CARLETON UNIVERSITY
SPROTT SCHOOL OF BUSINESS
BUSI3402A
WINTER 2019
SYSTEM ANALYSIS AND DESIGN
TIME AND LOCATION: TBD
(UPDATED: 22TH NOV, 2018)

Instructor: Satyendra Singh, Ph.D.
Office: TBD
Office Hours: By appointment
Email: sati.singh@carleton.ca

TA: TBD
Office Hours: TBA

DESCRIPTION

This course is directed specifically towards **business students**. It emphasizes systems analysis and design as a discipline and attempts to identify the role of the systems analyst and end user in the analysis and design of computer-based business information systems. The course covers the concepts, skills, methodologies, techniques, and tools essential for the systems analyst to successfully develop information systems. Through class discussions and hands-on opportunities, students will be introduced to the knowledge and techniques required to develop information systems in today's turbulent business and technical environment. Students are expected to **actively participate** in class, work individually and in groups. Please note that this is not a programming (related) course.

OBJECTIVE

The key objective of the course is to make you ***a critical thinker of systems analysis and design (SAD) in the contemporary environment***.

CALENDAR DESCRIPTION AND PREREQUISITES

BUSI 3402 [0.5 credit] -Systems Analysis and Design
Methods of analysis of computer-based information systems. The systems development life cycle, planning, analysis, design, implementation and maintenance. Structured and object-oriented methods will be used. Use of a CASE tool.

Prerequisite: one of BUSI 2400, COMP 2404, or SYSC 2004 (with a grade of C or higher).

APPROACH

The delivery approach for this course is a combination of lecture and seminar styles. Thus, you are expected to come fully prepared in each class. On an average, each class will require about 4-5 hours of preparation time.

REFERENCE MATERIAL

The content covered in this course is inspired by various books. There are a number of good books that you can buy or borrow but you will need access to **System Analysis and Design by Dennis, Wixom and Roth, 6th Edition, Wiley Publications** for lab work**.** Numerous academic articles are also covered in class under "SAD Exploration". These articles will help you explore SAD as a discipline and build foundations to become a critical thinker. The course syllabus, all lecture notes, lab material and any additional information will be posted on Carleton LMS (https://culearn.carleton.ca).

MY EXPECTATIONS OF YOU

I expect you to behave in a manner that demonstrates professionalism and respect for your colleagues and your professor. The expected behaviours include:

1. **Completing assignments on time**. Your coursework is due as per the schedule in the syllabus. Late assignments will be penalized 5% per day starting immediately after the time identified in the syllabus.
2. **Attending all classes**. Please email me if you are unable to attend because of illness or other extraordinary circumstance. You will still lose your class participation and attendance marks.
3. **Being prepared for classes**. Learning is not a passive, last minute activity. It requires sustained effort by all of us. The assigned readings exist to prepare you to learn in class and accumulate knowledge over time.
4. **Coming to class on time**. Classes will begin and end promptly. Kindly show your respect for your colleagues by being in class and ready to begin on time.
5. **Participating in class**. Playing games, instant messaging your friends, surfing the Internet, and reading for other courses are examples of unacceptable class behaviour. If I am aware of these behaviours, I will ask you in class to stop. I would like to avoid this embarrassing situation so please give the class your attention. You may learn something! Also such behaviour will directly affect your class participation grade.
6. **Being respectful**. We can have fun and learn at the same time! However, learning can sometimes be difficult. Discussions can sometimes become heated. Remember, we want to encourage everyone to participate and that means occasionally someone may make a mistake or say something with which you disagree. Let's work hard to be courteous and respectful of everyone in class by expressing opinions without resorting to disrespectful language and negative behaviour.

MY COMMITMENT TO YOU

1. Begin and end classes on time.
2. Provide you with a roadmap of the course and show you our collective progress.
3. Provide you with clear instructions about assignments.

4. Provide you with timely feedback.
5. Be available outside of class – through meetings, via email or by telephone.
6. Respond to emails in timely manner.
7. Be open to your suggestions for improving the class learning experience.
8. Be respectful of you as you work to learn new material and provide a welcoming classroom experience.

