Syllabus

This is a single, concatenated file, suitable for printing or saving as a PDF for offline viewing. Please note that some animations or images may not work.

Course Description

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

MET CS682

Information Systems Analysis and Design

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This course describes modern methods of information system analysis and design for organizations with IT resources. It introduces the discovery process for system feasibility, describes stakeholder analysis, and covers requirements analysis. The course explains use cases and their application to requirements analysis. It covers the management of system analysis projects and risks. “Build vs. buy” trade-offs are discussed. The Unified Modeling Language for specifying object-oriented system designs is discussed. Data flow diagrams and activity models are integrated with the analysis and design coverage. The course covers most of the fundamental system architectures, as well as approaches to detailed design.

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.

Course Objectives and Learning Goals

This course is designed to enable you to do the following

- Recognize various types of business systems
- Explain and summarize a proposed systems analysis project
- Recognize various software development process approaches including Rapid Application Development (RAD) and Agile approaches.
- Recognize project management dynamics within software projects
- Understand and apply requirements gathering techniques
- Recognize and apply various architectural and detailed design approaches
- Recognize and apply goals of good system design
- Understand and apply UML models

By reading the lectures and completing the assignments in this course, you will be able to:

- Perform systems analysis:
    - Develop written functional and non-functional requirements
    - Create written use cases and scenarios
    - Develop graphical user interface mock-ups
- Identify how to best implement and manage a project within the Software Development Lifecycle (SDLC) including various Agile methodologies.
- Better predict and deal with risks
- Integrate the use of classes in Object-Orientation
- Relate one class to another through inheritance, aggregation and dependencies
- Create class, sequence, activity, data flow, and state transition UML diagrams
- Understand and apply tradeoffs within design goals
- Construct system architectures and detailed designs

Week-by-Week Topics

Weekly Activities

Each week you will need to:

- Read the online lectures
- Attend supplementary live sessions (and/or listen to recordings of live sessions)
- Read required and recommended pages in the textbook
- Complete the interim assessment for interim feedback
- Complete the homework assignment

Week-by-Week Topics

Week 1 — Introduction and Process

- Types of Information Systems
- Systems Analysis
- Process
- Introduction to System Analysis Methodology
- Participants in Systems Analysis

Week 2 — The Management of System Analysis

- System Requirements and System Design
- Systems Development Methodologies
    - Structured—Waterfall, Parallel
    - Rapic Application Development (RAD)—Phased, Prototyping, Throwaway Prototyping
    - Agile—Scrum, Extreme Programming (XP), Lean, Kanaban, Scaled Agile Framework (SAFe)
- Trade-offs and selecting a suitable development methodology
- Tools of Project Management
    - WBS, Gantt, Software
- Project estimation techniques
    - PERT
    - Variables and factors
    - Agile: Planning Poker
- Managing Scope
    - Scope Creep, timeboxing
- Managing Risks
- Managing Teams
    - Individuals
    - Teams
    - Team Leadership
    - Organization culture and structure

Week 3 — System and Requirements Analysis

- The meaning and sources of requirements

    - Identifying stakeholders
- Requirements gathering strategies and techniques
    - Interview strategies and problem-solving
- Documenting requirements
    - Overview-mission statement
    - Functional and non-functional requirements
    - User stories
    - Use cases
- User interface and interface requirements
    - Principles for user interface design
- The modeling of requirements
    - Introduction to Unified Modeling Language (UML)
    - State transition diagrams
- Methods of organizing requirements - a summary

Week 4 — Modeling with UML

- Classes in UML
    - Entity Classes, Attributes, Methods, Non-Entity Classes
    - Textual Analysis strategies to determine objects
        - Example of extracting classes, attributes and methods from a use case
    - Class relationships in UML
        - Inheritance, Association, Aggregation, Composition, Other Dependencies
    - Class diagrams
    - Detailed sequence diagrams

Week 5 — System Architectures

- Design purposes
- Software frameworks
- More on data flow diagrams
- ATAM Design and Tradeoffs
- Categorizing system architectures
- Component technology

Week 6 — Object-Oriented Designs

- Design in the Unified Development Process
- Designing against component interfaces
- Specifying classes and functions for design
- Software reuse
- Detailed sequence diagrams and data flow diagrams

- Standards for detailed design
- Estimating cost of software

Week 7 — Final Exam

Instructor

Jack Polnar

Computer Science Department
Metropolitan College
Boston University
jpolnar@bu.edu

Office Hours and Questions: I welcome your questions via email (jpolnar@bu.edu), within course discussions, and during supplementary live sessions. We can also arrange time to meet one-on-one through a live office or a phone call.

