/output data. The course covers a wide variety of approaches, including Supervised Learning, Neural Nets and Deep Learning, Competitive Learning, Bayesian Learning, and Genetic Algorithms.

Prerequisites: CS 521 and CS 682 or instructor consent.

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, depending on the settings of your browser.

Learning Objectives

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

1. Distinguish between main machine learning techniques: Classification, neural nets, and rules.
2. Compare how the main machine-learning techniques can be applied.
3. Implement more than one of these techniques in a significant manner.

Instructor

Vineet Raghu, Ph.D

Computer Science Department
Metropolitan College
Boston University

Email: vraghu@bu.edu

Dr. Vineet Raghu is an Instructor of Radiology at the Massachusetts General Hospital and Harvard Medical School and a part-time lecturer at BU MET CS. His research focuses on the use of deep learning to measure aging and predict risk of major age-related chronic disease from common medical imaging, genetics, and genomic data. His current research projects aim to 1) estimate risk of death, chronic lung disease, and cardiovascular disease from x-rays of the chest, 2) estimate risk of cardiovascular disease from pictures of the back of the eye, and 3) estimate aging from whole-body x-ray scans and genetics.

Vineet obtained his bachelor's degree in Computer Science and Mathematical Biology and his Ph.D. in Computer Science from the University of Pittsburgh. He served as a teaching assistant for six undergraduate

courses during his graduate program.

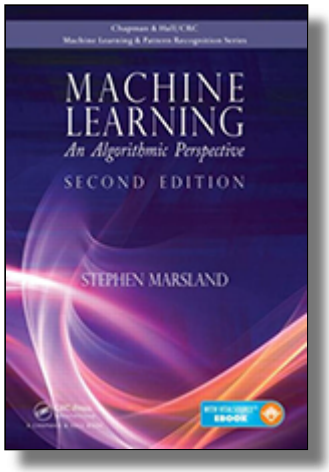
Course Developer: Eric Braude, Ph.D.

Eric received his Ph.D. in mathematics from Columbia University and master's degree in computer science from the University of Miami. He taught at CUNY and Penn State, followed by 12 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 program construction and machine learning. Eric has written, cowritten, or edited six books, including *Software Engineering* and *Software Design*. His current research includes the application of neural nets to recovery from failure in IoT, embedded UML for agile development and automatic theorem synthesis, and proving for plain geometry.

Read Professor Braude's complete resume.

Materials

Required Book



Marsland, Stephen. (2014). *Machine Learning: An Algorithmic Perspective* (2nd ed.).
Publisher: Taylor & Francis

ISBN-13: 978-1466583283
ISBN-10: 1466583282

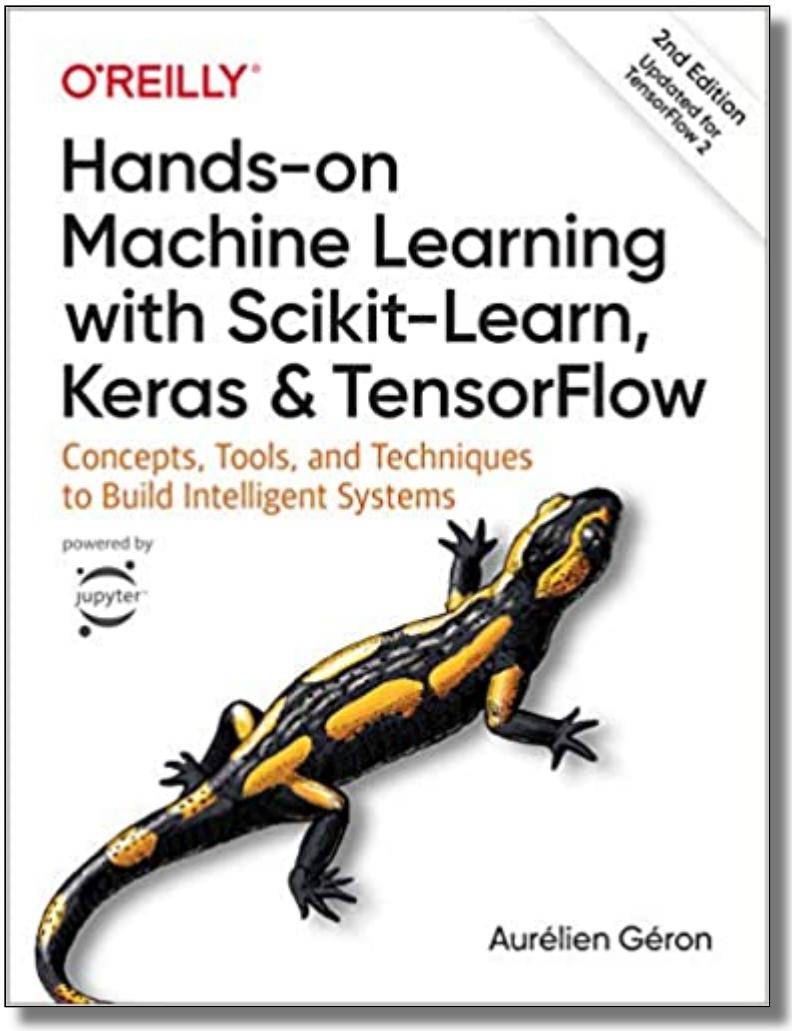
This book can be purchased from Barnes & Noble at Boston University.