EVALUATION

1	Class Participation	10%
2	Class Attendance	5%
3	4 Individual Lab Reports	20%
4	Mid Term Exam	20%
	Final Exam	20%
5	Team Project	25%
	Total	**100%**

1. Class Participation

Class participation is an important aspect of your learning. When you speak up in class, you learn to express your ideas in a way that others can understand. When you ask questions, you learn how to obtain information to enhance your own understanding of a topic.

You are expected to participate in the classroom discussion by answering questions, asking good questions, making observations, raising issues, and making suggestions. Try to make at least one good contribution each week, but don't overdo it. Restrict your comments to those that will benefit the entire class.

Your final grade will be determined at the end of the term

2. Class Attendance

Existing research indicates that class attendance is a useful predictor of subsequent course achievements. For every class you attend, you will earn 0.5 points up to a total of 5 points.

3. 4 Individual Lab Reports

This course has 9 virtual labs. They are virtual for your convenience so that you can watch and learn on your own time. Everyone is required to submit 4 lab reports. Each report will be worth 5 points, so I am looking for concise and simple reports, maximum 5 pages. You can pick any 4 labs for your report but 2 must be submitted before the mid-term and the other two before the last class. Each report must be submitted with a cover page that is posted on cuLearn.

For your reports, consider the following scenarios.

Lab 1: Assume Carleton University does not have a learning management system and has decided to implement cuLearn. Create a project charter to implement the cuLearn system. The lab gives you one system request form but you are free to use another one that you may have access to.

Lab 2: Create a project plan for the above scenario in MS Project.

Lab 3: Exercise B, Chapter 4, Page 150. Please note that in addition to answering the question, you are also required to create a use case diagram.
Lab 4: Minicase 2, Chapter 5, Page 185-186.

Lab 5: Exercise D, Chapter 6, Page 210.

Lab 6: Minicase 1, Chapter 8, Page 263 - 264

Lab 7: There are 3 parts to this report. (a) Exercise C, Page 185, Chapter 5; (b) Exercise E, Page 308, Chapter 9; and (c) Exercise F, Page 308, Chapter 9

Lab 8: Minicases 1 and 2, Page 345, Chapter 10.

Lab 9: Exercises A and B, Page 398, Chapter 12

4. Mid Term and Final Exam

Both exams will include material only discussed in class and from the lab tutorials.

The mid-term exam will be conducted right after the winter break and will include everything that has been covered until then. Similarly, the final exam will only include material covered after the mid-term exam.

The concepts discussed under SAD Exploration will be part of your exams too. I do not expect you to remember the details from the articles but do expect you to remember concepts.

5. Team Project

Deliverables for the team project include the following: a project proposal, project report, project presentation, and a peer evaluation.

Project Proposal: (10% of project grade) The proposal should outline what the team plans to investigate and report on. It should contain the following: a title for the project, a short description and rationale, possible sources of information, resources that may be needed, and a project management schedule for the team's project (not the final implementation of the proposal). I will review each project proposal to verify its appropriateness for the course. The proposal should not be more than 4 pages in length.

Project Report: (60% of project grade) The project report should be constructed as a proposal for funding, targeted at, and delivered in the language of, upper management.

The proposal should contain at least the following: a title page; an executive summary page; table of contents and list of figures; departmental/company overview (i.e. how the affected department fits within, and contributes to, the overall organization); description of the problem and how it is negatively impacting the operations of the department/company; scope and requirements of proposed solution; short-list of vendors and vendor selection criteria (if applicable); cost-benefit analysis for proposed solution (do not include items: discounting/net present value/time value of money, uncertainty/sensitivity analysis; but do include an estimated payback period with a minimum analysis horizon of one year); proposed implementation plan for the proposed solution (including budget and timeline); references; and appropriate appendices and illustrations. The report should not be more than 15 pages in length, excluding appendices and illustrations. You will lose 1 point for every extra page over the allowed limit for the report.

