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 Overview

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

MET CS693
Digital Forensics

This course presents students with a comprehensive understanding of digital forensic principles and the collection, preservation, and analysis of digital evidence. Students will learn about the importance of forensic principles and procedures, legal considerations, digital evidence controls, and the documentation of forensic analysis. Course topics will include computer and network technologies, operating system architectures, disk structures, and file system analysis. Students will develop an understanding of the different applications and methods for conducting network and digital forensic acquisition and analysis. This course will incorporate laboratory exercises and demonstrations to reinforce practical applications of digital forensic theory.

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.

Course Objectives

At the successful completion of the course, you will have developed a comprehensive understanding of digital forensic principles. You will be able to:

- Describe the attributes of file systems and storage media.
- Identify potential sources of electronic evidence.
- Understand the importance of maintaining the integrity of digital evidence.
- Demonstrate the ability to perform basic forensic data acquisition and analysis using computer and network-based applications and utilities.
- Demonstrate the ability to accurately document forensic procedures and results.

- Identify career opportunities for digital forensic professionals.
- Demonstrate the ability to conduct research to develop an in depth understanding of a topic relating to digital forensics.

Course Outline

- **Calendar Tool** - You can see many due dates in the calendar tool. You may add your own events there as well. However, please be aware that you may not find all of the important dates for the course listed there. You will stay current by checking announcements, discussions, and emails throughout the course.
- **Readings** - Each module has both textbook readings and online readings. Your professor may suggest additional readings during the course.
- **Discussions** - There are both class and group threaded discussions for each module. These discussions are moderated by your facilitator. Postings for each discussion should be completed by the assigned due dates. There are also general discussions boards, which are not graded, for you to use to discuss any issues with your classmates. Please see the Class Discussion and Users and Groups menus on the home page for more details.
- **Assignments and labs** - There are assignments and labs that are due throughout the course. Please access from the Assignments menu.
- **Midterm and Final Exams** - Assessments are also listed in the course calendar and accessed from the Assessments menu.

Module 1: Digital Forensics and Incident Response

Overview of Digital Forensics and Incident Response and Incident Response and Investigations: Legal Aspects of Digital Forensics.

Module 2: Computing and Network Devices

Introduction to Computing and Network Devices and Operating System Architecture and Disk Structures.

Module 3: Digital Forensic Acquisition and Authentication

Principles of Digital Forensic Acquisition and Authentication and Digital Evidence Handling and Processing Digital Forensic Media Acquisition, Midterm Examination

Module 4: Digital Forensic Analysis

Principles of Digital Forensic Analysis and Applications and Digital Forensic Media Analysis (UNIX/Linux).

Module 5: Network Forensic Analysis

Principles of Network Forensic Analysis (Laboratory Session) and Digital Forensic Media Analysis (Microsoft Windows)

Module 6: Forensic Reports and Testimony

Forensic Reports and Testimony Special Topics in Digital Forensics

Module 7: Final Exam and Wrap-up

You will prepare for and take the proctored final exam.

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

Instructor

Mehrdad (Mike) Nourai, BSEE, MSCS, ABD

Computer Science Department
Metropolitan College
Boston University
808 Commonwealth Ave, Room 250
Boston, MA 02215

Office Hours: Email me in Online Campus to arrange a time to meet online. I am always happy to connect with students outside of the live classrooms.

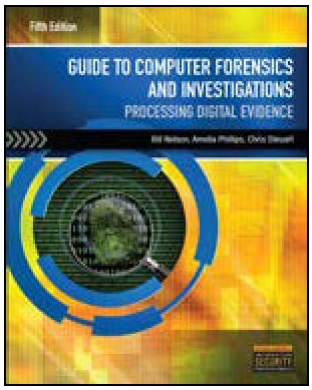
Email: mnourai@bu.edu

Original Course Instructor

Vijay Kanabar 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 PhD in Information Systems from University of Manitoba and is a certified Project Management Professional (PMP).

Course Materials and Resources

Required Book Bundle



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

Important note from the Instructor:

The correct book bundle (including the DVD and Lab Manual) may have been emailed out to students earlier via the BU bookstore. The bundle can also be purchased through BU B&N bookstore. Because it is fairly new, this bundle is only available through Cengage or the bookstore (as of now):

- BUNDLE: Guide to Computer Forensics and Investigations, 5th ed + Lab Manual (and DVD's);
  ISBN: 9781305813007
- Alternatively, you can buy the text and Lab Manual separately:
  - Text + DVD:
    ISBN: 9781285060033: Guide to Computer Forensics and Investigations, 5th ed
  - Lab Manual + DVD:
    ISBN: 9781285079080 : Lab Manual for Guide to Computer Forensics and Investigations, 5th ed

Please note:

- you MUST purchase the Lab Manual. The lab assignments depend on the content provided.
- Cengage also has setup a student site to purchase the required resources directly from them. Please see here:
  http://www.cengagebrain.com/course/1263976

If you have any questions you can contact the instructor and the course facilitator.