This textbook will be referred to in syllabus as "Marsland Book".

Géron, Aurélien. (2019). *Hands-On Machine Learning with Scikit-Learn, Keras, and TensorFlow: Concepts, Tools, and Techniques to Build Intelligent Systems* (2nd ed.).
Publisher: O'Reilly Media

ISBN-13: 978-1492032649
ISBN-10: 1492032646

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



This textbook will be referred to in syllabus as "Géron Book".

Tools and Technology Requirements

Students will use Python and TensorFlow, both freely available.

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

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—even if you do not live in Boston. 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.

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

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

YouTube

Please Note

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

Study Guide

Module 1 Study Guide and Deliverables

Module Theme:	Machine Learning Introduction: • Introduction to Classification, Neural Nets, Expert Systems • Introduction to Genetic Algorithms and Bayesian Learning
Readings:	• Part I: Marsland Book Chapter 3, pp. 39-43, and Chapter 8, p. 169

- Part II: Marsland Book Chapter 1 and Chapter 10, pp. 211-214
- Géron Book pp. 175-178
- Module 1 online content

Assignments:

- Self-Introduction due Thursday, May 12, at 11:59 PM ET (not graded; access at "Class Discussion" on the left-hand course menu)
- Draft Assignment 1 due Sunday, May 15, at 6:00 AM ET
- Assignment 1, due Wednesday, May 18, at 6:00 AM ET

Live Classrooms:

- Tuesday, May 10, from 8:00 PM to 9:00 PM ET
- Thursday, May 12, from 8:00 PM to 9:00 PM ET
- Live Office:
  - Tuesday and Thursday after Live Classroom, for as long as there are questions
  - TBD

Module 2 Study Guide and Deliverables

Module Theme: Learning from Data and Neural Nets, Part I

Readings:

- Unsupervised Learning: Marsland Book p. 281
- k-Means: Marsland Book pp. 282-287
- Learning with Neural Nets, Part I: Marsland Book pp. 15-20, 43-49, Géron Book pp. 279-295
- Module 2 online content

Assignments:

- Draft Assignment 2 due Sunday, May 22, at 6:00 AM ET

	• Assignment 2, due Wednesday, May 25, at 6:00 AM ET

Live Classrooms:	• Tuesday, May 17, from 8:00 PM to 9:00 PM ET
	• Thursday, May 19, from 8:00 PM to 9:00 PM ET
	• Live Office:
	  ◦ Tuesday and Thursday after Live Classroom, for as long as there are questions
	  ◦ TBD

Module 3 Study Guide and Deliverables

Module Theme:	Neural Nets, Part II: Backpropagation and Deep Learning
Readings:	• Neural Nets: Marsland Book pp. 73-85, Géron Book p. 450 • Module 3 online content
Assignments:	• Draft Assignment 3 due Sunday, May 29, at 6:00 AM ET • Assignment 3, due Wednesday, June 1, at 6:00 AM ET

Live Classrooms:	• Tuesday, May 24, from 8:00 PM to 9:00 PM ET
	• Thursday, May 26, from 8:00 PM to 9:00 PM ET
	• Live Office:
	  ◦ Tuesday and Thursday after Live Classroom, for as long as there are questions
	  ◦ TBD