Project Presentation: (30% of project grade) Each team will give an in-class presentation of its project lasting no more than 15 minutes. This will consist of 12 minutes for the actual presentation and 3 minutes for questions. The limited presentation time makes it imperative for the group to organize what is to be presented. Visual aids should be used to enliven the presentations. However, these must be well designed and clear. All team members should take part in the presentation. The audience is expected to participate and ask questions to the presenting teams.

Peer Evaluation: Each student will be required to perform a peer evaluation of his or her peers' involvement and performance in the project team (involvement and performance in the project preparation and presentation, and team formation and development). The peer evaluation will be used to adjust your project grade upward or downward. The peer evaluation forms can be downloaded from the course resources page on cuLearn.

Example Project Focus Areas (Not an exhaustive list, you can pick something else):

- Replacing the current learning management system with a cloud based system.
- Implementing a co-op system
- Network Management Services

LAB AND DELIVERABLES SCHEDULE

Due in Class	Deliverable(s)
1-Jan 7	
2-Jan 14	Finish Lab 1
3-Jan 21	a) Team Project Proposal b) Finish Lab 2
4-Jan 28	Finish Lab 3
5-Feb 4	Finish Lab 4 and Lab 5
6-Feb 11	Submit any two individual lab reports from Lab 1 to Lab 5 by this class
7-Feb 25	Mid-Term
8-Mar 4	Finish Lab 6

9-Mar 11	Finish Lab 7
10-Mar 18	Finish Lab 8
11-Mar 25	Finish Lab 9
12-Apr 1	Submit any two individual lab reports from Lab 6 to Lab 9 by this class
13-Apr 8	a) Group Project Presentations b) Group Project Report c) Peer Evaluation
14-TBD	Final Exam

ASSIGNMENT SUBMISSION

All written assignments must be submitted to the Instructor in class on the day they are due. It is the student's responsibility to ensure that all assignments are received in an accessible format on or before the due date. Assignments are due at the time indicated. Late assignments will be marked down by 5% for every calendar day late (only when late submissions are allowed). The assignments must be submitted with a cover page that are posted on cuLearn.

GRADING SCHEMA

The following grading scale will be used for evaluating all your subjective assignments, i.e., Class Participation, Lab Reports, and Group Project. For each of the assignment you could get EE, ME+, ME, NE+, NE, U+ or U. Below explains the grading scale.

Evaluation Type	**Exceeded Expectations (EE) – 92%**	**Met Expectations (ME) – 82%**	**Need Improvement (NE) – 72%**	**Unsatisfactory (U) – 0 to 62%**
Class Participation	• Engages actively in every class • Offers critical insights • Asks thoughtful questions	• Engages actively in most classes • Offers critical insights and asks thoughtful questions in most classes • The other key difference between EE and ME is in the quality of discussions	• Engages only in a few classes • Makes comments and asks questions • Insights are often missing • Quantity is high but quality is lacking	• Hardly speaks in a class; • Comes late or leaves early • Low attendance
Lab Reports	• The report answers all parts of the question	• The answer contains most of the points	• The answer contains basic facts that are correct, but	• The answer has several errors. Complete

	• Goes above and beyond by offering critical insights • The writing is very clear and measured. The reader doesn't have to refer anywhere to understand the answer. • The report is within prescribed guidelines.	that needed to be included • The writing is clear, if uninspired. • Correct attempts to integrate the points. • The writing is within prescribed guidelines and measured.	may also have incorrect statements as well. Shows limited understanding. • The writing is not within prescribed guidelines.	failure to answer the question • Plagiarized
Group Presentation	• The presentation was clear and engaging. • Visual aids are well designed, clear and used to enliven the presentations. • All team members took part in the presentation. • Answered all the questions posed by the audience with deep insights • Presentation follows the prescribed time limit	• The presentation was somewhat engaging • Visual aids are clear • All team members took part in the presentation • Answered all the questions posed by the audience with some insights • Presentation follows the prescribed time limit	• The presentation was clear but did not engage the audience • Not all components of the presentation are included • Visual aids are somewhat inspiring • Answers to the questions posed by the audience were satisfactory • Presentation went beyond allowed time limit	• The presentation was not clear • Not all components of the presentation are included • Visual aids are not inspiring • Answers to the questions posed by the audience were not satisfactory • Presentation went beyond allowed time limit
Group Reports	• The report includes all parts the question asked • Goes above and beyond by offering	• The answer contains all parts of the question asked • The report is clear, if uninspired	• The answer contains critical parts of the question asked • The writing is not inspired.	• The report is missing several parts • The writing is unclear, not within prescribed

	critical insights • The report is very clear, complete and measured • The report is within prescribed guidelines	• Correct attempts to integrate the points • The writing is within prescribed guidelines and measured	Shows limited understanding • The writing is not within prescribed guidelines	guidelines and unmeasured