Welcome!

My name is Jack Polnar and I will be your instructor for CS682, Information Systems Analysis and Design. Our teaching team and I welcome the opportunity to teach, guide and interact with you through the next 6–7 weeks of fast-paced learning of Information Systems Analysis and Design. In this course we will learn and think about how to gather requirements and design IT systems, including many of the challenges and approaches, both conceptually and hands-on. My goal in this course is to show you how exciting and challenging the process of analysis and design is. How it is constantly evolving and impacting our experience at work, school and at home!

I received my master's degree in Computer Information Systems with Security Concentration from Boston University MET in 2008. I have taken this course as a student once, just like you are now! I have been teaching, facilitating and helping develop courses here at BU MET Online program since Spring 2006 starting with this exact course! In addition to CS682, I am also heavily involved in CS779 Advanced Database Management.

Currently I am a Data Management Lead for Newton Public Schools (k-12, Newton MA) where my team and I are responsible for many various information systems. We frequently apply principals from the agile approach in supporting and maintaining our various IT Systems including planning, administration, programming, integration, and data analysis. I also independently consult developing various business systems.

The best way to reach me outside of our many Live Classroom sessions is to email me at jpolnar@bu.edu. I normally pick up email many times per day.

Contacting the Instructor

Stay in contact with Jack Polnar by means of the following:

- E-mail jpolnar@bu.edu or discussions within Blackboard
- Live Classroom Sessions: Each week, Live Classroom sessions will be scheduled. Each session will be open to all students and will be recorded.
- Post to “Ask The Teaching Team”
- Telephone contact: E-Mail me and we can schedule a phone call at your convenience.

Initial Course Development

CS682 Information Systems Analysis and Design has been developed with contributions from:

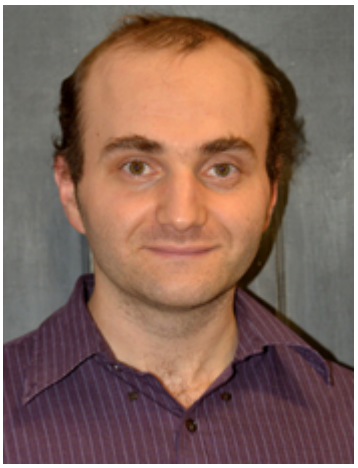
Eric Braude

This course was originally developed by Dr. Eric Braude. He is an Associate Professor of Computer Science at Boston University’s Metropolitan College where he has at times held the chairmanship and the acting associate deanship. He received his Ph.D. from Columbia University in mathematics and Master’s in Computer Science from the University of Miami. He taught at CUNY and Penn State, followed by twelve years in government and industry as a software engineer, scientist, and manager. His research concerns reliable program construction. Eric has written, co-written, or edited six books, including “Software Engineering” and “Software Design.”

Additional information about Dr. Braude can be found on his BU homepage at http://www.bu.edu/csmet/braude/