Course Downloads and References

Forensic Examination of Digital Evidence: A Guide for Law Enforcement
NCJ 199408, April 2004, Special Report, National Institute of Justice
http://www.ncjrs.gov/pdffiles1/nij/199408.pdf

Electronic Crime Scene Investigation: A Guide for First Responders
NCJ 187736, July 2001, NIJ Guide, National Institute of Justice
http://www.ncjrs.gov/pdffiles1/nij/187736.pdf

Digital Evidence in the Courtroom: A Guide for Law Enforcement & Prosecutors
http://www.ncjrs.gov/pdffiles1/nij/211314.pdf

Investigations Involving the Internet and Computer Networks
NCJ 210798, January 2007, Special Report, National Institute of Justice
https://www.ncjrs.gov/pdffiles1/nij/210798.pdf

Cloud Computing Forensic Science Challenges
http://csrc.nist.gov/publications/drafts/nistir-8006/draft_nistir_8006.pdf

GRIZZLY STEPPE – Russian Malicious Cyber Activity: Joint Analysis Report
https://www.us-cert.gov/sites/default/files/publications/JAR_16-20296A_GRIZZLY%20STEPPE-2016-1229.pdf

GRIZZLY STEPPE – Russian Malicious Cyber Activity: Indicators
https://www.us-cert.gov/sites/default/files/publications/JAR-16-20296A.csv

Additional References

- Incident Response
  Purdue University Incident Response Policy (VII.B.3)
- Conditions on Use and Policy on Computing Ethics
  Boston University
- Designing and Developing an Application for Incident Response Teams
  FIST 2006 Conference
- United States Code
- *Investigations Involving the Internet and Computer Networks*
  NCJ 210798, January 2007, Special Report, National Institute of Justice

Lab Video Tutorials

The text lab manual includes instructions that will guide you through the work. This includes helpful hints and information on the utilities and applications used for the lab. In addition, during each week's live classroom, labs will be discussed. Please bring your questions during these sessions.

We recommend you use a hypervisor (virtual machine) software platform like VMWare Workstation (or VMWare Fusion) to complete the labs. VMWare allows you to quickly install the required Operating Systems (Windows 8.1 or 10), install your lab tools, boot from a virtual disk or image, clone a disk, and more. If you prefer to use a native Windows installation, you can do so, however using a virtual lab workstation is often more flexible. Please review the below videos for reference (links of lab video tutorials are also available at the Assignments area and inside each Lab's instruction sheet):

- Navigating BU Dreamspark and BU VMWare Program portals

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  Download

- Creating a virtual machine in VMWare Workstation

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- Changing the boot order of a virtual machine and booting from an ISO

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- Provisioning a new virtual disk drive in disk management

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Live Classroom Discussions and Archives

There will be synchronous Live Classroom discussions that will announced during the course. These sessions will be archived for further viewing. Your participation, while not mandatory, will be valuable to you and the entire class. In order to participate in these discussions or to access the archived sessions, you will need to go to the Live Classroom links.

Boston University Library Information

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

to the series is below:

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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.

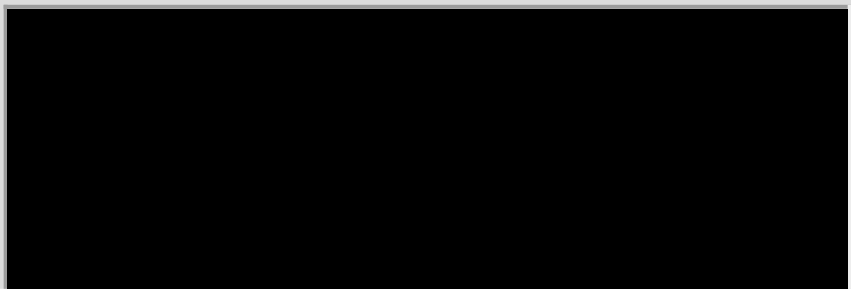
To locate course eReserves, go to http://www.bu.edu/library/services/reserves.

