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File: Course Description and Overview

Course Description

MET CS 695

Network and Computer Security for Business

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The goal of the course is to present and explain formal and technical aspects of computer security on examples of real world systems and thus enable the student to relate theoretical approaches and technical implementations to the security requirements of the problem domain.



The course provides an in-depth presentation of security issues in computer systems, networks, and applications. Formal security models are presented and illustrated on operating system security aspects, more specifically memory protection, access control and authentication, file system security, backup and recovery management, intrusion and virus protection mechanisms. Application level security focuses on language level security and various security policies; conventional and public keys encryption, authentication, message digest and digital signatures. Internet and intranet topics include security in IP, routers, proxy servers, and firewalls, application-level gateways, Web servers, file and mail servers. Discussion of remote access issues, such as dial-up servers, modems, VPN gateways and clients.

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.

File: Course Learning Objectives

Course Learning Objectives

Upon successful completion of this course you will be able to:

- Understand and be able to discuss the general concepts of information security governance and the importance of balancing the use of security policy, processes, technology and operations to mitigate organizational security risks.

- Develop detailed security requirements based on market/business needs, threat profiles, security policy obligations and asset vulnerabilities/exposure.

- Perform asset assessments, determine probable threats and risks that drive solution architectural alternatives, trade-off studies, modeling and design issues.

- Prepare service/product security architectures and designs that sufficiently comply with enterprise security requirements thereby minimizing risks to acceptable cost levels.

- Plan operational security procedures, ensure operations security activities comply with policy, along with conducting periodic security reviews and audits.

- Support product/service development, integration and procurement activities ensuring that selected components, when deployed, will comply with the organizational detailed security requirements.

File: Course Outline

Course Outline

Calendar Tool - You can see many due dates in the Vista 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 in the course. Your study guide will provide the details of most of your readings and deliverables.

Readings - Each module may have both textbook readings and online lectures . The details are in the study guide and on the first page of each module. Your professor may suggest additional readings during the running of the course.

Discussion - There are threaded discussions  for each module. These discussions are moderated by your facilitator. You will also receive feedback from your professor. 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.

Assignment - There are assignments  that are due throughout the course.

Assessments/Quizzes - Quizzes  are also listed in the course calendar and accessed from the Assessments menu.

Module 1

Lecture 1 - What is Security?

Introduction: A 21st Century Fairytale?, Why are you important to Computer Security?, What are the threats to your computer? As a user, what to do?

The Subject of Security: Branches of Security, Steps for Better Security, The Common Body of Knowledge (CBK) Security Domains, Defining Security by Function

Lecture 2 - Systems Engineering

What is Systems Engineering: Stating the Problem, Investigate Alternatives and Model the System, Integrate, Launch the system, Assess performance, Re-evaluate, Process Variations

Process Management: ISO 9000 Processes and Procedures, Capability Maturity Model (CMM),

Organization Environments: Regulations/Legislation, Technology Evolution, Customers demands and expectations, Legal Liability, Competition, Terrorism or Cyber crime

Business/Organizational Types: Commercial enterprises, Residential, Governmental, Non-Governmental Organizations (NGOs), National Critical Infrastructure

Module 2

Lecture 3 - Foundation Concepts

Security Concepts and Goals: Subjects and Objects, What is Trust?, Domains, Security and /Trust, Security Goals/Objectives

Security Services: Authentication, Authorization, Confidentiality, Integrity, Non-Repudiation, Application of Services

Role of Cryptography in Information Security: Hash Algorithms, Symmetric Encryption, Asymmetric Encryption, Cryptography & Cryptanalysis, Key Management, Cryptographic Authentication

Authentication Systems: Kerberos Based Authentication, Public Key Infrastructure, Human Authentication, Concept of Factors, Proxies for Humans

Lecture 4 - Security Management and Systems Engineering

Policy Development

Management Oversight and Involvement

Security Process Management and Standards: Generally Accepted Information Security

Principles, ISO-17799, ISO-27001

Prototypical Enterprise Security Policy

Information Security Systems Engineering

Methodology: Existing Asset Inventory and Classification, Vulnerabilities, Threats and Risk

Module 3

Lecture 5 - Security Systems Engineering

Requirements Analysis and Decomposition: Security Requirements Derived from Policy, High Level Security Requirements, Detailed Security Requirements