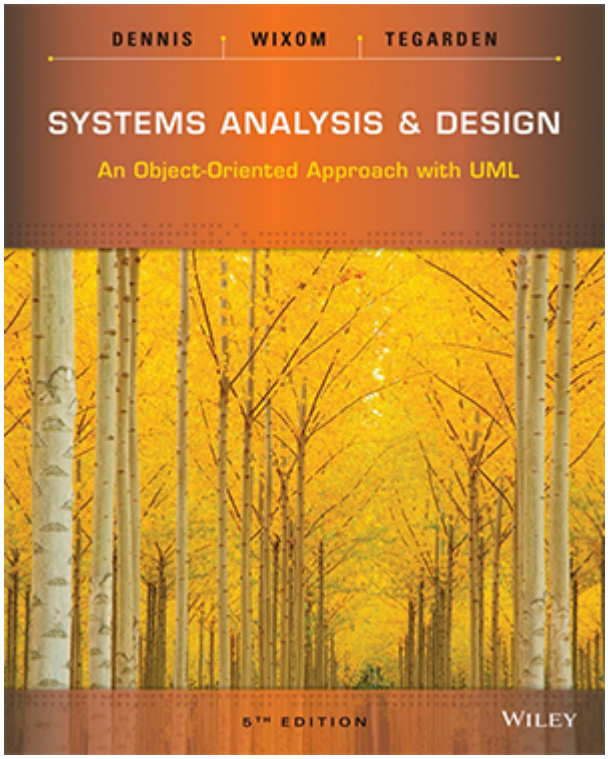
Jack Polnar

Contributions to the course provided by Jack Polnar. He is part time faculty at Boston University’s Metropolitan College Computer Science department. He received his master's degree in Computer Information Systems from Boston University's Metropolitan College. He has 20 years experience within government information technology, predominantly within systems analysis and database management. Jack Polnar was the 2018 recipient of BU MET's Roger Deveau Part-Time Faculty Award for Excellence in Teaching.



Course Resources

Required Book



Systems Analysis and Design: An Object-Oriented Approach
Dennis, Wixom, & Tegarden
5th Edition, 2015.
ISBN-13: 978-1118804674
ISBN-10: 1118804678

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

Other Resources

- For definitions and terms, and for pointing you to references, Wikipedia can sometimes be useful. However, remember that information at Wikipedia is erratically curated, and entries have been manipulated by a variety of people for a variety of reasons. You are free to use Wikipedia as a starting point and as a source of pointers to higher-quality information, however avoid citing Wikipedia (or similar sources that have not been reviewed professionally for veracity) as authorities.
- The UML specifications are at http://uml.org/ (but you will find them very dense and formal indeed).
- You have the option of using Visio or Lucidchart in this course for UML. However, you are free to use other tools if you wish.

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 http://www.bu.edu/library/research/collections to access eBooks and eJournals directly.

If you have questions about library resources, go to http://www.bu.edu/library/help/ask-a-librarian to email the library or use the live-chat feature.

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

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

Free Tutoring Service

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

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

YouTube

Please Note

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

It is recommended that you prioritize the readings: studying the “primary” ones first and then looking at as many of the “secondary” ones as you can. Unless otherwise noted, readings are from **Systems Analysis and Design: An Object-Oriented Approach,** by Dennis, Wixom, & Tegarden (5th Edition, 2015). In the readings listed below, you are given a page range for the reading, but you are only required to read the subsections that are itemized. If no subsections are mentioned, you are required to read the entire page range.

Module 1 Study Guide and Deliverables

Readings:

Primary Reading for Module 1:
The following readings should be completed after reading the module parts that they pertain to.

- Page 1-5: Introduction, The Systems Development Life Cycle
- Page 17-19: Typical Systems Analyst Roles and Skills
- Page 428-431: Ubiquitous Computing and the Internet of Things
- Page 43-44: Project Identification
- Page 53-54: Project Selection

Secondary Reading for Module 1
The following readings are not required, however they provide additional depth and examples for concepts in this module.

- Page 45-48: Feasibility Analysis (Technical Feasibility and Economic Feasibility)

Assignments: Assignment 1 due Wednesday, November 6, at 5:00 pm ET

Assessments: Interim Assessment 1 due Saturday, November 2, at 12:00 pm ET

Live Classrooms:

- Wednesday, October 30, 8:00-10:00 pm ET - Class Lecture
- Thursday, October 31, 8:00-9:00 pm ET - Assignment Review
- Saturday, November 2, 12:00-1:00 pm ET - Interim Assessment Review

Module 2 Study Guide and Deliverables

Readings:

Primary Reading for Module 2 Part 1
The following readings should be completed after reading the module parts that they pertain to.

- Page 5-17: Systems Development Methodologies

Primary Reading for Module 2 Part 2
The following readings should be completed after reading the module parts that they pertain to.

- Page 41-43: Introduction to Project Management
- Page 53-58: Project Selection, Traditional Project ManagementTtools
- Page 63-71: Creating and Managing the Workplan (read Managing Scope, Timeboxing, Managing Risk)
- Page 71-76: Staffing the Project (focus on Characteristics of a Jelled Team, Staffing Plan, Motivation, Handling Conflict)

Secondary Reading for Module 2 Part 1
The following readings are not required, however provide additional depth and examples for concepts in this module.