CLASS NEWS AND UPDATES

Please check the class webpage at http://culearn.carleton.ca for regular news and updates.

COURSE SCHEDULE

Class	Topic	Description
1-Jan 7	Introduction and Information Systems Development	**Learning Objectives and Agenda:** In this class, the course syllabus will be introduced and expectations will be set, followed by the discussion of information systems development lifecycle. We will also look at various development methodologies and modeling techniques. **Preparation Guideline:** Read Chapters 1, and 2 of your main text book and the following "SAD Exploration". I am not expecting you to remember details from the articles but you should have an idea about what each article is emphasizing to have a meaningful and insightful discussion in the class. In each article, highlight up to 2 key insights and how do they relate to the topic of discussion in the class. You can always identify more insights. **SAD Exploration:** • Where now for development methodologies, Avison and Fitzgerald, Communications of the ACM, 2003, 46:1, p.78-82 • Theoretical reflections on agile development methodologies, Nerur and Balijepally, Communications of the ACM, 2007, 50:3 p.79-83 • Extrapolating from Moore's Law, Cusumano and Yoffie, Communications of the ACM, 2016, 59:1, p.33-35 • The value of social theories for global computing, Kleine, Communications of the ACM, 2015, 58:9, p.31-33

		• Software on Mars, Goth, Communications of the ACM, 2012, 55:11, p.13-15
2-Jan 14	Requirements Collection	**Learning Objectives and Agenda:** Analysis phase answers the questions of who uses the system, what the system does, and where and when it is used. During this phase, the analyst determines the functional requirements for the new system. In class we discuss various requirements gathering techniques. **Preparation Guideline:** Read Chapter 3 of your main text book and the following "SAD Exploration". I am not expecting you to remember details from the articles but you should have an idea about what each article is emphasizing to have a meaningful and insightful discussion in the class. In each article, highlight up to 2 key insights and how do they relate to the topic of discussion in the class. You can always identify more insights. **SAD Explorations:** • A unified model of requirements elicitation, Hickey and Davis, Journal of Management of Information Systems, 2004, 20:4, p.65-84 • Behavioral programming, Harel et. al., Communications of the ACM, 2012, 55:7, p.90-100 • Energy efficiency: A new concern for application software developers, Pinto and Castor, Communications of the ACM, 2017, 60:12, p.68-75 • Sensing emotions, Mone, Communications of the ACM, 2015, 58:9, p.15-9
3-Jan 21	Modeling System Requirements	**Learning Objectives and Agenda:** An extensive amount of information is required to properly define the system's requirements. In this class we will cover techniques for documenting the requirements. **Preparation Guideline:** Read Chapters 4, 5 and 6 of your main text book. The material covered in these chapters will be covered in 3 classes, i.e., Classes 3, 4 and 5. Regarding "SAD Exploration", I am not expecting you to remember details from the articles but you should have an idea about what each article is emphasizing to have a meaningful and insightful discussion in the class. In each article, highlight up to 2 key insights and how do they relate to the topic of discussion in the class. You can always identify more