Access Control Concepts: Subjects, Objects, and Access Operations, Access Control Structures, Access Control Lists, Capability Lists, Administrative Tasks in Access Control Methods (Groups and Permissions, Protection Rings, Role Based Access Control (RBAC))

Security Modeling and Security Related Standards: Integrity; Confidentiality Policies versus Integrity Policies, Security Models (Lipner, BLP/HRU, Biba, Chinese Wall, Clark-Wilson), Security Standards (ITU-T, ISO, ATIS, IETF, ETSI, others)

Architecture Development: Functional Architectures (OSI, Internet), Converged Networks and Interfaces (NGN), Converged Network Management (TMN and eTOM), General Computer Security Architecture, General Networking Security Frameworks

Lecture 6 Security Systems Design - Computer Security Mechanisms

Security Related Hardware: Processor States and Status, Memory Addressing, Registers and

Architectures, Interruption of Processor Activity
Operating Systems (OSs): Memory and Address Protection, Fences, Relocation, Base/Bound Registers, Segmentation, Paging

Module 4

Lecture 7 - Security within Common Operating Systems and Applications

Overview of Unix Type OS Security Capabilities
Overview of Solaris Security Capabilities
Overview of Microsoft Windows Security Capabilities
Overview of Real-Time Type OS Security Capabilities
Overview of Security within Applications Software
Exception Handling, Bounds Checking, Shared Libraries

Lecture 8 - Communications Security Capabilities

Network Security Models: Authentication, Authorization
Overview of Security Capabilities of Common Protocols: Protocol Security Concept Evolution, Default Security by Protocol Layer

Module 5

Lecture 9 - Available Network Security Mechanisms

Layer 1 - Physical (e.g., wireless, wired, optical)
Layer 2 - Data Link (802.1q, 802.1x, 802.11i, MPLS/GMPLS, PON, ATM)
Layer 3 - Inter-networking (IPsec, Packet Filtering & DPI)
Layer 4 - Transport Application (TLS/SSL/DTLS, ssh)
Layer 5 - Service Applications (email, Web/E-commerce, VoIP, IM, Java, .NET, CORBA/DCE)
Layer 5 - Management Applications (e.g., EMS, NMS, OSS)

Module 6

Lecture 10 - System Operation, Administration, Maintenance and Provisioning

Operational Security Mechanisms
Documentation
Operational Readiness: Field Testing, Acceptance Testing, Operational Deployment
Third Party Access
Security Event Response and Forensics
Security Management Mechanisms
Operational Review, Sr. Management Oversight, Accreditation, Certification

Lecture 11 - System Lifecycle and Decommissioning

Lifecycle Review
Withdrawal from Service

Lecture 12 - Systems Development and Procurement Security

Security in Systems Development
Security in Systems Procurement: Requests for Information/Proposals (RFIs/RFPs), Standards Compliance, Acceptance Testing and Review

Module 7 - Prepare for and take the final exam

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 database technology, your grades or the course. This is also a time when we enter into a dialog where we endeavor to learn from you how we can modify the course so that it better meets your needs.

File: Instructor Biography

Instructor - Dr. Dhananjay Kulkarni
Dr. Dhananjay Kulkarni

Computer Science Department
Metropolitan College
Boston University
808 Commonwealth Ave, 2nd floor
Boston, MA 02215

Office Hours: By appointment or email

Office Phone: 617-358-5164

Email: kulkarni@bu.edu



Biography

Dr. Kulkarni has extensive knowledge in various computer science fields, specializing in database management, database security, and information systems. An experienced researcher, he has published works in several journals, conferences, and technical reports, including an article in *ACM Transactions* on design automation of electronic systems. Kulkarni is currently conducting research on Internet fraud detection, information privacy, and real-time data processing. He offers technical expertise in information security principles, and in programming languages of C, C++, Java, SQL, and Visual Basic. At MET, he teaches courses related to database security, IT security policies and procedures, and database management.