- Page 268-273: Design Strategies (focus on Custom Development, Packaged Software, Outsourcing)

- Scrum Guide (18 pages)
- Scaled Agile Framework White Paper (28 pages)
- Please see Appendix Sections for additional suggested readings.

Secondary Reading for Module 2 Part 2

The following readings are not required, however they provide additional depth and examples for concepts in this module.

- Page 45-53: Feasibility Analysis
- Page 77-79: CASE Tools, Standards, Documentation
- Page 458-461: Coordinating Activities, Managing the Schedule, Cultural Issues

Assignments: Assignment 2 due Wednesday, November 13, at 5:00 pm ET

Assessments: Interim Assessment 2 due Saturday, November 9, at 12:00 pm ET

Live Classrooms:

- Wednesday, November 6, 8:00-10:00 pm ET - Class Lecture
- Thursday, November 7, 8:00-9:00 pm ET - Assignment Review
- Saturday, November 9, 12:00-1:00 pm ET - Interim Assessment Review

Module 3 Study Guide and Deliverables

Readings: **Primary Reading for Module 3:**

The following readings should be

completed after reading the module parts that they pertain to.

Meaning and sources of requirements and requirements gathering strategies and techniques

- Page 86-91: Requirements Determination (read Defining a Requirement)
- Page 112: User Stories

User Interface Requirements

- Page 368-372: Principles for User Interface Design

The Modeling of Requirements

- Page 34-36: The Unified Modeling Language

Secondary Reading for Module 3
The following readings are not required, however they provide additional depth and examples for concepts in this module.

Requirements Analysis

- Page 92-110: Requirements Analysis Strategies, Requirements—Gathering Techniques

Non-Functional Requirements

- Page 438-440: Hardware and System Software Specifications
- Page 440-447: Non-functional Requirements and Physical Architecture Layer Design
- Page 410: Non-functional Requirements and Human-

Computer Interaction Layer Design
- Page 360-361: Non-functional Requirements and Data Management Layer Design

Use Cases *(Note: The methodology in the textbook differs slightly from what is provided in the module)*

- Page 126-127: Identifying Major Use Cases
- Page 140-152: Business Process Documentation with Use Cases and User Case Descriptions

Human-Computer Interaction Design

- Page 367-410: Human-Computer Interaction Layer Design

State Machines *(Note: The textbook introduces state machine diagraming through an object-oriented approach, which is covered in the next module.)*

- Page 221-227: Behavioral State Machines
- Page 227-229: Examples of Creating Behavioral State Machine Diagrams
- Page 375: Windows Navigation Diagrams (MND), which are based on state transition diagrams.
- UML Specification (opens PDF)

Assignments: Assignment 3 due Wednesday, November 20, at 5:00 pm ET

Assessments: Interim Assessment 3 due Saturday, November 16, at 12:00 pm ET

Live Classrooms:

- Wednesday, November 13, 8:00-10:00 pm ET - Class Lecture
- Thursday, November 14, 8:00-9:00 pm ET - Assignment Review
- Saturday, November 16, 12:00-1:00 pm ET - Interim Assessment Review

Module 4 Study Guide and Deliverables

Readings:

Primary Reading for Module 4:
The following readings should be completed after the module parts that they pertain to.

- Page 19-23: Basic Characteristics of Object Oriented Systems
- Page 163-167: Structural Modeling: (read Introduction, Structural Models, and Object Identification—through Textual Analysis only)
- Page 176-183: Class Diagrams (read Elements of a Class Diagram)
- 204-210: Sequence Diagrams

Secondary Reading for Module 4
The following readings are not required, however they provide additional depth and examples for concepts in this module.