		insights. **SAD Explorations:** • Supporting reuse in system analysis, Sugumaran et. al., Communication of the ACM, 2000, 43:11, p.312-322 • Supporting systems analysis and design through fisheye views, Turetken et. al., Communications of the ACM, 2004, 47:9, p.72-77 • Conceptual modeling and system architecting, Dori, Communications of the ACM, 2003, 46:10, p.63-65
4-Jan 28	Structured Methodology	**Learning Objectives and Agenda:** Modeling activities and interactions is a difficult process. Building models is a challenging and time-consuming task. Activities and interaction must be specified in exacting detail. Analysts and users must jointly evaluate model completeness, correctness and quality. In this class we cover the traditional structured approach to representing activities and interactions. We describe and present the diagrams and other models of the traditional approach. **Preparation Guideline:** Revise Chapters 4, 5 and 6 of your main text book. Regarding "SAD Exploration", I am not expecting you to remember details from the articles but you should have an idea about what each article is emphasizing to have a meaningful and insightful discussion in the class. In each article, highlight up to 2 key insights and how do they relate to the topic of discussion in the class. You can always identify more insights. **SAD Explorations:** • What storytelling can do for information visualization, Gershon and Page, Communications of the ACM, 2001, 44:8, p.31-37 • Metaphors and methodologies: Living beyond the systems machine, Kendall and Kendall, MIS Quarterly, 1993, 17:2, p.149-171 • Use-Case 2.0, Jacobson et. al., Communications of the ACM, 2016, 59:5, p. 61-69 • Metaphors we compute by, Videla, Communications of the ACM, 2017, 60:10, p.42-45

5-Feb 4	Object Methodology	**Learning Objectives and Agenda:** In this class we cover the objected oriented approach to representing activities and interactions. We describe and present the diagrams and other models of the object-oriented approach. **Preparation Guideline:** Revise Chapters 4, 5 and 6 of your main text book. Regarding "Brain Teasers", I am not expecting you to remember details from the articles but you should have an idea about what each article is emphasizing to have a meaningful and insightful discussion in the class. In each article, highlight up to 2 key insights and how do they relate to the topic of discussion in the class. You can always identify more insights. **SAD Explorations:** • Dilemma between the structured and object-oriented approaches to system analysis and design, Rob, The Journal of Computer Information Systems, 2006, 46:3, p.32-42 • Revolution or evolution? A comparison or object-oriented and structured systems development methods, Sircar et. al., MIS Quarterly, 2001, 25-4, p. 457-471 • Object oriented analysis – Is it just theory?, Gelbard et. al., IEEE Software, January/February, 2010, p. 64-71 • How intuitive is object oriented design? Hadar and Leron, Communication of the ACM, 2008, 51:5, p. 41-46
6-Feb 11	Moving to Design	**Learning Objectives and Agenda:** The design phase uses the requirements that were gathered during analysis to create a blueprint for the future system. A successful design builds on what was learned in earlier phases and leads to a smooth implementation by creating a clear, accurate plan of what needs to be done. In this class, we cover the initial transition from analysis to design. **Preparation Guideline:** Read Chapter 7. While reading the following "SAD Exploration", think about kinds of issues you need to consider when designing information systems. This will help you to have meaningful and insightful discussion in the class. Please note that these articles just give you a few examples of what you need to consider while designing information systems in the contemporary environment.

		Brain Teasers: • Making a game of system design, Swartout and Lent, Communications of the ACM, 2003, 46:7, p. 32-39 • The disappearing computer, Streitz and Nixon, 2005, Communications of the ACM, 48:3, p. 33-35 • When technologies manipulate our emotions, Calvo et. al., Communications of the ACM, 2015, 58:11, p. 41-42 • The washing machine that ate my sari – Mistakes in cross-cultural design, Chavan et. al., Interactions, January/February 2009, p. 26-31 • Fifty years of operating systems, Denning, Communications of the ACM, 2016, 59:3, p. 30-32
7-Feb 25	Mid-Term	
8-Mar 4	Architecture and UI Design	**Learning Objectives and Agenda:** In this class we will cover architecture and UI designs. Architecture design describes the system's hardware, software and network environment. The architecture design flows primarily from the nonfunctional requirements, such as operational, performance, security, cultural, and political requirements. A user interface is the part of the system with which the users interact. It includes the screen displays that provide navigation through the system, the screens and forms that capture data, and the reports that the system produces. **Preparation Guideline:** Read Chapter 8 and 9. While reading the following "SAD Exploration", think about kinds of issues you need to consider when designing information systems. This will help you to have meaningful and insightful discussion in the class. Please note that these articles just give you a few examples of what you need to consider while designing information systems in the contemporary environment. **SAD Explorations:** • Banavar, G., and Bernstein, A., "Software infrastructure and design challenges for ubiquitous computing applications", Communication of the ACM, 2002, 45, 12, pp. 92-96 • Vogels, W., "Beyond server consolidation," ACM Queue, January/February, 2008, pp. 20-26

