

■ Syllabus

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Description and Objectives

This [module](#) is also available as a concatenated page, suitable for printing or saving as a PDF for offline viewing.

MET CS 782

IT Strategy and Management

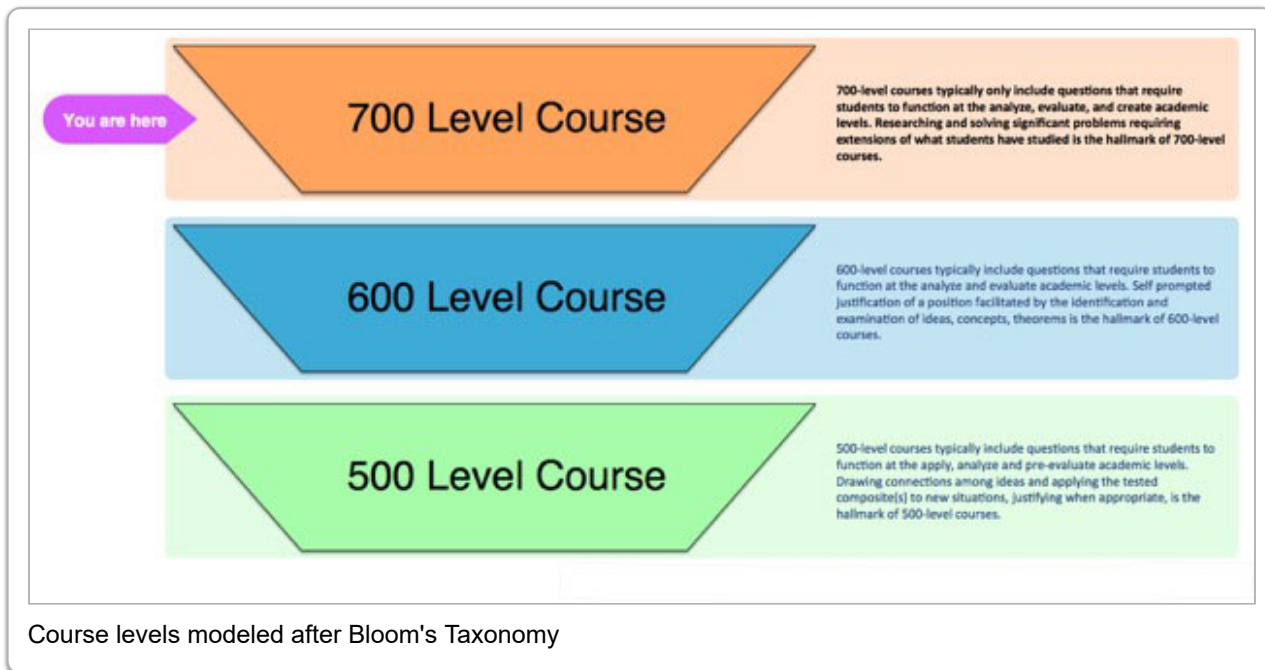
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This course provides an overview of information systems technology and management in today's organizations. We will study IT infrastructure, architecture, and applications used in enterprise information systems within organizations and in interaction with customers, suppliers, partners, and others. The course discusses the operational, competitive, and strategic value of information technology and how its management and governance contributes to the realization of that value.

Setting Course Expectations at the 700 Level

This is a 700-level graduate course. A major portion of the class is intended to help prepare you or help hone your skill set with respect to understanding technology, business, and system usage.

Being able to express understanding and knowledge of the current technological and business landscape is extremely important. The ability to articulate a particular position in writing or to deliver a persuasive presentation, and then to make assertions and perform fundamental research that demonstrates the validity to your position, is a crucial skill. The figure below describes the expectations for a 700-level course.



The course is intentionally broad and covers much material. In today's business environment, you are often overloaded with data. It's extremely important to be capable of sifting through this data and use it to create information. It's also critical for you to be able to take this information and use it to solve problems and create/express a story or strategy, etc.

Your assignments are based on scenarios and will be very similar to what you might expect to find at work. They include complex problems that you will resolve by using the data and information provided by the lecture materials. The assignments are abstract and offer the opportunity to find multiple solutions. The course staff will give you the general direction, and then it's up to you to fill in the details.

Throughout this course you will be asked to demonstrate your skills in cognitive reasoning and your understanding of the material. You will be expected to make logical applications of the material to the various situations presented. In addition, you will be called upon to justify your positions or assertions in a creative and thoughtful way.

Learning Objectives

Through online readings, assignments, online discussions, and chats with the instructor, students will gain understanding of the following:

- **Analyzing** business situations and problems and understanding the role that information technology can play in solving them
- **Evaluating** the competitive and operational impacts of adopting new information technologies
- **Managing** IT, present and future

Technical Notes

The table of contents expands and contracts (+/- sign) and may conceal some pages. To avoid missing content pages, you are advised to use the next/previous page icons in the top right corner of the learning modules.

This course requires you to access files such as word documents, PDFs, and/or media files. These files may open in your browser or be downloaded as files, depending on the settings of your browser.

Instructor

M. Adam Arakelian

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M. Adam Arakelian is in executive management as a senior director of engineering at Dell-EMC, in their ISG Engineering organization running DevOps for over 15K engineers. He has been with Boston University as a member of its part-time faculty for nearly 15 years. Arakelian has more than 20 years of industry experience and been part of the design and implementation of many types of information systems, including transaction-based inventory management systems, customer-relationship management systems, and decision support and expert systems. He has also driven engineering teams in delivering billion dollar product releases, owned and sold his own intellectual property to major organizations, and led large teams to success.

Arakelian holds a master's degree from Boston University in computer information systems, with a concentration in security. He has deep knowledge of system architecture and design, secure systems, database technology, and computer information system security. He has taught this course several times, along with courses in database management and system analysis and design.

In the past, Arakelian has been the CTO and president of a small startup organization. He has worked for and/or contracted with many startups, taking them public, and other organizations such as Avid Technology, the Boston District Attorney's Office, and CMGi.

Course Development

This course was originally developed by Professor Ellis Cohen, who has been teaching Information Systems Technology and Management & Strategy at Boston University's Metropolitan College, both online and in the classroom, since 2004. Cohen is also the director of [OpenLine Consulting](#), a Boston-based training and consulting company focused on IT strategy and relational database design. He has been the technology and project leader for a variety of research and advanced technology projects and the CTO of two Internet startup companies. Cohen earned his PhD in computer science from Carnegie-Mellon University.