- Page 163-198: Structural Modeling (read all of Chapter 5)
- Page 210-215: Examples of Building Sequence Diagrams

- Page 375: 4th Paragraph on Stereotypes

Supplementary Reference

- OMG Unified Modeling Language Specification from OMG v 2.5

Assignments: Assignment 4 due Wednesday, November 27, at 5:00 pm ET

Assessments: Interim Assessment 4 due Saturday, November 23, at 12:00 pm ET

Live Classrooms:

- Wednesday, November 20, 8:00-10:00 pm ET - Class Lecture
- Thursday, November 21, 8:00-9:00 pm ET - Assignment Review
- Saturday, November 23, 12:00-1:00 pm ET - Interim Assessment Review

Module 5 Study Guide and Deliverables

Readings: **Primary Reading for Module 5:**
The following readings should be completed after reading the module parts that they pertain to.

- Page 262-268: Packages and Package Diagrams
- Page 286-291: Design Criteria (read Coupling, Cohesion)
- Page 418-424: Physical Architecture Layer Design
- Page 432-438: Infrastructure Design (read Network Model)

Secondary Reading for Module 5

The following readings are not required, however they provide additional depth and examples for concepts in this module.

- Page 293-304: Object Design Activities
- Page 424-425: Selecting a Physical Architecture
- Page 426-432: Cloud Computing, Ubiquitous Computing and the Internet of Things, Green IT

The *Encounter* video game case study will be referenced in this module.

- Requirements for the *Encounter* Video Game
- Design of the *Encounter* Video Game

Assignments: Assignment 5 due Wednesday, December 4, at 5:00 pm ET

Assessments: Interim Assessment 5 due Saturday, November 30, at 12:00 pm ET

Live Classrooms:

- Wednesday, November 27, 8:00-10:00 pm ET - Class Lecture
- Friday, November 29, 8:00-9:00 pm ET - Assignment Review
- Saturday, November 30, 12:00-1:00 pm ET - Interim Assessment Review

Module 6 Study Guide and Deliverables

Readings: **Primary Reading for Module 6:**

The following readings should be completed after reading the module parts that they pertain to.

- Page 314-319: Method Specification
- Page 58-63: Project Effort Estimation

Secondary Reading for Module 6: The following readings are not required, however they provide additional depth and examples for concepts in this module.

- Techniques for Estimating – Planning Poker, Mountaingoatsoftware (12 pages)

The *Encounter* video game case study will be referenced in this module.

- Requirements for the *Encounter* Video Game
- Design of the *Encounter* Video Game

Assignments: Assignment 6 due Wednesday, December 11, at 5:00 pm ET

Assessments: Interim Assessment 6 due Saturday, December 7, at 12:00 pm ET

Live Classrooms:

- Wednesday, December 4, 8:00-10:00 pm ET - Class Lecture
- Thursday, December 5, 8:00-9:00 pm ET - Assignment Review
- Saturday, December 7, 12:00-1:00 pm ET - Interim Assessment Review

Final Exam Details

The Final Exam is a proctored exam available from **December 11 at 6:00 AM ET to December 14 at 11:59 PM ET**. The Computer Science department requires that all final exams be administered using an online proctoring service called Examity that you will access via your course in Blackboard. Detailed instructions regarding your proctored exam will be forthcoming from the Assessment Administrator. You will be responsible for scheduling your own appointment within the defined exam window.

The Final Exam will be **open book/open notes** and is accessible only during the final exam period. You can access it from the Assessments section of the course. Your proctor will enter the password to start the exam.

Final Exam duration: **three hours**

The exam consists of five short essay questions.

Microsoft Azure Dev Tools for Teaching

In this class you will use **Visio Professional** or **LucidChart** to create UML diagrams (although you may use another tool with your instructor's permission).

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

FAQ and basic information are at Microsoft Azure Dev Tools for Teaching.

If you choose to use LucidChart we suggest that you access it using your BU Google apps account. Information can be found here to set up your Google Apps account http://www.bu.edu/tech/support/google/

Evaluation of Students and Grading

Absorbing and creating IT perspectives will be expected of all students in the class.

Basis for Grades

There are three components to your grades.

Weekly Assignments

Most of the content of the course will be explored through weekly assignments that study actual cases or encourage you to extrapolate from your own organizations and experiences. These are counted equally.

Interim Assessments

These questions are similar to what you will find on the same week's assignments and are intended to help you with the associated subject matter so that you can get feedback before your assignment for that week is due. We encourage you to start the "interim assessment" at the beginning of each week so that you are familiar with its question, you can work on it through the week up until the interim assessment deadline.