		• Vertigaal, R., and Poupyrev, I., "Organic user interfaces", Communication of the ACM, 2008, 51, 6, pp. 26-30 • Vertegaal, R., "Attentive user interfaces", Communication of the ACM, 2003, 46, 3, pp. 31-33 • Selker, T., "Touching the future", Communications of the ACM, 2008, 51:12, p.14-18
9-Mar 11	Program and Data Design	**Learning Objectives and Agenda:** An important activity of the design phase is designing the programs that will perform the system's application logic. Programs can be quite complex, so analysts must create instructions and guidelines for programmers which clearly describe that the program must do. Another important activity of the design phase is the data storage component of the system. In this class we will also describe the activities that are performed when developing the data storage design. **Preparation Guideline:** Read Chapter 10 and 11. While reading the following "SAD Exploration", think about kinds of issues you need to consider when designing information systems. This will help you to have meaningful and insightful discussion in the class. Please note that these articles just give you a few examples of what you need to consider while designing information systems in the contemporary environment. **SAD Explorations:** • Giguette, R., "Building objects out of Plato: Applying philosophy, symbolism, and analogy to software design", Communication of the ACM, 2006, 49, 10, pp. 66-71 • Sugumaran, V., Park, S., and Kang, K.C., "Software product line engineering", Communication of the ACM, 2006, 49, 12, pp. 28-32 • Scott, K.M., "Is usability obsolete", Interactions, 2009, May/June, pp. 6-11 • Seltzer, M., "Beyond relational databases", Communication of the ACM, 2008, 51, 7, pp. 52-58

10-Mar 18	System Interface Controls and Security Design	**Learning Objectives and Agenda:** Most modern information systems involve extensive input and output, and many people and organizations require access to the data stored by a system. Many system inputs and outputs do not involve much human interaction. Many of these system interfaces are not as obvious to end users. But analysts need a deep understanding of existing systems, databases, and network technologies where I/O occurs to design a system that incorporates all I/O needs **Preparation Guideline:** While reading the following "SAD Exploration", think about kinds of issues you need to consider when designing information systems. This will help you to have meaningful and insightful discussion in the class. Please note that these articles just give you a few examples of what you need to consider while designing information systems in the contemporary environment. **SAD Explorations:** • Dykstra, J. and Spafford, E. H., "The case for disappearing cyber security", Communication of the ACM, 2018, 61:7, pp. 40-42 • West, R., "The psychology of security", Communications of the ACM, 2008, 51, 4, pp. 34-41 • Oppliger, R., "IT security: In search of the holy grail", Communication of the ACM, 2007, 50, 2, pp. 96-98 • Bonneau et al., "Passwords and the evolution of imperfect authentication", Communication of the ACM, 2015, 58:7, pp. 78-87 • Weaver, N, "Risks of cryptocurrencies", Communications of the ACM, 2018, 61:6, pp.20-24
11-Mar 25	Implementation	**Learning Objectives and Agenda:** As the design phase is completed, the systems analyst begins to focus on the tasks associated with building the system, ensuring that it performs as designed and developing documentation for the system. Programmers will carry out the time-consuming and costly task of writing programs, while the systems analyst prepares plans for a variety of tests that will verify that the system performs as expected. **Preparation Guideline:** Read Chapter 12. While reading the following "SAD Exploration", think about kinds of issues you need to