This course has been extensively updated continuously by Professors Adam Arakelian and Eric Braude.

M. Adam Arakelian is currently a Director of Engineering in Dell-EMC in their VMAX Organization. He has been with Boston University as a member of their part-time faculty for almost 10 years. Adam has help develop and evolve the course into what it is today. He has more than 15 years of industry experience and has been part of the design and implementation of many different types of information systems, including transaction-based inventory management systems, customer-relationship management systems, decision support and expert systems. He has also driven engineering teams to deliver hundred million product releases, owned and sold his own intellectual property to major organizations and has led large teams to success.

He holds a master's degree from Boston University in Computer Information Systems with a concentration in security. He has deep knowledge of system architecture and design, designing secure systems, database technology, and computer information system security. He has taught this course several times, along with database management and system analysis and design.

In the past, he has been the CTO and President of a small start-up organization; has and has worked and/or contracted for many start-ups taking them public as well as other such organizations as Avid Technology, the Boston District Attorney's Office, and CMGi. [Adam Arakelian's home page can be found here.](#)

The course has also benefited over the years from the excellent facilitating and teaching staff at BU. Facilitators who have contributed to the course over the years have been Mark Massengill, Rich O'Connell, Andrea Wilson, Dawson Williams, and Behdad Shashossini.

Course Précis

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Business leaders no longer view IT solely in terms of how it can be used to make the company operate more effectively. Instead, they consider how IT can help them succeed in solving problems, exploiting opportunities, and evolving the business. So, in understanding how to manage information systems, we first need to understand business strategy. A significant portion of this course addresses how business strategy and information technology have become intertwined. The role that IT plays in competitive strategy is also a significant topic that runs throughout the course.

The course also focuses on the role and management of information technology in business. Most of the ideas and lessons from business also apply to other kinds of organizations, including educational, religious, charitable, and governmental entities. Overall, the course emphasizes the role that IT plays in medium- to large-scale (250+ employees) organizations, although much of the material is also relevant to smaller organizations.

Both the readings and the assignments emphasize that the CIO is the main party who is responsible for aligning an organization's strategic goals and its IT architecture and activities. The views and importance of technologists (possibly the CIO or CTO or their staff members) are also critical to the IT endeavor. These professionals evaluate new technologies as they emerge on the scene. Based on both operational and competitive perspectives, they make recommendations about the adoption of novel technologies.

The course is divided into three parts.

Information Systems Strategy

In the first part of this course—consisting of Modules 1 and 2—we will examine overall business and organizational strategy and how it relates to the role that IT plays in the organization. We will cover the following topics:

- **Business Models, Competitive Strategy, and Organization Mission**—How businesses are modeled, and how they compete; the mission of businesses and other organizations; and the relationship between an

organization's mission and its strategy.

- **IT and the Digital Organization**—The functionality of the digital organization, and the role that IT plays in supporting it; competitive and operational perspectives on IT, including analysis of both benefits and risk.

Information Systems Technology

In the second part of the course—consisting of Modules 3 and 4—we will cover the major components of information systems technology and architecture. In addition to the technology itself, we examine its strategic value, and the impacts of its deployment. We will cover the following topics:

- **Data, Application, and Business Process Integration**—Underlying technology basics, issues and approaches for integrating systems across the enterprise.
- **Cross-Functional Enterprise Systems**—The characteristics and issues of ERP and SCM systems.
- **Communication and Collaboration Systems**—The technology and the organizational and strategic impacts of communication and collaboration systems.
- **Analytics**—The technology and value of data warehousing, data mining, and model-based decision support systems.
- **E-commerce**—Technologies and business approaches and models, for marketing, sales and delivery of products and services using the web.
- **M-commerce**—Technologies and business approaches and models, using mobile computing.
- **Utility-Based Computing**—Including Cloud computing and Software-as-a-Service (SaaS).

Information Systems Management

In the third part of the course—consisting of Modules 5 and 6—we will turn to the management of information systems. Specifically, we will address the following:

- **IT Management and Governance**—How decisions are made about adoption, investment, implementation, and deployment of information technology within organizations; organizational perspectives on project planning and implementation.
- **Security, Availability, Privacy, and Compliance**—How organizations ensure their systems are reliable and available, how they deal with privacy and security concerns, and how they ensure compliance with government regulations.
- **Future of IT**—Outsourcing, the growth of utility computing, and how changes in IT will affect both organizations and individuals.
- **Technology Adoption and Innovation**—How to determine whether, when, and how an organization should adopt new technology, and how IT organizations can be forces for innovation.

Resources

Required eReserve Course Material

This course requires readings provided through library eReserves. The [Course eReserves CS 782](#) reading list is also available in the left-side course menu. The list will open in a new browser window.

Online Resources

Below, you will find a list of the most important and useful online resources related to this course. They are a good source for research for your assignments and discussions. *Please note that due to copyright restrictions, we are unable to provide active hyperlinks for some web sites.*

Magazines Available Online

Many of these magazines are available through the [BU Library](#).

- [Baseline Magazine](#)
- [Information Management](#)
- [Business Week](#)
- [CIO Insight](#)
- [CIO Magazine](#)
- [Computer World](#)
- [CSO Magazine](#)
- [Fast Company](#)
- [Info World](#)
- [InformationWeek](#)
- [IT Business Edge](#)
- [Red Herring](#)
- [Strategy and Business](#)

Other Online Resources

- [Managing the Digital Enterprise](#)
- [NetMBA](#)
- [QuickMBA](#)
- [Wikipedia](#)

Online Journal Access

There are a number of online journals that have useful articles, in particular:

- [Communications of the ACM](#)
- [Harvard Business Review](#)
- [Information Systems Management](#)
- [Journal of Management Information Systems](#)
- [MIT Sloan Management Review](#)

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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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 [Collections](#) to access eBooks and eJournals directly.

If you have questions about library resources, go to [Ask a Librarian: Help & FAQs](#) to email the library or use the live-chat feature.

To locate course eReserves, go to [Reserves](#).