Module 4 Study Guide and Deliverables

Module Theme:	Neural Nets, Part III: Recurrent Neural Nets (RNNs) and Generative Adversarial Networks (GANs)
Readings:	• Géron Book pp. 567-568 • Module 4 online content
Assignments:	• Draft Assignment 4 due Sunday, June 5, at 6:00 AM ET • Assignment 4, due Wednesday, June 8, at 6:00 AM ET

Live Classrooms:	• Tuesday, May 31, from 8:00 PM to 9:00 PM ET
	• Thursday, June 2, from 8:00 PM to 9:00 PM ET
	• Live Office:
	  ◦ Tuesday and Thursday after Live Classroom, for as long as there are questions
	  ◦ TBD

Module 5 Study Guide and Deliverables

Module Theme:	Genetic Algorithms
Readings:	• Primary: Marsland Book Chapters 10.1 and 10.2 • As time permits: Marsland Book Chapter 10.3 • Module 5 online content
Assignments:	• Draft Assignment 5 due Sunday, June 12, at 6:00 AM ET • Assignment 5, due Wednesday, June 15, at 6:00 AM ET
Live Classrooms:	• Tuesday, June 7, from 8:00 PM to 9:00 PM ET

- Thursday, June 9, from 8:00 PM to 9:00 PM ET
- Live Office:
  - Tuesday and Thursday after Live Classroom, for as long as there are questions

Module 6 Study Guide and Deliverables

Module Theme:	Bayesian Learning
Readings:	• Marsland Book Chapters 2.3 and 16.1 • Module 6 online content
Assignments:	• Optional Draft Assignment 6 due Sunday, June 19, at 6:00 AM ET • Assignment 6, due Wednesday, June 22, 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 Classrooms:	• Tuesday, June 14, from 8:00 PM to 9:00 PM ET
	• Thursday, June 16, from 8:00 PM to 9:00 PM ET
	• Live Office:
	  ◦ Tuesday and Thursday after Live Classroom, for as long as there are questions
	  ◦ TBD

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 Computer Science Department requires that all final exams be administered using an online proctoring service called Examity, which you will access via your course in Blackboard. 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 ("Proctored Final Exam Information" module on the course home page). 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 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: three hours.

The exam features essay questions. Each question is worth equal points.

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

- Use of the physical and/or eBook textbook is permitted.
- Use of a standard handheld and/or desktop calculator is allowed. Online calculators are not permitted.
- Use of any printed and/or electronic materials (such as PDFs) is allowed. You may access the course online, including graded assignments.
- There are no exclusions to the use of software.
- Use of three pieces of blank scratch paper is permitted.

Evaluation of Students and Grading

To attain excellence ("A" work), you are expected to go beyond satisfying the assignment statement essentials, and to develop your own analyses and comparisons. Additional detailed criteria are listed later in this Syllabus section.

Basis for Grades

There are three components to your grades.

1. **Draft Assignments**
    - Each Draft Assignment typically requests part of the module's assignment and is intended to help you complete the latter. You may only submit your draft assignment once, so that you can get feedback before your assignment for that module is due. We encourage you to start the draft version early in each module.
    - Draft Assignments are graded on a Pass/Fail basis, with Pass=1, Fail=0, and Neither=0.5.
    - Draft Assignment 6 in Module 6 is optional, so you can concentrate on completing your Assignment 6 during Week 6. Your draft assignments grade will be calculated from Draft Assignment 1 to Draft Assignment 5. If you do choose to complete Draft Assignment 6, its grade will replace a prior draft assignment with a 0.5 or 0.0 grade—if one exists. (There is no extra credit for Draft Assignment 6 other than this.)
    - Access and submit the Draft Assignments in the "Assignments" area.
2. **Assignments**
    - The content of the course will be explored for most students by the topical assignment each week (the direction files with a "T" in the name).
    - If you are already an advanced student or have experience with machine learning, you may decide instead to do a term-project throughout (the direction files with a "P" in the name). We recommend that you discuss the project alternative with your facilitator before selecting it to make sure it is appropriate for you.
    - You are permitted to submit and resubmit your weekly assignment unlimited times to improve your work, provided you do so before the assignment deadline for that module. Only the last on-time version will be graded.
    - The weekly assignments in total are worth 60% of the course grade. The teaching team expects your understanding to improve throughout the course. Accordingly, the first sets of assignments weigh less than the rest, so you will have opportunities to catch up along the way. The weight of assignments ramps up as follows:
        - Assignment 1 (Module 1): 7%
        - Assignment 2 (Module 2): 7%
        - Assignment 3 (Module 3): 9%
        - Assignment 4 (Module 4): 11%
        - Assignment 5 (Module 5): 13%
        - Assignment 6 (Module 6): 13%

- Access and upload the assignment in the "Assignments" area.

