

Syllabus

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Course Overview

This [module \(allpages.htm\)](#) 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 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 Discussion Module on the home page for more details.
- **Assignments and labs** - There are assignments and labs that are due throughout the course.
- **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

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

Dustin Navarro, BS EE, M.S. CIS

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.

Office Phone: (530) 400-5178

Email: dnavarro@bu.edu (<mailto:dnavarro@bu.edu>)



Dustin Navarro is a part-time faculty member of Boston University and has many years of experience in IT System Management and Administration in both the government sector and in private industry. Mr. Navarro has been exposed to some significant digital forensics cases in his travels, particularly during stints in e-discovery at an AMLAW 100 law firm.

Mr. Navarro has substantial business experience in network communications, project management, and digital forensics and has frequently been asked to develop coursework in these subjects.

Mr. Navarro holds a Bachelor of Science in Electrical Engineering from the University of California at Davis, a Master of Science in Computer Information Systems Security from Boston University, and is a VMWare Certified Professional (VCP).

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 Course Book

Nelson, B., Phillips, A., Steuart, C. (2010). *Guide to Computer Forensics and Investigations* (4th ed.). Cengage.

For students who need the bundle (book + printed access card):

<http://www.cengagebrain.com/shop/en/US/storefront/US?cmd=CLHeaderSearch&fieldValue=1111087318>

<http://www.cengagebrain.com/shop/en/US/storefront/US?cmd=CLHeaderSearch&fieldValue=1111087318>



For students who have already purchased the book and ONLY need the Printed Access Card:

<http://www.cengagebrain.com/shop/en/US/storefront/US?cmd=CLHeaderSearch&fieldValue=9781435498860>

<http://www.cengagebrain.com/shop/en/US/storefront/US?cmd=CLHeaderSearch&fieldValue=9781435498860>

This textbook can be purchased from [Barnes and Noble at Boston University](http://bu.bncollege.com/). (<http://bu.bncollege.com/>)

This contains both the book and online web-based labs keycard. Please note that used books will have a used key for the software and will not be useful.

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> (<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> (<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> (<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> (<https://www.ncjrs.gov/pdffiles1/nij/210798.pdf>)

Live Classroom Discussions and Archives

There will be synchronous Live Classroom discussions that will be 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 Link

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> (<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 include:

Go to <http://www.bu.edu/library/research/collections> (<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> (<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> (<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.

Additional Course Resources

References

- [Incident Response](http://www.purdue.edu/policies/information-technology/viib3.html) (<http://www.purdue.edu/policies/information-technology/viib3.html>)
Purdue University Incident Response Policy (VII.B.3)
- [Conditions on Use and Policy on Computing Ethics](http://www.bu.edu/computing/policies/ethics.html) (<http://www.bu.edu/computing/policies/ethics.html>)
Boston University
- [Designing and Developing an Application for Incident Response Teams](http://www.first.org/conference/2006/papers/leune-kees-papers.pdf) (<http://www.first.org/conference/2006/papers/leune-kees-papers.pdf>)
FIST 2006 Conference
- [United States Code](http://uscode.house.gov) (<http://uscode.house.gov>)

- *Investigations Involving the Internet and Computer Networks* (<http://www.ncjrs.gov/pdffiles1/nij/210798.pdf>)

NCJ 210798, January 2007, Special Report, National Institute of Justice

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> (<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> (<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 Classroom 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> (<http://proquest.safaribooksonline.com/0321268172>).

Discussions: Please post your introduction as soon as possible. Discussion 1 postings end March 18 at 6:00 AM ET

Assignment: Assignment 1 due March 18 at 6:00 AM ET

Labs: There is no lab

Module 2 Study Guide and Deliverables

Readings: Online lecture material and *Guide to Computer Forensics and Investigations*, Chapters 2, 3 and 6. Optional: *File System Forensic Analysis*, Chapter 2

(<http://proquest.safaribooksonline.com/0321268172> (<http://proquest.safaribooksonline.com/0321268172>)).