Final Exam

There will be a 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 will be three hours and will be similar in format to the weekly homework assignments. This provides you the opportunity to show what you have learned from reading the material, participating in the discussions, and doing the homework.

Grade Computations

The course grade will be computed from the following:

Weekly Assignments	60%
Interim Assessments	6%
Proctored Final Exam	34%
Optional Live In-Class Presentations	Up to 1% total extra credit

Part of the greatness of our online program is sharing and learning ideas from each other. Our goal is to provide you an opportunity to learn, teach and contribute to learning of others in our class. For those of you who are interested, you can earn up to 1% extra credit based on live in-class presentations which could be based on sharing your interim assessment or previous week's homework solution, a particular course-related concept that you have researched and would like to present, or an experience you have had outside the course that may be relevant to the subject matter of this course. Please contact the instructo for details and to schedule your presentation.

Rubric

The weekly assignments are graded according to the evaluation matrices on pages that follow. These are averaged using A+=97 A=95, A-=93, B+=87, B=85, B-=83 etc. When a paper is considered to be perfect, a score of 100 can be entered.

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

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

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

The interim assessment grades are Acceptably on track (1), Not yet acceptably on track (0). Otherwise:
>=5 ” Acceptably...”: A
>=4 ” Acceptably...”:: B
>=3 ” Acceptably...”:: C
.=1 ” Acceptably...”:: D
None ”meets ...”:: F

> An "A" grade at Boston University is reserved for excellent work. If you are given 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, of course.) If you don't see such feedback, please remind your facilitator about it. Grades are an excellent motivator but they are only the means to an end rather than ends in themselves. The average grade in graduate courses is usually expected to be a B+. If the course average turns out to be less than this at the end of the term, and the class performance is not less than average, I am able to elevate some grades that fall on borderlines.

Grading Criteria for Homework

Unless otherwise specified, homework will be evaluated according to the following criteria, weighted equally.

	D	C-	C+	B-	B+	A
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

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
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 relevant issues	Exceptionally thorough coverage of all major relevant issues
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
Utilization of resources	No useful use of notes, text(s), Web or UML tools with incorrect details or applicability		Some useful use of notes, text(s), Web or UML tools with mostly correct details or applicability	Fairly good use of notes, text(s), Web or UML tools with correct details or applicability	Very good use of notes, text(s), Web or UML tools with correct details or applicability	Excellent use of notes, text(s), Web or UML tools with entirely correct details or applicability

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 facilitator. This must be done in advance of the deadline (unless the emergency makes this impossible, of course), and should be accompanied by particulars that back it up. Additional documentation may be requested. No 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.

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, and the access will be available at the exam sites.

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

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

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

Regards,

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

Who's Who: Roles and Responsibilities

You will meet many BU people in this course and program. Some of these people you will meet online, and some you will communicate with by email and telephone. There are many people behind the scenes, too, including instructional designers, faculty who assist with course preparation, and video and animation specialists.

People in Your Online Course in Addition to Your Fellow Students

Your Facilitator. Our classes are divided into small groups, and each group has its own facilitator. We carefully select and train our facilitators for their expertise in the subject matter and their excellence in teaching. Your facilitator is responsible for stimulating discussions in pedagogically useful areas, for answering your questions, and for grading homework assignments, discussions, term projects, and any manually graded quiz or final-exam questions. If you ask your facilitator a question by email, you should get a response within 24 hours, and usually faster. If you need a question answered urgently, post your question to one of the urgent help topics, where everyone can see it and answer it.

Your Professor. The professor for your course has primary responsibility for the course. If you have any questions that your facilitator doesn't answer quickly and to your satisfaction, then send your professor an email in the course, with a cc to your facilitator so that your facilitator is aware of your question and your professor's response.

Your Lead Faculty and Student Support Administrator, Jennifer Sullivan. Jen is here to ensure you have a positive online experience. You will receive emails and announcements from Jen throughout the semester. Jen represents Boston University's university services and works for the Office of Distance Education. She prepares students for milestones such as course launch, final exams, and course evaluations. She is a resource to both students and faculty. For example, Jen can direct your university questions and concerns to the appropriate party. She also handles general questions regarding Online Campus functionality for students, faculty, and facilitators, but she does not provide tech support. She is enrolled in all classes and can be contacted within the course through Online Campus email as it is running. You can also contact her by external email at jensul@bu.edu or call (617) 358-1978.