3. **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.
   - The grading criteria for each question are shown in the Final Exam Essay Questions Rubric below. You must provide explanation of all of your answers, and it will be subject to these criteria. The exam has occasional reminders to explain your answers.
   - Please keep the contents of the final exam confidential. Sharing details about this exam constitutes academic misconduct for both parties.
   - Access and submit the final exam in the "Assessments" area.

Grade Computations

The course grade will be computed from the following:

Overall Grading Percentages	
Draft Assignments	10
Assignments	60
Proctored Final Exam	30

Rubrics

Assignments Rubric
The term project assignments are graded according to the rubric below. These are averaged using the following guidelines: A+ = 97, A = 95, A- = 90, B+ = 87, B = 85, B- = 80 etc. When a paper is considered outstanding, a score of up to 100 can be given.

The assignment rubrics will look approximately like the following.

Criteria	**D**	**C**	**B**	**A**
Correctness	No justification of correctness	Tests, comments, and	Tests, comments, and explanations justify	Tests, comments, and explanations justify correctness extremely well;

		explanations mostly correct	correctness; honored all instructions	complete and thorough; honored all instructions
Clarity	Unclear	Explained; somewhat clear	Every class, class relationship, and method clearly specified; well commented; clear; little redundant code	Every class, class relationship, and method precisely specified; thoroughly commented; entirely clear; negligible redundant code
Understanding	Minor understanding evidenced	Satisfactory understanding evidenced	Evidence of good understanding throughout	Evidence throughout of entirely thorough understanding

Lab Rubric
The lab grades are: *Acceptably on track* (1), *Not yet acceptably on track* (0), and *Neither* (0.5).

Final Exam Essay Questions Rubric
Please respond to the following question as concretely and as clearly as you can, citing specifics from your term project (i.e., avoid generalities—statements that apply to most projects of your overall type). To demonstrate your understanding, use your own words. Where you have no clear conclusions, describe the relevant trade-offs. Each question will be evaluated using rubrics like the following.

The resulting grade is the average of these, using: A+ = 97, A = 95, A- = 90, B+ = 87, B = 85, B- = 80 etc.

Criteria	**D**	**C**	**B**	**A**
Technical Correctness	No justification of correctness	Technically mostly correct	Implementation correctness well justified; commented completely; well commented and tested	Implementation correctness thoroughly justified throughout by precise block- and line-comments and tests
Clarity in	Unclear	Somewhat	Clear with a few	Entirely clear

Presentation		clear	exceptions	throughout
Depth and Thoroughness of Coverage	Shallow or superficial coverage of most topics	Satisfactory depth and thoroughness	Evidence of depth and thoroughness in covering most topics	Evidence of depth and thoroughness in covering all topics

To get an A grade for the course, your weighted average should be >=93; for A-, >=90; B+, >=87; B, >=83; B-, >=80; etc.

By the time grades are submitted to the registrar, the class average will be approximately an 87 (B+).

Grades typically start lower, allowing room for growth as the term progresses.

> An A grade at Boston University is reserved for excellent work. If you are given and A, you are to be congratulated. The university officially designates good work as deserving of a B and we reward good work with a B accordingly. It is our obligation to tell you, as far as we can, what would improve your work. (That can sometimes be hard if you receive an A, of course.) If you don't see such feedback, please remind your facilitatorinstructor about it. Grades are an excellent motivator, but they are only means to an end rather than ends in themselves. The average grade in graduate courses is usually expected to be a B+. If the course average turns out to be less than this at the end of the term, and the class performance is not less than average, I am able to elevate some grades that fall on borderlines.

Ungraded Items:

- **Ungraded Discussion Forums:** There are ungraded discussion forums throughout the course. You are encouraged to share your knowledge and learn from your peers. Discussion forums are provided for your benefit. Some discussion forums involve the instructional staff; others are among students.
- **Live Classroom Sessions:** Live Classroom sessions will be offered during this course in Modules 1 through 6. In each module, students have a Live Classroom session with the instructor and another Live Classroom (or problem-solving session) with the facilitator. Days/times will be posted in the Study Guide and the "Announcements" area.