Discussions: There are no discussions this week

Labs: Module 2 Lab due March 25 at 6:00 AM ET

Module 3 Study Guide and Deliverables

Readings: Online lecture material and *Guide to Computer Forensics and Investigations*, Chapter 4 and read [Access Data FTK Reference Manual \(../documents/FTK_User_Guide.pdf\)](#).
Optional: *File System Forensic Analysis*, Chapter 3
(<http://proquest.safaribooksonline.com/0321268172> (<http://proquest.safaribooksonline.com/0321268172>))

Discussions: Discussion 3 postings end April 1 at 6:00 AM ET

Assignment: Assignment 3 due April 1 at 6:00 AM ET

Labs: Module 3 Lab due April 1 at 6:00 AM ET

Module 4 Study Guide and Deliverables

Readings: Online lecture material and *Guide to Computer Forensics and Investigations*, Chapters 5, 7, and 10

Discussions: There are no discussions this week

Assessments: The midterm exam opens April 1 at 6:00 AM ET and closes April 8 at 6:00 AM ET

Labs: Module 4 Lab due April 8 at 6:00 AM ET

Module 5 Study Guide and Deliverables

Readings: Online lecture material, *Guide to Computer Forensics and Investigations* Chapters 9, 11, and 12 and [Investigations Involving the Internet and Computer Networks](#) (<http://www.ncjrs.gov/pdffiles1/nij/210798.pdf>) (DOJ Special Report)

Discussions: Discussion 5 postings end April 15 at 6:00 AM ET

Labs: Module 5 Lab due April 15 at 6:00 AM ET

Module 6 Study Guide and Deliverables

Readings: Online lecture material and *Guide to Computer Forensics and Investigations*, Chapter 13.

Discussions: There are no discussions this week

Labs: Module 6 Lab due April 22 at 6:00 AM ET

Final Exam Details

The final exam is a proctored exam available from **April 23 at 8:00 AM ET to April 26 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	20%
Discussions/Participation	10%
Midterm Examination	20%
Final Examination	40%

Grade	Approximate Numeric Grade Range	Grade Points
A	95–100	4.0
A-	90–94.9	3.7
B+	85–89.9	3.3
B	80–84.9	3.0
B-	75–79.9	2.7

C+	70–74.9	2.3
C	65–69.9	2.0
C-	60–64.9	1.7
D	50–60	1.0
Fail	< 50	0

Course Requirements

Participation

- Graded Discussions - all discussions will be graded on a 10-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/> (<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,

p>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 place where you will take 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

MSDN Academic Alliance Software Center

MET College is a member of the MSDN Academic Alliance, which allows faculty, graduate and undergraduate students currently enrolled in MET courses to obtain certain Microsoft products free of charge.

You can obtain many types of Microsoft software free of charge from the Microsoft Developer Network Academic Alliance (MSDNAA) Program. By the first day of class your instructor will submit your BU email address to Microsoft to enroll you in the program for the current semester. You will receive an email from the MSDNAA E-Academy License Management System (ELMS) from the address: elms_support@e-academy.com (mailto:elms_support@e-academy.com).

Some spam filters may direct this email to a junk email folder, so you may want to check your junk email folder or add the address above to your contacts or other white list. The email will provide you with a username and password, and direct you to the MSDNAA site.

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

If you do not receive your email by the end of the first week, first check your junk email folder and then please follow the instructions at <http://www.bu.edu/metit/hw-and-sw/msdn-academic-alliance-software-center> (<http://www.bu.edu/metit/hw-and-sw/msdn-academic-alliance-software-center>)

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 Student Services Coordinator, Andrew Hinkell. Andrew is here to ensure you have a positive online experience. You will receive emails and announcements from him throughout the semester. Andrew 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 ahinkell@bu.edu (<mailto:ahinkell@bu.edu>) or call (617) 358-4569 or (855) 261-5255.

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, Alexa Muhs. Alexa administers the academic aspects of the program, including admissions and registration. You can ask Alexa questions about the program, registration, course offerings, graduation, or any other program-related topic. Alexa can be reached at amuhs@bu.edu (<mailto:amuhs@bu.edu>) or (617) 353-2565.