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

Please Note

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

Study Guide

The required readings, discussion particulars, and assignment particulars can be found within the modules, in the "Discussion" section of the course, and in the "Assignment" sections respectively. Weekly Quizzes and Review Quizzes can be accessed within the "Assessments" section of the course.

Review Quizzes can be taken multiple times and there is no grade given, but you will find them helpful in gaining additional insights and preparing for each graded Weekly Quiz.

Module 1 Study Guide and Deliverables

Required

- Online lectures

Readings:

eReserve:

- Chen, R., Kraemer, K. L., & Sharma, P. (2009). "Google: The World's First Information Utility?" *Business & Information Systems Engineering*, 1(1), 53–61.
- Kraemer, K. L., & Dedrick, J. (2002). "Dell Computer: Organization of a Global Production Network."
- Magretta, J. (2002). *Why business models matter*.
- Ovans, A. (2015). *What is a business model*.
- Porter, M. E. (1985). MILLAR, VE *How information gives you competitive advantage*. *Harvard Business Review*, 63(4), 149.
- Porter, M. E. (1989). How competitive forces shape strategy. In *Readings in strategic management* (pp. 133-143). Palgrave, London.

- Team FME. (n.d.). "Porter's Five Forces: Strategy Skills. Free-Management-Ebooks."
- Van Alstyne, M., Parker, G., & Choudary, S. (2016). "Pipelines, Platforms, and the New Rules of Strategy." *Harvard Business Review*, 94(4), 54+.

Supplementary eReserve:

Readings:

(not listed within the module)

- Baca, S. (2010). Cloud Computing: What it is and what it can do for you.
- Lim, H. C., Babu, S., Chase, J. S., & Parekh, S. S. (2009, June). Automated control in cloud computing: challenges and opportunities. In *Proceedings of the 1st workshop on Automated control for datacenters and clouds* (pp. 13-18). ACM.
- Xellentro. (2014, September 13). Portfolio Management Metrics.
- York, J. (n.d.). The SaaS Hybrid Question : Demystifying Software Business Models

Related

Readings:

eReserve:

- A variety of related readings are provided throughout the module to further your understanding of the content.

Discussions:

- Discussion 1

Assignments:

- Assignment 1

Assessments:

- Quiz 1

Module 2 Study Guide and Deliverables

Required

- Online lectures

Readings:

eReserve:

- "AWS Partner Story: Wipro. (n.d.)."
- "Feeding 10 Billion People." (n.d.). Cloud Technology Partners.
- Davenport, T. H., & Patil, D. J. (2012). Data scientist. *Harvard business review*, 90(5), 70-76.
- Few, S., & Edge, P. (2012). Big data, big ruse. *Visual Business Intelligence Newsletter*, (July/August/September).
- Linden, G., Dedrick, J., & Kraemer, K. L. (2011). Innovation and job creation in a global economy: The case of Apple's iPod. *J. Int'l Com. & Econ.*, 3, 223.
- Strategies, E. B. (2002). Netflix: Transforming the DVD Rental Business.
- "Yelp Case Study - PMazon Web Services (AWS)." (n.d.).

Supplementary eReserve:**Readings:**

(not listed within the module)

- Barrett, A. (n.d.). How to adopt a successful DevOps enterprise.
- Bisson, S. (2014, August 27). The secret of DevOps success? It's not about the technology.
- Buying From the Grid: Case Management Software as a Service. (n.d.). New Dawn Technologies.
- Kim, G., Behr, K., & Spafford, K. (2014). *The phoenix project: A novel about IT, DevOps, and helping your business win*. IT Revolution.
- Mueller, E. (2019, January 12). What Is DevOps?
- Waters, K. (2010, August 15). 7 Key Principles of Lean Software Development.

Related**eReserve:****Readings:**

- A variety of related readings are provided throughout the module to further your understanding of the content.

Discussions:

- Discussion 2 postings end

Assignments:

- Assignment 2

Assessments:

- Quiz 2

Module 3 Study Guide and Deliverables

Required

- Online lectures

Readings:**eReserve:**

- Dieringer, D. S. (2004). ERP implementation at Nestle.
- Gilmore, D. (2013, October 4). Just What is a Supply Chain Strategy?
- Gordon, I. (2001). CRM is a strategy, not a tactic. *Ivey Business Journal*, 66(1), 6-6.
- Nucleus Research. (2006). ROI Case Study. *Salesforce.com Wealth Management Firm*.
- Rayner, N., & Woods, J. (2011). ERP strategy: why do you need one and key considerations for defining one. *Gartner RAS Core Research*, 2(4), 1-9.
- Schaffer, C. (n.d.). Design Thinking Applied to CRM.
- Trexin. (2017, January 16). The Importance of an ERP Strategy.
- Vitasek, K., Manrodt, K., & Kling, J. (2012). McDonald's Secret Sauce for Supply Chain Success. In *Vested* (pp. 119-152). Palgrave Macmillan, New

York.

Supplementary eReserve:

Readings:

(not listed within the module)

- CRM Best Practices - Customer Relationship Management
- Denodo. (2019, May 30). Data Virtualization
- Perez, H. D. (2013). Supply chain strategies: Which one hits the mark?
- Schaffer, C. (n.d.). The Strategic Importance of Measuring Customer Lifetime Value.
- Sletten, B. (2009, December 03). Resource-Oriented Architecture: The Rest of REST
- Software as a Service for Government: Changing the IT Timeline. (n.d.). Faulkner Technologies.
- Taber, D. (2010, April 30). Advice for Evaluating CRM Cloud Platforms.

Related

eReserve:

Readings:

- A variety of related readings are provided throughout the module to further your understanding of the content.

Discussions:

- Discussion 3

Assignments:

- Assignment 3

Assessments:

- Quiz 3

Module 4 Study Guide and Deliverables

Required

- Online lectures

Readings:

eReserve:

- Augment. (2016, May 19). The Evolution of eCommerce Over the Last Decade.
- Bhavnani, R. (2016). Top 10 mobile marketing trends for 2016.
- Butcher, D. (2009). Timberland launches marketing campaign to drive mobile commerce.
- Kraemer, K. L., & Dedrick, J. (2003, February 06). Dell Computer: Using E-commerce To Support the Virtual Company.
- Maleske, M. (2012) 8 ways SOX changed corporate governance. Corporate Counsel.
- Siwicki, B. (2014, April 28). E-commerce and m-commerce: The next five years.