- Your participation, while not mandatory, will be valuable to you and the class. To participate in the Live Classroom discussion, you will need to go to the "Live Classroom/Offices" area.
- Live Classroom sessions will be recorded and archived for further viewing. You can go to the "Live Classroom Recordings" area to view the recordings.

Expectations

We recognize that emergencies occur in professional and personal lives. If one occurs that prevents your completion of homework by a deadline, please make this plan to your facilitator. This must be done in advance of the deadline (unless the emergency makes this impossible, of course), and should be accompanied by particulars that back it up. Additional documentation may be requested. **No regular credit will otherwise be granted for late homework, but we will note it and it may influence your course grade at the end of the term.**

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

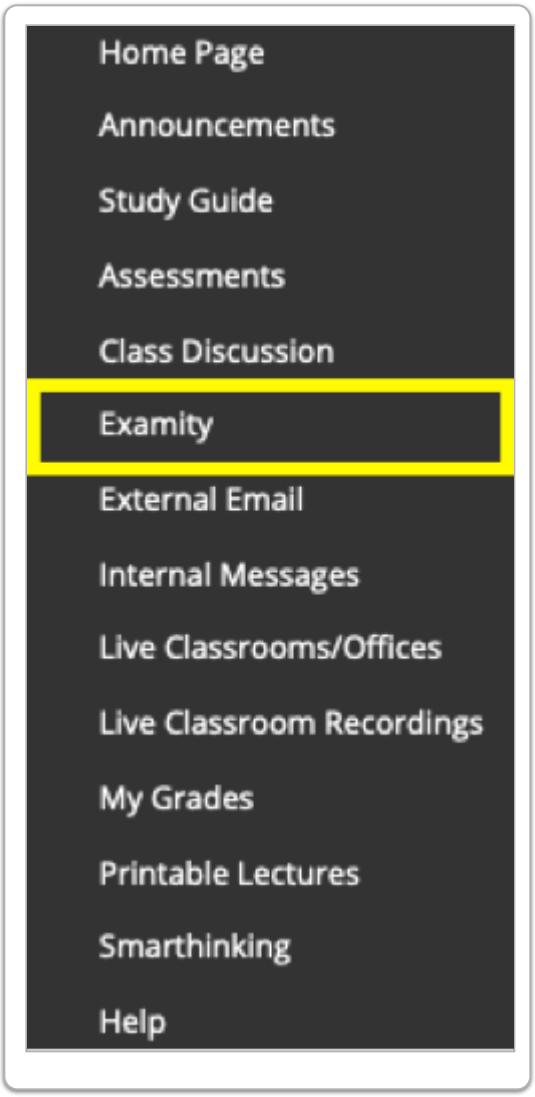
- Desktop or laptop computer recommended for best experience, some course functionality including proctored exams are not compatible with phones or tablets
- Headset with built-in microphone for high quality audio during live classroom sessions
- Webcam (required for proctored exams)
- Working computer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