Your Computer Science Department Program Administrator, Camille Kardoose. Camille is responsible for administering most aspects of the Computer Science Department, and she can help you with most matters. You can reach Camille at cgkardoo@bu.edu (<mailto:cgkardoo@bu.edu>) or (617) 353-2566.

Professor Jae Young Lee, Program Advisor. Dr. Lee reviews requests for transfer credits and waivers and advises students on which courses to take to meet their career goals. Dr. Lee can be reached at jaeylee@bu.edu (<mailto:jaeylee@bu.edu>) or (617) 358-5165.

Professor Robert Schudy, Director of the MSCIS Online Program. Dr. Schudy is responsible for the MSCIS online program. Feel free to contact Dr. Schudy at rschudy@bu.edu (<mailto:rschudy@bu.edu>) or (617) 358-0009.

Professor Anatoly Temkin, Computer Science Department Chairman. Dr. Temkin makes final decisions on petitions for transfer credits for courses taken at other institutions. You can reach Professor Temkin at temkin@bu.edu (<mailto:temkin@bu.edu>) or at (617) 358-2566.

Professor Lou T. Chitkushev, Associate Dean for Academic Affairs, Metropolitan College. Dr. Chitkushev is responsible 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 Schudy, then Professor Temkin, and then Professor Chitkushev.

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

When you are **READING** your peers' communication, consider:

- **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 others' mistakes or privately point them out politely.
- **If a comment upsets or offends you, re-read it and/or take some time before responding.**

Important Note: Don't hesitate to let your instructor or student services coordinator 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

Go to http://www.bu.edu/online/online_course_schedule/important_dates/ (http://www.bu.edu/online/online_course_schedule/important_dates/) to view the drop dates for your course.

Go to <http://www.bu.edu/studentlink> (<http://www.bu.edu/studentlink>) to withdraw or drop your course.

- If you are dropping down to zero credits for a semester please contact your college or academic department.
- **Non-participation in your online course does not constitute a withdrawal from the class.**

*The Registration Fee is non-refundable

Technical Support

Assistance with Online Campus-related technical problems is provided by the IT Help Center. To ensure the fastest possible response, please fill out the online form using the link below.

IT Help Center Support	
Web	http://www.bu.edu/help/tech/learn (http://www.bu.edu/help/tech/learn/)
Phone	888-243-4596 or local 617-353-4357

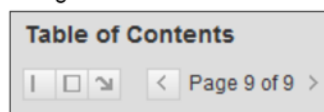
Important Information

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

The Table of Contents may contains 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/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:



Boston University technical support via email (ithelp@bu.edu (<mailto:ithelp@bu.edu>)), the support form (<http://www.bu.edu/help/tech/learn> (<http://www.bu.edu/help/tech/learn/>)), and phone (888-243-4596) is available from 8 AM to Midnight Eastern Time. 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 at <http://www.bu.edu/help/tech/learn> (<http://www.bu.edu/help/tech/learn/>) 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:

- 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

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](http://www.bu.edu/tech/web/course-sites/blackboard-learn/) (<http://www.bu.edu/tech/web/course-sites/blackboard-learn/>)
- Check your browser settings with Blackboard's [Connection Test](http://www.bu.edu/tech/web/course-sites/blackboard-learn/start/connection-test/) (<http://www.bu.edu/tech/web/course-sites/blackboard-learn/start/connection-test/>)
- Download Most Recent Version of [Adobe Flash Player](http://get.adobe.com/flashplayer/) (<http://get.adobe.com/flashplayer/>)
- Download Most Recent Version of [Adobe Acrobat Reader](http://get.adobe.com/reader/) (<http://get.adobe.com/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 will guide you through clearing your cache, with instructions tailored to specific operating systems and browsers: <http://www.bu.edu/tech/web/course-sites/blackboard-learn/how-to/clear-your-browser-cache/> (<http://www.bu.edu/tech/web/course-sites/blackboard-learn/how-to/clear-your-browser-cache/>) .

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: <http://www.bu.edu/tech/web/course-sites/blackboard-learn/how-to/> (<http://www.bu.edu/tech/web/course-sites/blackboard-learn/how-to/>) .

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