Supplementary Readings:	eReserve: (not listed within the module) <ul style="list-style-type: none"> • Friedenber, M. (2010, May 14). Catching the mBusiness Wave. • ICMR. (2012). Mobile Business - The Emerging Trends.
Related Readings:	eReserve: <ul style="list-style-type: none"> • A variety of related readings are provided throughout the module to further your understanding of the content.
Discussions:	<ul style="list-style-type: none"> • Discussion 4
Assignments:	<ul style="list-style-type: none"> • Assignment 4
Assessments:	<ul style="list-style-type: none"> • Quiz 4

Module 5 Study Guide and Deliverables

Required Readings:	<ul style="list-style-type: none"> ◦ Online lectures
eReserve:	<ul style="list-style-type: none"> • Abbasi, N., Wajid, I., Iqbal, Z., & Zafar, F. (2014). Project failure case studies and suggestion. <i>International Journal of Computer Applications</i>, 86(6). • Edlich, A., & Khetarpal, S. (2014, August 07). Offshore Centers Can Offer More than Low Costs. • Farrell, D. (2004). Beyond offshoring: assess your company's global potential. <i>Harvard business review</i>, 82(12), 82-90. • Farrell, D. (2006). Smarter off shoring. <i>Harvard business review</i>, 84(6), 84-92. • George, K., Ramaswamy, S., & Rassey, L. (2014). Next-shoring: A CEO's guide. <i>McKinsey Quarterly</i>, 1, 26-39. • "Intuit Case Study: Small Business Consumer Software." (n.d.). • PMI Project Management Institute. (n.d.). Executive Guide to Project Management. • Potts, J. (2013, January 04). Disaster Recovery Is Not Business Continuity. • Robinson, A. (2016). Nearshoring & Reshoring Will Continue to Increase Thanks to these Main Benefits.
Related Readings:	eReserve: <ul style="list-style-type: none"> • A variety of related readings are provided throughout the module to further your understanding of the content.

- Discussions:** • Discussion 5
- Assignments:** • Assignment 5
- Assessments:** • Quiz 5

Module 6 Study Guide and Deliverables

Required • Online lectures

Readings:

eReserve:

- Burke, J. C., & Shaw, M. J. (2008). IT portfolio management: a case study. *AMCIS 2008 Proceedings*, 183.
- Gibbert, M. (2005). Boundary-setting strategies for escaping innovation traps. *MIT Sloan Management Review*, 46(3), 58.
- Kien, S. S., Soh, C., & Weill, P. (2010). Global IT management: structuring for scale, responsiveness, and innovation.
- Martin, R. L. (2014). The big lie of strategic planning. *Harvard business review*, 92(1/2), 3-8.
- Schaffer, C. (n.d.). The Strategic Importance of Measuring Customer Lifetime Value.
- Weill, P., & Ross, J. W. (2004). IT governance on one page.

Supplementary **eReserve:**

Readings:

(not listed within the module)

- Moran, B. (2011). Groupon: Bad for Business? | BU Today | Boston University.
- Byers, J. W., Mitzenmacher, M., & Zervas, G. (2011, September 07). Daily Deals: Prediction, Social Diffusion, and Reputational Ramifications.
- Xellentro. (2014, September 13). Portfolio Management Metrics.
- Zaleznik, A. (2015, May 22). Managers and Leaders: Are They Different?

Related

eReserve:

Readings:

- A variety of related readings are provided throughout the module to further your understanding of the content.

Discussions: • Discussion 6

Assignments: • Assignment 6

Assessments: • Quiz 6

Final Exam Details

The Final Exam is a proctored exam and will be taken in class on December 16th starting 6 PM and ending at 9 PM EST. The exam is only accessible during the final exam period. You can access it from the Assessments section of the course. Final Exam Duration: **3 hours**

This is a **open book/open notes exam**. You may use a standard handheld and/or desktop calculator. Online calculators are not permitted. You may use any printed and/or electronic materials (such as PDFs). This includes but is not limited to: any of the modules, any of the assignments, and any slides contained in the course. You may use the follow software: Word, Excel, PowerPoint, and AdobePDF reading. You may copy and paste from assignment and course materials into the final exam. You may not access any website materials outside of Blackboard. You may also bring 10 pieces of scratch paper.

You can take the exam only once. The exam features **essay questions**.

References

The references are supplied within the notes, except, on occasion, for the following.

O'Brien, J. A., & Marakas, G. (2010). *Management Information Systems* (10th ed.). McGraw-Hill Education.

Course Grading

Absorbing and creating IT perspectives is expected of everyone. To attain excellence ("A" work), you will be expected to develop excellent analyses and comparisons. The course grading is designed to have you function as a competent IT professional.

There are four components to your grades, promoting various types of learning.

1. Weekly Assignments

Most of the content of the course will be explored through weekly assignments that study actual cases or that encourage you to extrapolate from your own organizations and experiences. Each assignment is counted equally. The assignment-grading criteria are described below. The assignments are research focused, so it is imperative that you provide appropriate citations in your submissions. Please review carefully the "Reference and Citation Guide" and "Academic Conduct" sections below. The Assignments involve writing and are

focused on how you'd address certain scenarios as they are presented to you. On average a paper ranges from 6-8 pages and we recommend keeping the papers to a maximum of 10 pages.

2. Discussions

You will learn a great deal by interacting (asynchronously) with the other students in the class, and your grade is not dependent on this activity. However, you can earn up to 3% of extra credit if you do participate in discussions, please see grading computations below. Postings will be graded and up to 3% can be applied as extra credit to your final grade. It is important that you have meaningful posts and invoke conversation with your fellow classmates. Please post often.

3. Weekly Assessments

Each week there will be an assessment containing multiple-choice questions that will cover the material located within the modules and the textbook only. The assessments will NOT cover any article or business case readings.

- **Review Quizzes:** Each week, along with the Assessment Questions, there will be Review Questions that you may wish to review to find more clarification regarding the material. You may answer these review questions multiple times; there will no grade given, but you will find them helpful in gaining additional insights to the course.