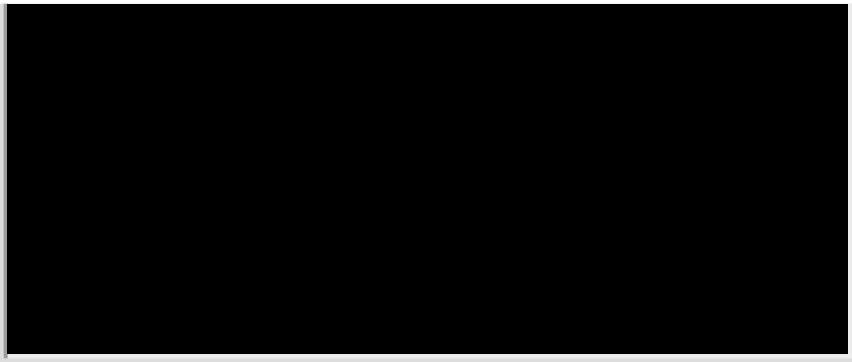
Please note that you are not to post attachments of the required or other readings in the water cooler or other areas of the course, as it is an infringement on copyright laws and department policy. All students have access to the library system and will need to develop research skills that include how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





YouTube

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.

Microsoft Imagine for Academic Institutions

Metropolitan College is a member of Microsoft Imagine for Academic Institutions (formerly DreamSpark), a Microsoft program that supports technical education by providing access to Microsoft software for learning, teaching, and research purposes. Our membership allows faculty and students currently enrolled in MET courses to obtain certain Microsoft products free of charge. All MET students are granted access to download the software for the duration of their study at MET College.

FAQ and basic information are at: http://www.bu.edu/metit/hw-and-sw/msdn-academic-alliance-software-center/.

VMware Academic Program

Metropolitan College is a member of The VMware Academic Program. VMAP enables current MET students and faculty to gain easy access to cutting-edge virtualization technology and resources.

All current MET students are granted access to download.

For information on how to login and get support, please visit: http://www.bu.edu/metit/hw-and-sw/vmware-academic-program/.

Study Guide

The following material is collected here for your convenience but the required readings, discussion details, and assignment particulars can be found within the modules, in the "Discussion" section of the course, and in the "Assignment" sections respectively.

In preparation for this course you should read:

Forensic Examination of Digital Evidence: A Guide for Law Enforcement

NCJ 199408, April 2004, Special Report, National Institute of Justice

http://www.ncjrs.gov/pdffiles1/nij/199408.pdf

Digital Evidence in the Courtroom: A Guide for Law Enforcement & Prosecutors

http://www.ncjrs.gov/pdffiles1/nij/211314.pdf

Live Classroom Sessions

There will be synchronous Live Classroom discussions that will be announced during the course. These sessions will be archived for further viewing. In order to participate in these discussions or to access the archived sessions, you will need to go to the Live Classrooms/Offices links.

Module 1 Study Guide and Deliverables

Readings: Online lecture material and *Guide to Computer Forensics and Investigations,* Chapters 1; Optional: *File System Forensic Analysis*, Chapter 1 http://proquest.safaribooksonline.com/0321268172

Discussions: Please post your introduction as soon as possible. Discussion 1 postings end March 21 at 6:00 AM ET

Assignment: Assignment 1 due March 21 at 6:00 AM ET

Labs: Please attempt labs 1.1 - 1.4 that are listed in the module 2 labs. These labs install software you will need going forward. Take screenshots so you can use them for your Module 2 lab submission.

Module 2 Study Guide and Deliverables

Readings: Online lecture material and *Guide to Computer Forensics and Investigations*, Chapters 2 and 5, and read Access Data FTK Reference Manual. Optional: *File System Forensic Analysis*, Chapter 2 (http://proquest.safaribooksonline.com/0321268172).

Discussions: There are no discussions this week

Labs: Module 2 Lab due March 28 at 6:00 AM ET

Module 3 Study Guide and Deliverables

Readings: Online lecture material and *Guide to Computer Forensics and Investigations*, Chapters 3 and 13. Optional: *File System Forensic Analysis*, Chapter 3 (http://proquest.safaribooksonline.com/0321268172) *NIST, Cloud Computing Forensic Science Challenges,* http://csrc.nist.gov/publications/drafts/nistir-8006/draft_nistir_8006.pdf

Discussions: Discussion 3 postings end April 4 at 6:00 AM ET

Assignment: Assignment 3 due April 4 at 6:00 AM ET

Labs: Module 3 Lab due April 4 at 6:00 AM ET

Module 4 Study Guide and Deliverables

Readings: Online lecture material and *Guide to Computer Forensics and Investigations*, Chapters 4, 6 and 8.