Original Course Designer

Stuart Jacobs

Computer Science Department
Metropolitan College
Boston University
808 Commonwealth Ave,
2nd floor
Boston, MA 02215

Email: sjjacobs@bu.edu



Biography

Mr. Jacobs obtained his MSc in Applied Statistics and Educational Research, Southern Connecticut State University, New Haven CT and BA in Computer Science, University of Wisconsin Madison. He has over 35 years of industry experience and was principal investigator for the design of an autonomous agent distributed vulnerability analysis system and a Mobile IP prototype using public key cryptography.

Mr. Jacobs serves as the lead Security Architect at Verizon Corp. where his responsibilities include security architecture, requirements development and standardization activities, including serving as Verizon's security subject matter expert to ANSI-ATIS, ITU-T, TMF, OIF and IETF.

Previously Mr. Jacobs served as a Systems Engineer and network architect at GTE Government Systems Inc. where he was responsible for research and development on numerous strategic and tactical US military communications systems ranging from submarine deployed high data rate satellite base stations to NORAD early warning communication systems. Mr. Jacobs also performed telecommunications engineering on network management architectures and developed course materials on security, networking and network management.

Now, as an adjunct faculty member, he teaches courses in Computer and Communications Security.

Module 1 Study Guide and Deliverables

Readings: Online Lecture 1 What is Security
Online Lecture 2 Systems Engineering
Recommended: "[Systems Engineering Fundamentals](#)," Defense Acquisition University Press, 2001

Discussions: Discussion 1 postings due May 17 at 6:00 AM ET

Assignments: Assignment 1 due May 17 at 6:00 AM ET

Assessments: Quiz 1 due May 18 at 6:00 AM ET

Module 2 Study Guide and Deliverables

Readings: Online Lecture 3 Foundation Concepts
Online Lecture 4 Security Management and Systems Engineering
NIST Managing Risk from Information Systems ([SP-800-39-ipd InfoSec Risk Mgt.pdf](#))

Discussions: Discussion 2 postings due May 24 at 6:00 AM ET

Assignments: Assignment 2 due May 24 at 6:00 AM ET

Assessments: Quiz 2 due May 25 at 6:00 AM ET

Module 3 Study Guide and Deliverables

Readings: Online Lecture 5 Security Systems Engineering
Online Lecture 6 Security Systems Design - Computer Security Mechanisms

Discussions: Discussion 3 postings due May 31 at 6:00 AM ET

Assignments: Assignment 3 due May 31 at 6:00 AM ET

Assessments: Quiz 3 due June 1 at 6:00 AM ET

Module 4 Study Guide and Deliverables

Readings: Online Lecture 7 Security within Common Operating Systems and Applications
Online Lecture 8 Communications Security Capabilities
Network Security: Private Communication in a Public World
chapter 1 (1.5, 1.6, 1.12, 1.13, 1.14)
chapter 2 (2.1, 2.2)
chapter 5 (5.1, 5.2, 5.5-5.7)
chapter 6 (6.1-6.3.3, 6.3.6, 6.6-6.7)

Discussions: Discussion 4 postings due June 7 at 6:00 AM ET

Assignments: Assignment 4 due June 7 at 6:00 AM ET

Assessments: Quiz 4 due June 8 at 6:00 AM ET

Module 5 Study Guide and Deliverables

Readings: Online Lecture 9 Available Network Security Mechanisms
Network Security: Private Communication in a Public World
chapters 9, 10, 15 (15.1-15.7)

Discussions: Discussion 5 postings due June 14 at 6:00 AM ET

Assignments: Assignment 5 due June 14 at 6:00 AM ET

Assessments: Quiz 5 due June 15 at 6:00 AM ET

Module 6 Study Guide and Deliverables

- Readings:** Online Lecture 10 System Operation, Administration, Maintenance and Provisioning
Online Lecture 11 System Lifecycle and Decommissioning
Online Lecture 12 Systems Development and Procurement Security
- Discussions:** Discussion 6 postings due June 21 at 6:00 AM ET
- Assignments:** Assignment 6 due June 21 at 6:00 AM ET
- Assessments:** Quiz 6 due June 22 at 6:00 AM ET

Module 7 Study Guide and Deliverables

- Readings:** There are no new readings
- Discussions:** There is no discussion
- Assignments:** There is no assignment
- Assessments:** There is no quiz
- Final Exam:** The final exam opens at 9:00 AM on June 23 and closes at 11:59 PM on June 26.