4. Final Exam

There will be a three-hour proctored Final Exam in this course using a proctor service called Examity. Detailed instructions regarding your proctored exam will be forthcoming from the Assessment Administrator. You will be responsible for scheduling your own appointment. The exam is similar in overall style of the assignments. This provides you the opportunity to show what you have learned from the material, the discussions, and the homework.

The course grade will be computed as follows:

Weekly Assignments	50%
Discussions	3% (Extra Credit)
Weekly Assessments	20%
Proctored Final Exam	30%

Evaluation Criteria and Grading Rubric

To clarify the qualities we consider most important for your professional and academic growth, we will provide you with evaluation criteria for every assignment in advance. To enable you to assess your grade standing throughout the course, your instructor will give your submissions a letter grade on each criterion.

The letter grades are the same as those used by the University (A = 4.0, B = 3.0, etc.). Letter grades are

used to enable you to know where you stand at all times. For the purposes of computation and averaging, letter grades can be treated as numbers using the University's system:

Letter Grade	Approximate percentage grade range	Grade Points
A	96–100	4.0
A-	91–95	3.7
B+	86–90	3.3
B	81–85	3.0
B-	76–80	2.7
C+	71–75	2.3
C	66–70	2.0
C-	61–66	1.7
D	56–60	1.0
F	0–55	0

To obtain an "A" for the course, you must score 4.0 or higher; to obtain an "A-", 3.7 or higher; "B+", 3.3 or higher, etc.

An "A" grade at Boston University is awarded for excellent work. If you earn an A, you are to be especially congratulated. The university officially designates good work as deserving of a "B," and we reward good work with a B, accordingly. It is our obligation to tell you as far as we can what would improve your work. (That can sometimes be hard if you receive an A or A+, of course.) Grades are an excellent motivator but they are only means to an end rather than ends in themselves. The average grade in graduate courses is ordinarily expected to be a B+. If the average turns out to be less than this at the end of the term, and the class performance is no less than average, I am able to elevate some grades that fall on borderlines. Grades are an evaluation of your work at a particular time: I recommend that you never take a grade as any kind of label of yourself. All submissions in this course will be graded on a 100-point scale.

Discussion Participation

We will retrieve all of the contributions that you make online during each week. This is an important and motivating part of the learning process. Participation will consist of weekly discussions on subjects provided each week. Make your online comments substantive. They should relate to your experience or your reading. They should not mention the specifics of the homework or its solution. A contribution may contain a question for the group to consider. A good question is one that you have thought about, whose answer would be useful for all, which does not have a ready answer in the text readings, and which is clearly phrased. However, discussions are extra credit and can count toward 3% extra credit to your final average.

Criteria for Homework Assignment Grading

The assignments are essay-type for the most part, and we make every effort to provide you objective feedback and evaluation. For each of your assignments—as well as the final questions—your facilitator will assess your work using the table. The “utilization of resources” criterion does not apply to evaluating the questions on the final.

	D	C-	C+	B-	B+	A
1. Clarity	Disorganized or hard-to-understand		Satisfactory but some parts of the submission are disorganized or hard to understand	Generally organized and clear	Very clear, organized and persuasive presentation of ideas and designs	Exceptionally clear, organized and persuasive presentation of ideas and designs
2. Technical Soundness	Little understanding of, or insight into, material technically		Some understanding of material technically	Overall understanding of much material technically	Very good overall understanding of technical material, with some real depth	Excellent, deep understanding of technical material and its inter-relationships
3. Thoroughness & Coverage	Hardly covers any of the major relevant issues		Covers some of the major relevant issues	Reasonable coverage of the major relevant areas	Thorough coverage of almost all of the major	Exceptionally thorough coverage of all major

					relevant issues	relevant issues
4. Relevance	Mostly unfocused	Focus is off topic or on insubstantial or secondary issues	Only some of the content is meaningful and on topic	Most or all of the content is reasonably meaningful and on-topic	All of the content is reasonably meaningful and on-topic	All of the content is entirely relevant and meaningful
5 Utilization of resources	No useful use of notes, text(s), or Web with incorrect details or applicability		Some useful use of notes, text(s), or Web with mostly correct details or applicability	Fairly good use of notes, text(s), or Web with correct details or applicability	Very good use of notes, text(s), or Web with correct details or applicability	Excellent use of notes, text(s), or Web with entirely correct details or applicability

If you have thoughtful questions about your facilitator’s evaluation, please discuss them with him or her in an academic manner. This can be an excellent opportunity to learn and to identify misperceptions. It is best if this process is resolved but if it is necessary for the course professor to re-grade an assignment, he independently grades the entire assignment—not parts—using the criteria above. This grade would replace that given by the facilitator.

Lateness

We recognize that emergencies occur in professional and personal lives. If one occurs that prevents your completion of homework by a deadline, please make this plain to your instructor. This must be done in advance of the deadline (unless the emergency makes this impossible, of course), and should be accompanied by particulars that back it up. No credit will otherwise be granted for late homework. We want to be fair to everyone in this process, including the vast majority of you who sacrifice so much to submit your homework on time in this demanding schedule. However, understand that if no contact is made with your instructor, describing the situation that caused your submission to be late, there will be 15% deducted per day the assignment is late.

If you are granted an extension as above, your facilitator will specify a window of submission. For example, if homework assignment 2 is to be late, the window for its submission may be after the submission of homework assignment 3 and prior to the commencement of Module 4—to forestall cascading lateness. The grade for late homework with permission may become Pass/Fail.

Criteria for Discussion Grading

The discussions focus only on the online lecture material and associated readings in the textbook for that week and on relating them in a practical manner to experience. In the Subject, each contribution should number and name the specific lecture section or textbook reading page numbers that it references.

Here are guidelines to the kind of material to post.

- Relate the cited section or textbook reading page(s) to an experience of yours.
- Relate the cited section or textbook reading page(s) to a reported incident.
- Ask your classmates a thoughtful question about the cited section.
- Make informed predictions.
- Clarify the cited section if you have insights that others would find informative.
- Respond with substance to a posting on the cited section (Also, do provide feedback, compliments, or just “I agree,” if you feel that way, even though this does not do much for your grade).
- Relate the lecture material and the textbook.

The criteria for participation in the weekly discussions are as follows.

(i) Relevance

This concerns the degree to which your postings are relevant to the stated topic for the module. “A” work consists of postings which refer to and are entirely relevant to the week's module material. This criterion encourages you to keep your discussion grade on topic.