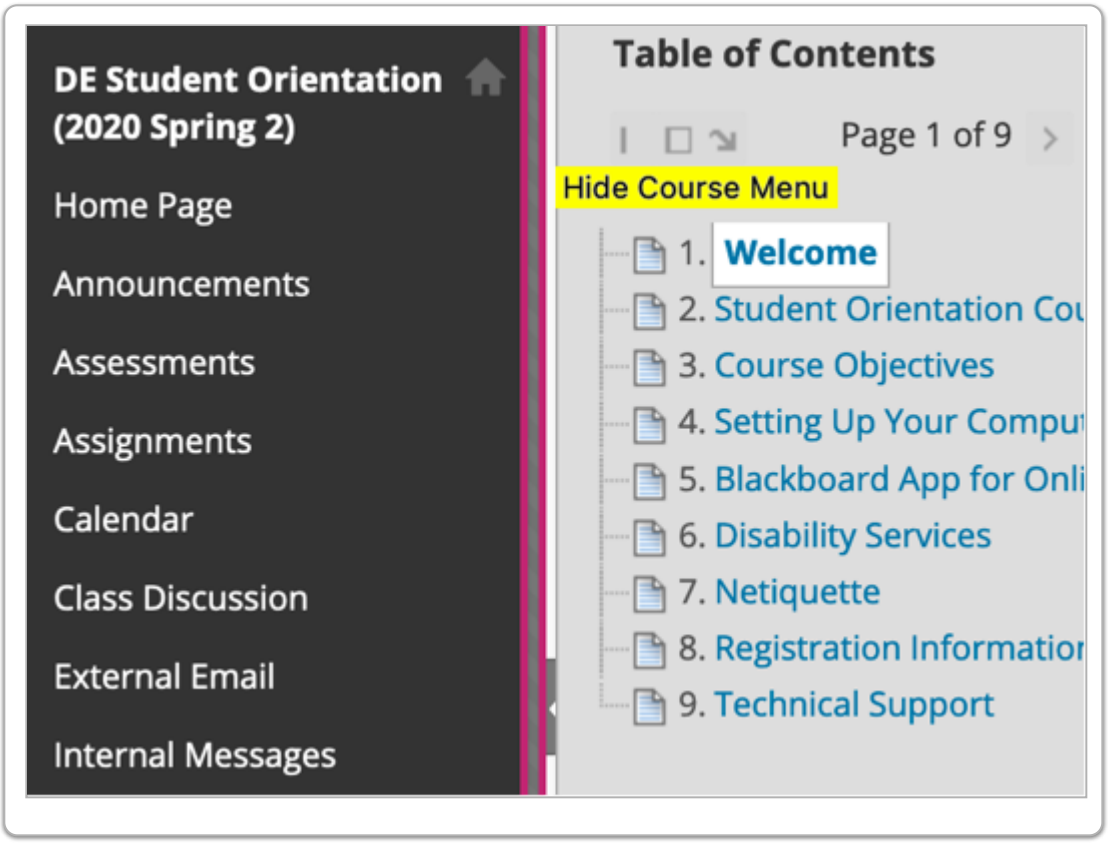
Navigating Courses

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

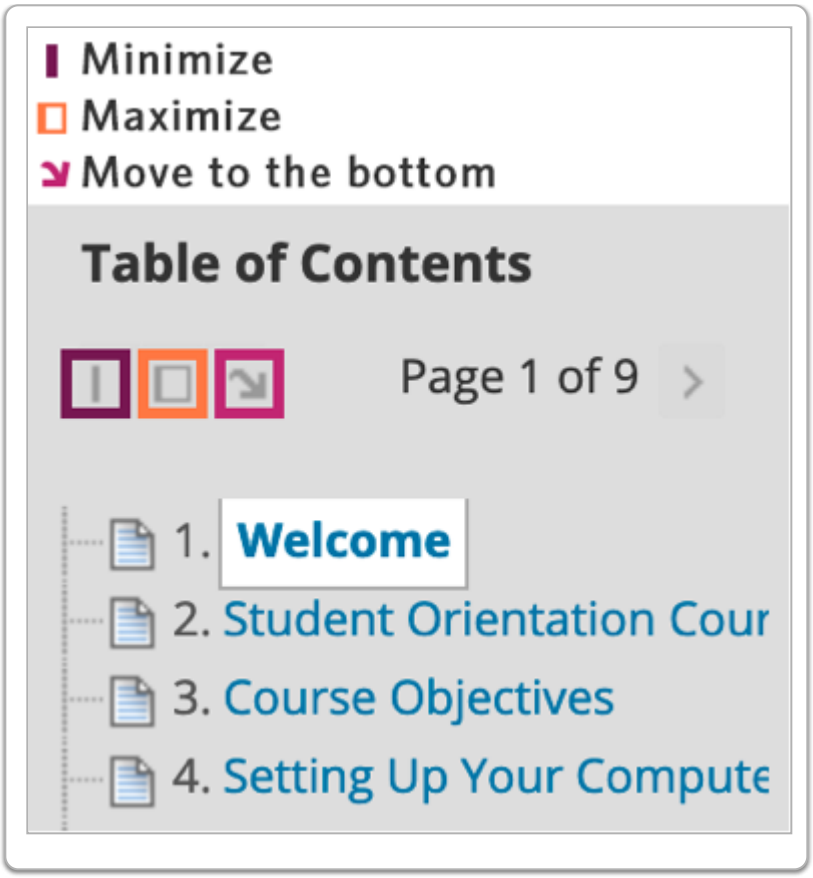
The Blackboard navigation tools, as shown in the images below; allow you to show and hide both the Course Menu and the Table of Contents which can free up space when moving through weekly lecture material.

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