Final Exam Details

The Final Exam is a proctored exam available from **June 23 at 9:00 AM ET to June 26 at 11:59 PM ET**. The Computer Science department requires that all final exams be proctored.

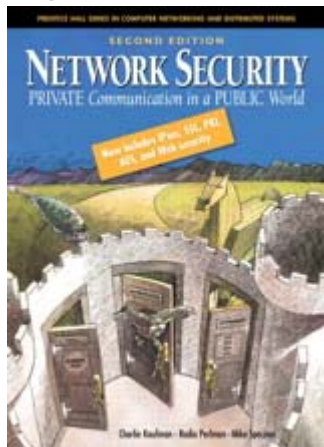
The exam is a three-hour open-book exam consisting of a combination of 50 multiple choice, multiple response, short answer, and True/False questions. It will only be accessible during the final exam period. You can access it from either the Assessments  section of the course or from the Final Exam module on the home page. Your proctor will enter the password to start the exam. Please see the Final Exam Instructions in the Final Exam module for more information.

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

File: Course Materials

Course Materials

Required Course Book



Network Security - Private Communication in a Public World, 2nd Edition

Charlie Kaufman, Radia Perlman and Mike Speciner, Prentice-Hall, 2002

(For Weeks 4 - 6)

This textbook can be purchased from [Barnes and Noble at Boston University](#).

Textbooks and References for Further Study

The following books are not required for this course. However you will find each to be valuable resources to anyone involved in the Information Security area.

The CISSP Prep Guide: Mastering the Ten Domains of Computer Security, 2nd edition, R.L. Krutz, and R. D. Vines, Wiley, 2004. ISBN: 0471413569

The above book is very useful should you decide to sit for the CISSP examination to prepare you for the style and level of detail of questions in the six hour exam.

Firewalls and Internet Security, Repelling the Wily Hacker, William R. Cheswick, and Steven M. Bellovin, Addison-Wesley, 1994

The above book is a classic for its very detailed treatment for statefull firewalls and DMZs and is still relevant today.

Practical UNIX & Internet Security, 2nd Edition, ,Simson Garfinkel and Gene Spafford: O'Reilly, 1996

The above book is a classic for its very detailed treatment of general networking security and hardening of unix typs operating systems and is still relevant today.

Hacking Expose Network Security Secrets & Solutions, 2nd Edition, Joel Scambray, Stuart McClure, and George Kurtz, McGraw-Hill, 2001

The above book provides an interesting look into those involved in malware and some of the techniques used for breaching targeted systems.

Security Engineering; A Guide to Building Dependable Distributed Systems, Ross Anderson, Wiley, 2001

The above book is an interesting collection of discussions on security engineering and associated challenges.

Computer Related Risks, Peter G. Neumann, Addison-Wesley, 1995

The above book is one of the definitive texts on the basic concepts of what constitutes risks, especially information security risks.

Applied Cryptography, Bruce Schneier, 2nd Edition, Wiley & Sons, 1996

The above book is an excellent source for details on most any encryption algorithm you are likely to encounter. Most any version, starting with the 2nd edition, will be invaluable.

Accommodation of Special Needs

In accordance with University policy, I make every effort to accommodate unique and special needs of students with respect to speech, hearing, vision, seating, or other disabilities. Please notify [Disability Support Services](#) as soon as possible of requested accommodations.

File: Course Grading Information

Course Grading Information

It is important for each student to participate on a regular basis and complete all aspects of this course. This course is designed to include a major portion of learning by interacting (asynchronously) with the other students in the class, and the grade is therefore dependent on this activity.

Grading Structure and Distribution

The following tables depicts how final grades will be calculated. Only exceptions necessary to maintain academic standards will be allowed.

Overall Grading Percentages		Grading Scale	
Assignments	30%	A	94–100
Discussions	10%	A-	90–93
Quizzes	30%	B+	87–89
Proctored Final Examination	30%	B	84–86
		B-	80–83
		C+	77–79

C	74–76
C-	70–73
D	60–69
Fail	< 60

Grades will be curved to maintain academic standards at Boston University.

Delays

In the case of serious or emergency situations, or 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.