(ii) Proportion of substantive contributions.

This is the percentage of your online contributions that have significant content: 80% would be a good fraction (= B); 95% is definitely excellent (= A). This criterion implies that “more is not necessarily better.” For example, 8 substantial contributions out of 10 will score higher on this criterion than 79 contributions out of 100 with mixed substance—even though you have said more in the latter case. In assessing this criterion, we will ignore postings that are appropriate but obviously not intended to contain content, such as feedback, compliments, or just “I agree.”

Extensive quoted material that can be read from the Internet will fare poorly under this criterion as it is not the student's own contribution.

(iii) Usefulness of your week's contributions for the rest of your group.

This classification evaluates how useful and penetrating the totality of your comments and questions are for the rest of the group. “A” work will result from a significant set of comments and questions that are very useful to your fellow students, and which show that you are developing excellent insight into the subject at hand. This criterion encourages you to disseminate knowledge and to be participatory (e.g., by responding to good questions or points posed by others).

Contribute at an even rate of substantive postings throughout the week. Contributions concentrated at the end of the week are far less useful to your classmates because they have little time to absorb and respond.

Long posts are also far less likely to be read by your fellow students and will thus fare poorly in this criterion.

Reference and Citation Format Guide

The operative procedure for academic conduct is Metropolitan College's academic conduct code, which is referred to elsewhere in this syllabus. The following is supplied to assist you in fulfilling this, but in case of any inconsistency, the College's academic conduct code predominates.

In general, you will need to build on the ideas of others. But when you use someone's ideas, it is your responsibility to acknowledge this clearly. A *citation* is used to cite a referenced document within the body of your paper. APA citations use parentheses with the author(s) and year of publication that points to a reference. For example, at the place in your material where you quote from or use the ideas of the paper "Capabilities-Based Query...", you would include "(Papakonstantinou & Haas, 1998)"—and you would include the following at the end of the paper, under "References."

Papakonstantinou, Y., Gupta, A., & Haas, L. (1998). Capabilities-based query rewriting in mediator systems. *Distributed and Parallel Databases*, 6(1), 73-110.

Here is an example of this.

As noted by Papakonstantinou and Haas (1998), the degree of connectivity of ...

If it is appropriate to cite multiple documents together, then separate the citations by semi-colons within a single pair of parentheses. For example:

(Miller, 1999; Shafranske & Mahoney, 1998)

In addition, please note the following:

- All documents referenced are identified in parentheses by the author or authors last names (in the order that they appear on the publication) and the year of publication.
- If a document does not have a clearly identifiable author (e.g. it is published by an organization such as ECM TechNews), identify the document by the name of the organization, e.g. (ECM TechNews, 2016).
- If multiple papers are included that would have the same citation, distinguish each with a letter suffix, e.g. (Wikipedia, 2019a), (Wikipedia, 2019b), etc.
- If the year in which a document is published is not possible to determine, you will use "(n.d.)", which means "no date".
- The reference must include the names of the authors (if known), the title of the document, the name of the book or proceedings, if any, in which it appears (along with the page numbers where the article can be found), and the year.
- If you use an online article, you must also include the URL (*in addition to* the title, author, and date). In some cases, only the abstract of the article can be found online, in this case, you can include the URL of the

abstract, but make clear that it is only the abstract that is available online. Supply the date at which you used the URL.

- List the references in alphabetical order of the author's last name (or first author's last name), and then in order of publication (e.g., (Porter, 1979) should appear before (Porter, 1985), which should appear before (Porter, 2013)).
- For more information, please refer to Purdue Online Writing Lab General APA Guidelines: https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html or A Comprehensive Guide to APA Citations and Format <http://www.citationmachine.net/apa/cite-a-book>.

Academic Conduct Policy

Please visit Metropolitan College's website for the full text of the department's [Academic Conduct Code](#).

A Definition of Plagiarism

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

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

"Between these poles there are degrees and degrees, but they may be roughly placed in two groups. Close to outright and blatant deceit-but more the result, perhaps, of laziness than of bad intent-is the patching together of random jottings made in the course of reading, generally without careful identification of their source, and then woven into the text, so that the result is a mosaic of other people's ideas and words, the writer's sole contribution being the cement to hold the pieces together. Indicative of more effort and, for that reason, somewhat closer to honest, though still dishonest, is the

paraphrase, and abbreviated (and often skillfully prepared) restatement of someone else's analysis or conclusion, without acknowledgment that another person's text has been the basis for the recapitulation."

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

Academic Conduct Code

I. Philosophy of Discipline

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

II. Academic Misconduct

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

III. Violations of this Code

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

- A. **Cheating on examination.** Any attempt by a student to alter his or her performance on an examination in violation of that examination's stated or commonly understood ground rules.
- B. **Plagiarism.** Representing the work of another as one's own. Plagiarism includes but is not limited to the following: copying the answers of another student on an examination, copying or restating the work or ideas of another person or persons in any oral or written work (printed or electronic) without citing the appropriate source, and collaborating with someone else in an academic endeavor without acknowledging his or her contribution. Plagiarism can consist of acts of commission-appropriating the words or ideas of another-or omission failing to acknowledge/document/credit the source or creator of words or ideas (see below for a detailed definition of plagiarism). It also includes colluding with someone else in an academic endeavor without acknowledging his or her contribution, using audio or video footage that comes from another source (including work done by another student) without permission and acknowledgement of that source.
- C. **Misrepresentation or falsification of data** presented for surveys, experiments, reports, etc., which includes but is not limited to: citing authors that do not exist; citing interviews that never took place, or