Discussions: There are no discussions this week

Assessments: The midterm exam opens April 4 at 6:00 AM ET and closes April 11 at 6:00 AM ET This open book test covers all assigned material across the first three weeks of the course. This includes all book, module, and non-optional supplemental texts assigned during these weeks. Additionally, concepts covered during lab work and assignments are potential areas of focus. The questions can be multiple choice, choose multiple, or True or False.

Labs: Module 4 Lab due April 11 at 6:00 AM ET

Module 5 Study Guide and Deliverables

Readings: Online lecture material, *Guide to Computer Forensics and Investigations* Chapters 9, 10, 11, *Investigations Involving the Internet and Computer Networks* (DOJ Special Report), *GRIZZLY STEPPE – Russian Malicious Cyber Activity: Joint Analysis Report*, and *GRIZZLY STEPPE – Russian Malicious Cyber Activity: Indicators*

Discussions: Discussion 5 postings end April 18 at 6:00 AM ET

Labs: Module 5 Lab due April 18 at 6:00 AM ET

Module 6 Study Guide and Deliverables

Readings: Online lecture material and *Guide to Computer Forensics and Investigations*, Chapter 12 Optional: Chapter 14 (Report Writing).

Discussions: There are no discussions this week

Labs: Module 6 Lab due April 25 at 6:00 AM ET

Final Exam Details

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

The exam is a 90-minute, open-book, open-notes exam consisting of multiple-choice questions. It will only be accessible during the final exam period. You can access it from either the Assessments

section of the course or from the Final Exam module on the home page. 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.

Course Grading Structure

Each module in this course will cover one or more core digital forensic principles, along with details on the collection, preservation, and analysis of digital evidence. Most modules will also have at least one lab component. Students will be able to demonstrate their understanding of the fundamental of digital forensics through these assignments.

Grading Policy

All students will be expected to demonstrate digital forensics knowledge and techniques. To obtain an exceptional grade you have to exceed expectations in your projects, quizzes and assignments.

Grading Structure and Distribution

The grade for the course is determined by the following:

Grading Scheme	
Homework Assignments	10%
Labs	25%
Discussions/Participation	10%
Midterm Examination	25%
Final Examination	30%

Grade	Approximate Numeric Grade Range	Grade Points
A	95–100	4.0
A–	91–94.9	3.7
B+	87–90.9	3.3

B	83–86.9	3.0
B–	80–82.9	2.7
C+	75–79.9	2.3
C	65–74.9	2.0
C–	60–64.9	1.7
D	50–59.9	1.0
Fail	< 50	0

Course Requirements

Participation

- Graded Discussions - all discussions will be graded on a 100-point scale.

Assignments and Labs

Assignments will be assigned during the semester to reinforce topics presented during classroom lectures. Homework assignments and student submissions will be facilitated using the Boston University online learning management system. All homework must be the original effort of the student submitting the assignment.

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 date. 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 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.

Discussion Grading Rubric

Graded discussion periods are held on Day 1 of each module until 6:00 AM ET on Day 1 of the following module. You are certainly welcome to continue a discussion past the grading period, but additional material posted beyond the due date will not affect your discussion grade. The discussion grading rubric below is the guide we use to evaluate your discussion contributions. You will receive a grade and comments from your facilitator for each module's discussions.

Discussion Grading Rubric					
Criteria	**5–6**	**6–7**	**7–8**	**8–9**	**9–10**
Participation	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
Community	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
Content	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
Reflection and Synthesis			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

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 Senior 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 toll free at 1-888-524-2200.

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.

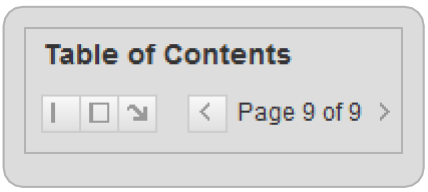
Navigating Courses

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

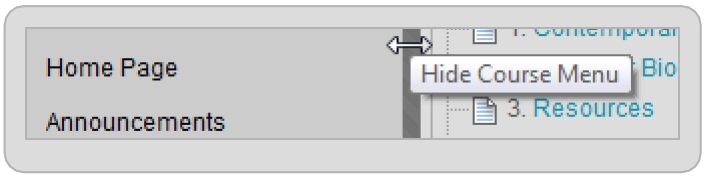
The Table of Contents may contain folders. These folders open and close (+ and – signs) and may conceal some pages. To avoid missing content pages, you are advised to use the next- and previous-page buttons (and icons) in the top-right corner of the learning content.

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.

Boston University Metropolitan College