File: Discussion Grading Rubric

Discussion Grading Rubric

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

Discussion Grading Rubric

Criteria	51–60	61–70	71–80	81–90	91–100
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 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

File: Important Message on Final Exams

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 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,

**Dr. Lou Chitkushev
Chair Computer Science Department
Metropolitan College
Boston University**

File: Final Exam Details

Study Guide

Module 1 Study Guide and Deliverables

Readings: Online Lecture 1 What is Security
 Online Lecture 2 Systems Engineering

File: Academic Conduct Policy

Academic Conduct Policy

For the full text of the academic conduct code, please go to http://www.bu.edu/met/metropolitan_college_people/student/resources/conduct/code.html

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 Metropolitan College in enforcing academic rules is to promote the kind of community atmosphere in which learning can best take place. This 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 the dishonesty of someone else. Penalties imposed should be carefully determined so as to be no more or no less than required to maintain the desired atmosphere. In defining violation 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' chances of being judged fairly for their academic work. Knowingly allowing others to represent your work as theirs is as serious an offense as submitting another's work as your own.

III. Violations of this Code

Violations of this code are acts that constitute an attempt to be dishonest or deceptive in the performance of academic work in or out of the classroom. To alter academic records, or to collaborate with another student or students in an act of academic misconduct. Violations include but are not limited to:

- A. Cheating on examinations. 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. Any attempt by a student to represent the work of another as his or her own. Plagiarism includes each of the following: copying the answers of another student on an examination, copying or substantially restating the work of another person or persons in any oral or written work without citing the appropriate source, and collaboration with someone else in an academic endeavor without acknowledging his or her contribution (see below for a more detailed definition of plagiarism).
- C. Misrepresentation or falsification of data presented for surveys, experiments, etc.
- 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 conversation is not allowed during examinations. Any unauthorized conversation may be considered prima facie evidence of cheating.
- F. Knowingly allowing another student to represent your work as his or her own.
- G. Forgery, alteration, or knowing misuse of graded examinations, grade lists, or official University records or documents, including but not limited to transcripts, letters of recommendation, degree certificates, alteration of examinations or other work after submission.
- H. Theft or destruction of examinations or papers after submission including purposefully altering possible poor performance.
- I. Submitting the same work in more than one course without the consent of the instructors involved.
- 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. Failure to comply with the sanctions imposed under the authority of this code.

File: Who's Who: Roles and Responsibilities

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 exercises, 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.

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 Manager of Student Services, Jen 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 Vista 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 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 Academic Advisor, Professor Anatoly Temkin. Dr. Temkin is the academic advisor for both on-campus and online students. Professor Temkin advises students on appropriate courses and programs. He also makes decisions on petitions for course waivers and transfer of credits for courses taken at other institutions. You can reach Professor Temkin at temkin@bu.edu or at (617) 358-2566.

Your Online Coordinator, Chris Hutchison-Jones. Chris administers the academic aspects of the program, including admissions and registration. You can ask Chris questions about the program, registration, course offerings, graduation, or any other program-related topic. Chris can be reached at crhj@bu.edu or (617) 353-2565.

Your Computer Science Department Program Coordinator, 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 cqkardoo@bu.edu or (617) 353-2566.

Your Online Faculty Coordinator, Robert Schudy. Professor Schudy is responsible for the MSCIS online program. Feel free to contact Dr. Schudy at rschudy@bu.edu or (617) 358-0009.

Professor Lubomir T. Chitkushev, PhD Chairman, Computer Science Department, Boston University Metropolitan College. Dr. Chitkushev is responsible for the Computer Science Department as a whole, including the MSCIS program. 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 and/or Professor Temkin, and then Professor Chitkushev.

Professor Tanya Zlateva, Metropolitan College Associate Dean for Academic Affairs. Dr. Zlateva is an Associate Professor in the Computer Science Department, our former chairman, and now the academic dean for the College. She is responsible for academic quality and other academic affairs throughout Metropolitan College.

File: Registration Information and Important Dates

Registration Information and Important Dates

Registration Information and Important Dates

Click [here](#) to view the drop dates for your course or go to http://www.bu.edu/online/online_course_schedule/important_dates/index.html.

Click [here](#) to withdraw or to drop your course or go to <http://www.bu.edu/studentlink>.