- field work that was not completed.
- D. **Theft of an examination.** Stealing or otherwise discovering and/or making known to others the contents of an examination that has not yet been administered.
 - E. **Unauthorized communication during examinations.** Any unauthorized communication may be considered prima facie evidence of cheating.
 - F. **Knowingly allowing another student to represent your work as his or her own.** This includes providing a copy of your paper or laboratory report to another student without the explicit permission of the instructor(s).
 - G. **Forgery, alteration, or knowing misuse of graded examinations, quizzes, grade lists, or official records of documents,** including but not limited to transcripts from any institution, letters of recommendation, degree certificates, examinations, quizzes, or other work after submission.
 - H. **Theft or destruction of examinations or papers** after submission.
 - I. **Submitting the same work in more than one course** without the consent of instructors.
 - J. **Altering or destroying another student's work or records,** altering records of any kind, removing materials from libraries or offices without consent, or in any way interfering with the work of others so as to impede their academic performance.
 - K. **Violation of the rules governing teamwork.** Unless the instructor of a course otherwise specifically provides instructions to the contrary, the following rules apply to teamwork: 1. No team member shall intentionally restrict or inhibit another team member's access to team meetings, team work-in-progress, or other team activities without the express authorization of the instructor. 2. All team members shall be held responsible for the content of all teamwork submitted for evaluation as if each team member had individually submitted the entire work product of their team as their own work.
 - L. **Failure to sit in a specifically assigned seat during examinations.**
 - M. **Conduct in a professional field assignment that violates the policies and regulations of the host school or agency.**
 - N. **Conduct in violation of public law occurring outside the University that directly affects the academic and professional status of the student, after civil authorities have imposed sanctions.**
 - O. **Attempting improperly to influence the award of any credit, grade, or honor.**
 - P. **Intentionally making false statements to the Academic Conduct Committee or intentionally presenting false information to the Committee.**
 - Q. **Failure to comply with the sanctions imposed under the authority of this code.**

Important Message on Final Exams

Dear Boston University Computer Science Online Student,

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

By requiring proctored finals, we are ensuring the excellence and fairness of our program. The final exam is administered online.

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

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

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

Regards,

Professor Lou Chitkushev, Ph.D.
Associate Dean for Academic Affairs
Boston University Metropolitan College

Disability and Access Services

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

Once a student receives their accommodation letter, they must send it to their instructor and/or facilitator each semester. They must also send a copy to their Faculty & Student Support Administrator, who may need to update the course settings to ensure accommodations are in place. Accommodations cannot be implemented if the student does not send their letter.

Netiquette

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

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



Ask Yourself...

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

Writing

When you are writing, please follow these rules:

- **Stay polite and positive in your communications.** You can and should disagree and participate in discussions with vigor; however, when able, be constructive with your comments.
- **Proofread your comments before you post them.** Remember that your comments are permanent.
- **Pay attention to your tone.** Without the benefit of facial expressions and body language, your intended tone or the meaning of the message can be misconstrued.
- **Be thoughtful and remember that classmates' experience levels may vary.** You may want to include background information that is not obvious to all readers.
- **Stay on message.** When adding to existing messages, try to maintain the theme of the comments previously posted. If you want to change the topic, simply start another thread rather than disrupt the current conversation.
- **When appropriate, cite sources.** When referencing the work or opinions of others, make sure to use correct citations.

Reading

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

- **Respect people's privacy.** Don't assume that information shared with you is public. Your peers may not want personal information shared. Please check with them before sharing their information.
- **Be forgiving of other students' and instructors' mistakes.** There are many reasons for typos and misinterpretations. Be gracious and forgive other's mistakes or point them out privately and politely.
- **If a comment upsets or offends you, reread it and/or take some time before responding.**

Important Note

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

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

Technical Support

Help Desk

Boston University IT Help Desk can be reached via email (ithelp@bu.edu), phone (617-353-4357) or by filling out the [support form](#) on their website. For IT Help Desk hours of operation, visit the [contact page](#). If you are contacting IT outside of business hours, you will receive a response the following day. Visit the BU Information Services & Technology (IS&T) [news page](#) for announcements and system-wide alerts.

Technology Requirements and Resources

To successfully view all content in your course, it is important that your computer setup meets the necessary minimum technical requirements. Certain courses with specific functionality or educational tools may require additional technical requirements, these details can be found on the Course Resources or Materials page in the Syllabus.

System Requirements

- Access to reliable, high-speed internet: Check your [internet connection speeds](#)
- Learning Management System (Blackboard): [System Requirements](#)
- Synchronous live classroom sessions (Zoom): [System requirements for Windows, macOS, and Linux](#)
- Courses with proctored exams (Examity): [System requirements for Windows, macOS](#)

Downloads

- Recommended web browsers: [Mozilla Firefox](#) or [Google Chrome](#)
- Synchronous live classroom sessions (Zoom): [Zoom download center](#)
- Courses with proctored exams (Examity): Desktop or laptop computer with [Google Chrome](#) or [Microsoft Edge](#)

Recommended Hardware

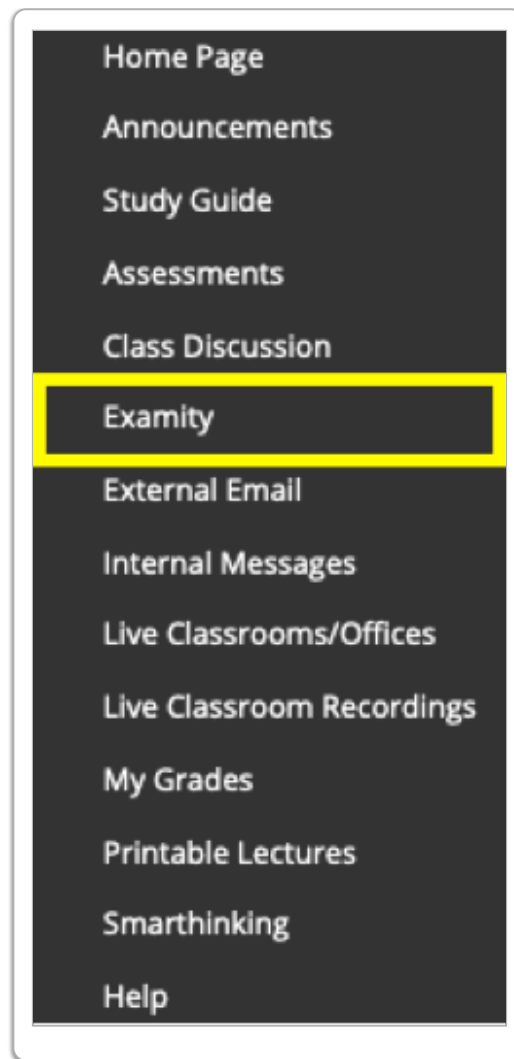
- Desktop or laptop computer recommended for best experience, some course functionality including proctored exams are not compatible with phones or tablets
- Headset with built-in microphone for high quality audio during live classroom sessions
- Webcam (required for proctored exams)
- Working computer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

Clearing Your Browser Cache

It is recommended that users periodically [clear their browser cache](#) to ensure they are viewing the most current course content. Completing this step often resolves login issues and problems viewing course materials.