People Not in Your Online Course

Although you will not normally encounter the following people in your online course, they are central to the program. You may receive emails or phone calls from them, and you should feel free to contact them.

Your Computer Science Department Online Program Coordinator, Peter Mirza. Peter administers the academic aspects of the program, including admissions and registration. You can ask him questions about the program, registration, course offerings, graduation, or any other program-related topic. He can be reached at metcsol@bu.edu or (617) 353-2566.

Your Computer Science Department Program Manager, Kim Richards. Kim is responsible for administering most aspects of the Computer Science Department. You can reach Kim at kimrich@bu.edu or (617) 353-2566.

Andrew Gorlin, Academic Advisor. Reviews requests for transfer credits and waivers. Advises students on which courses to take to meet their career goals .You can reach Andrew at asgorlin@bu.edu, or (617)-353-2566.

Professor Anatoly Temkin, Computer Science Department Chairman. You can reach Professor Temkin at temkin@bu.edu or at 617-353-2566.

Professor Lou T. Chitkushev, Associate Dean for Academic Affairs, Metropolitan College. Dr. Chitkushev is responsible for the academic programs of Metropolitan College. Contact Professor Chitkushev with any issues that you feel have not been addressed adequately. The customary issue-escalation sequence after your course facilitator and course faculty is Professor Temkin, and then Professor Chitkushev.

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

Disability Services

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

Netiquette

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

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

Ask Yourself…

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

Writing

When you are writing, please follow these rules:

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

Reading

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

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

Important Note

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

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

Registration Information and Important Dates

View the drop dates for your course.

Withdraw or drop your course.

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

- If you are unable to drop yourself on Student Link, please contact your college or academic department.

Technical Support

Experiencing Issues with BU Websites or Blackboard?

It may be a system-wide problem. Check the BU Information Services & Technology (IS&T) news page for announcements.

Boston University technical support is available via email (ithelp@bu.edu), the support form, and phone (888-243-4596). Please note that the IT Help Center has multiple locations. All locations can be reached through the previously mentioned methods. For IT Help Center hours of operation, please visit their contact page. For other times, you may still submit a support request via email, phone, or the support form, but your question won't receive a response until the following day. If you aren't calling, it is highly recommended that you submit your support request via the technical-support form, as this provides the IS&T Help Center with the best information in order to resolve your issue as quickly as possible.

Examples of issues you might want to request support for include the following:

- Problems viewing or listening to sound or video files
- Problems accessing internal messages
- Problems viewing or posting comments
- Problems attaching or uploading files for assignments or discussions
- Problems accessing or submitting an assessment

To ensure the fastest possible response, please fill out the online form using the link below:

IT Help Center Support
888-243-4596 or 617-353-4357 or Web
Check your open tickets using BU's ticketing system.

Navigating Courses

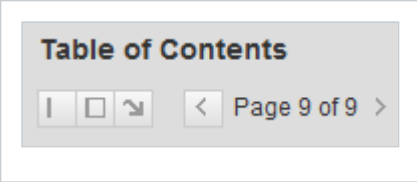
For best results when navigating courses, it is recommended that you use the Mozilla Firefox browser.

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

the top-right corner of the learning content.

Please also familiarize yourself with the navigation tools, as shown below; these allow you to show and hide both the Course Menu and the Table of Contents on the left. This will be helpful for freeing up screen space when moving through the weekly lecture materials.

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



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

Web Resources/Browser Plug-Ins

To view certain media elements in this course, you will need to have several browser plug-in applications installed on your computer. See the Course Resources page in the syllabus of each individual course for other specific software requirements.

- Check your computer's compatibility by reviewing Blackboard's System Requirements
- Check your browser settings with Blackboard's Connection Test
- Download most recent version of Adobe Flash Player
- Download most recent version of Adobe Acrobat Reader

How to Clear Your Browser Cache

The IT Help Center recommends that you periodically clear your browser cache to ensure that you are viewing the most current content, particularly after course or system updates.

This page is also found within the "How to…" section of the online documentation, which contains a list of some of the most common tasks in Blackboard Learn.