Note:

If you are dropping down to zero credits for a semester, you will need to 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

File: Netiquette

Netiquette

If you've been with us in the online graduate program for a while, you're probably pretty comfortable in this environment. But for those who are new or who may just want a refresher, here are some rules for communicating online which will help us all have a pleasant and rewarding online experience:

1. **Think of your discussion posts as though they were going to be printed in a newspaper.** Thinking of your posting this way should remind us not to write anything that might embarrass us or anyone else in the class. If you make a mistake and wish that you could take a post back, just send an email to your facilitator and the Professor, who can delete even graded posts.
2. **Feelings are helpful, but avoid negativity.** Our feelings, including our angst when we don't understand something, our elation when someone else appreciates what we have written, and our sense of satisfaction when we know that we have helped someone else, all help us learn. It's part of being human. Unfortunately another part of being human is the temptation to lash out against someone with whom we disagree. Angry words thrown at someone through the air are gone in a moment, and the apology afterwards can even help the relationship, but angry words thrown around in computer discussion threads or emails hang around forever to haunt us. Disagreement in discussions helps us gain other people's insights and perspective and is critical to learning many of the finer points, so don't hesitate to share your insights and opinions, even if they are very different than your classmates, but always be respectful, particularly in communications with others who may not agree with you.
3. **Remember the golden rule.** Imagine that you are the recipient of your post or email and write what you would like to receive if you were the recipient.
4. **Don't type in all caps.** This is impolite, like shouting in an intimate setting.
5. **Be careful with acronyms.** Some students might not know their meaning. It is always better to spell them out, at least at the first use.
6. **Don't disrupt discussion with unrelated comments.** Wait until the discussion is over to change the topic.
7. **Use the "Water Cooler" for posts that are social or outside the discussion category.** The Water Cooler is helpful for building community, but students are not required to read Water Cooler posts. Putting your general posts in the Water Cooler helps your classmates who are pressed for time and also improves the continuity of the discussion threads.
8. **Be kind to people who may not have broadband connections.** Don't incorporate large graphics, videos or images into graded discussions unless this is necessary. Images in the "Introductions" posts help us build community, so they are encouraged, but these are not graded, so people can skip them if they need to. If you are citing something large from an outside source in a public area like a discussion forum, provide a web address or link and steer others to what

you wish them to see.

9. **Think twice before posting to course-level discussions.** Different discussion topics have very different size audiences. The group discussions are visible to you, your facilitator, your professor, and student services - about fifteen people. Course level discussions are visible to the entire class, which may include one hundred or more students, ten or more facilitators, your professor, and student services. Think of addressing an audience of 100 when you are posting to the course-level discussions.

With your participation and cooperation, we're sure to have some lively, exciting discussions in this course.

File: Course Technical Support

Course Technical Support

Technical Support

Assistance with Vista-related technical problems is provided by the Vista Support staff. To ensure the fastest possible response, please fill out the online form located at [Online Form](#).

Web Site www.bu.edu/help/vista

Phone (888) 243-4596

Support via email and phone is available Monday through Friday from **9 AM to 5 PM** Eastern Standard Time; additional support hours are provided during exam periods and will be posted on the Vista home page.

In addition, answers to many common questions and solutions to most problems are found in our database of [Frequently Asked Questions](#).

If you are having issues uploading a document to Vista, please consult the following link prior to contacting Tech Support: [How to Upload a File](#).

After-hours Support

Vista use and setup issues can be obtained by contacting Blackboard Support at **(800) 806-7396**. Contact Vista Support staff for assistance with technical problems that relate directly to the Vista system.

Examples include:

- Problems viewing or listening to sound or video files
- Problems accessing Vista's internal email
- Problems viewing or posting comments in the Vista
- Problems attaching or uploading files within Vista

Web Resources

To view certain media elements in this course you will need to have several browser plug-ins such as Shockwave, Flash, and Adobe Acrobat on your computer. See your Course Resources page for specific software requirements for use in this course.

To ensure you are using the most recent version of each plug-in you require click the hyperlink below for a description of technology requirements necessary to complete this course. [Technology Requirements](#)

Browser Plug-Ins

To view certain media elements in this course you will need to have several browser plug-ins such as Java, RealPlayer, Shockwave, Flash, and Adobe Acrobat on your computer. Use the links in the Syllabus Course Resources page for specific software requirements for use in this course and to download and

install the appropriate software application.

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