Proctored Exams

Courses with proctored exams will have an Examity link in the left-hand course navigation. This link will not appear until scheduling opens. The ODE Assessment Administrator will notify you when it is time to schedule your exam. Details on Examity's technical requirements and how to schedule your exam are in the Proctored Exam Information module on the course homepage. The Assessment Administrator can be reached at pexams@bu.edu. Examity support is available 24/7 via phone (855-392-6489), email (support@examity.com), or 'live chat' when logged in to the Examity dashboard.



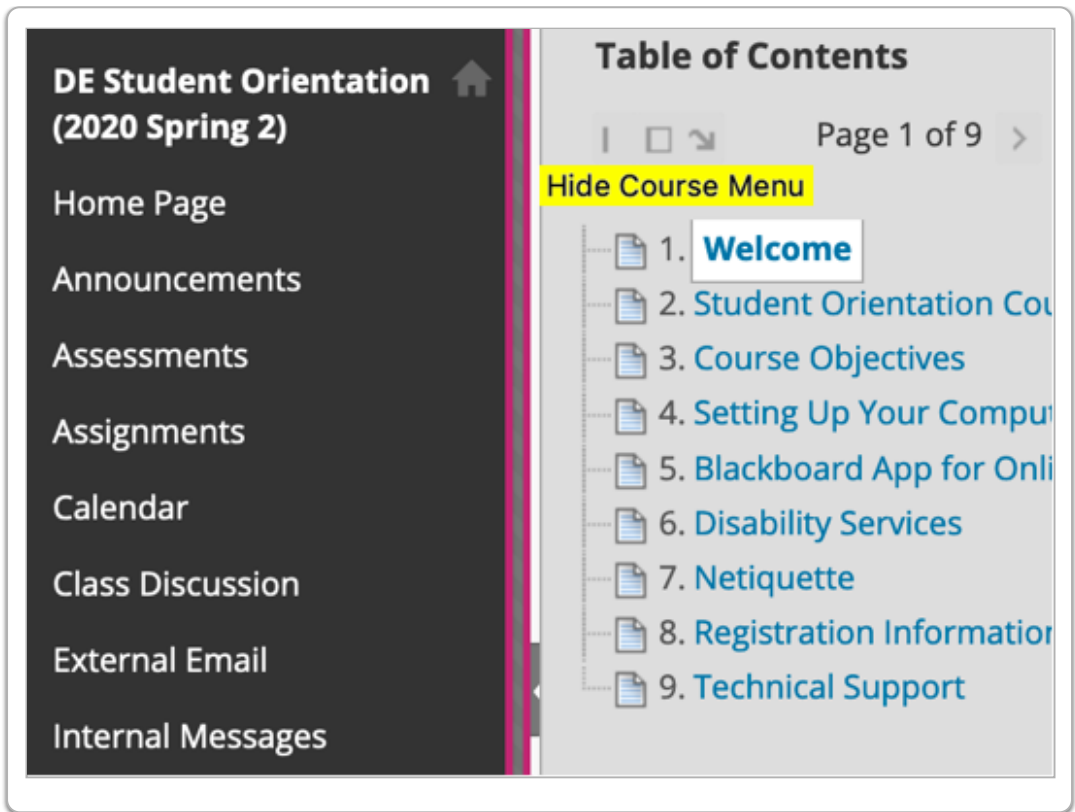
Navigating Courses

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

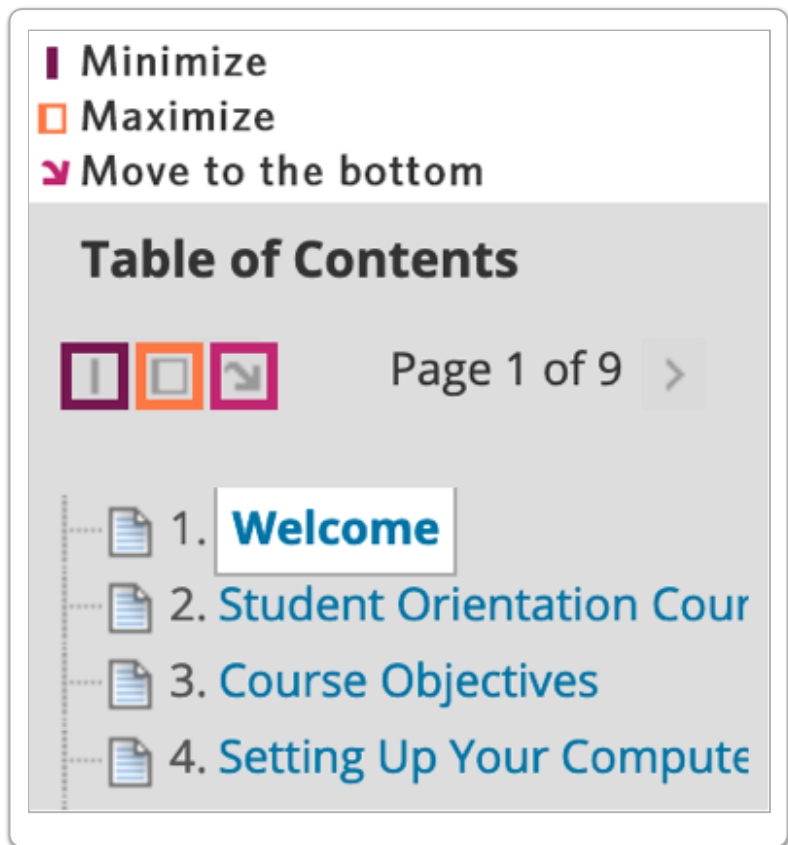
The Blackboard navigation tools, as shown in the images below; allow you to show and hide both the Course Menu and the Table of Contents which can free up space when moving through weekly lecture material.

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

Navigation tools for the Table of Contents are shown in the image below:



Clicking the space between the Course Menu and the Table of Contents allows you to show or hide the Course Menu on the left:



Boston University Metropolitan College