		consider when designing information systems. This will help you to have meaningful and insightful discussion in the class. Please note that these articles just give you a few examples of what you need to consider while designing information systems in the contemporary environment. **SAD Explorations:** • "Discovering bugs, or ensuring success", Communications of the ACM, 2018, 61:9, pp.12-13 • Armour, P.G., "The unconscious art of software testing", Communication of the ACM, 2005, 48, 1, pp. 15-18 • Jackson, D., "A direct path to dependable software", Communication of the ACM, 2009, 52, 4, pp. 78-88 • Cohen, C.F., Birkin, S.J., Garfield, M.J., and Webb, H.W., "Managing conflict in software testing", Communication of the ACM, 2004, 47, 1, pp. 76-81 • Maddox, P., "Testing distributed system", Communication of the ACM, 2015, 58:9, pp.54-58
12-Apr 1	Transition to the New System and System Maintenance	**Learning Objective:** In this class we examine the activities needed to install the information systems and successfully convert the organization to using it. It also discusses post implementation activities, such as system support and system maintenance. **Preparation Guideline:** Read Chapter 13 of your text book. By now you should have a good idea about our class discussion format. You are expected to read the following articles accordingly. **SAD Explorations:** • Mookerjee, R., "Maintaining enterprise software application", Communication of the ACM, 2005, 48, 11, pp. 75-79 • Gerace, T, and Cavusoglu, H., "The critical elements of the patch management process", Communication of the ACM, 2009, 52, 8, pp. 117-121 • Biehl, M., Prater, E., and McIntyre, J.R., "Remote repairs, diagnostics, and maintenance", Communication of the ACM, 2004, 47, 11, pp. 101-106 • Anthes, G. "Open source software no longer

		optional", Communications of the ACM, 2016, 59, 8, pp.15-17 • Tsaih et al., "Challenges deploying complex technologies in a traditional organization", Communications of the ACM, 2015, 58, 8, pp.70-75
13-Apr 8	Team Project Presentations	
14-TBD	Final Exam	

ADDITIONAL INFORMATION

Course Sharing Websites
Materials created for this course (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the author(s). They are intended for personal use and may not be reproduced or redistributed without prior written consent of the author(s).

Required calculator in BUSI course examinations
If you are purchasing a calculator, we recommend any one of the following options: Texas Instruments BA II Plus (including Pro Model), Hewlett Packard HP 12C (including Platinum model), Staples Financial Calculator, Sharp EL-738C & Hewlett Packard HP 10bII

Group work
The Sprott School of Business encourages group assignments in the school for several reasons. They provide you with opportunities to develop and enhance interpersonal, communication, leadership, follower-ship and other group skills. Group assignments are also good for learning integrative skills for putting together a complex task. Your professor may assign one or more group tasks/assignments/projects in this course. Before embarking on a specific problem as a group, it is your responsibility to ensure that the problem is meant to be a group assignment and not an individual one.

In accordance with the Carleton University Undergraduate Calendar (p 34), the letter grades assigned in this course will have the following percentage equivalents:

A+ = 90-100	B+ = 77-79	C+ = 67-69	D+ = 57-59
A = 85-89	B = 73-76	C = 63-66	D = 53-56
A - = 80-84	B - = 70-72	C - = 60-62	D - = 50-52
F = Below 50			

Grades entered by Registrar:
WDN = Withdrawn from the course
DEF = Deferred

Academic Regulations
University rules regarding registration, withdrawal, appealing marks, and most anything else you might need to know can be found on the university's website, here:
http://calendar.carleton.ca/undergrad/regulations/academicregulationsoftheuniversity/

Requests for Academic Accommodation
You may need special arrangements to meet your academic obligations during the term. For an accommodation request, the processes are as follows:

Pregnancy obligation
Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:

carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Religious obligation
Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, visit the Equity Services website:
carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf

Academic Accommodations for Students with Disabilities
If you have a documented disability requiring academic accommodations in this course, please contact the Paul Menton Centre for Students with Disabilities (PMC) at 613-520-6608 or pmc@carleton.ca for a formal evaluation or contact your PMC coordinator to send your instructor your Letter of Accommodation at the beginning of the term. You must also contact the PMC no later than two weeks before the first in-class scheduled test or exam requiring accommodation (if applicable). After requesting accommodation from PMC, meet with your instructor as soon as possible to ensure accommodation arrangements are made. **carleton.ca/pmc**

Survivors of Sexual Violence
As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence will not be tolerated, and is survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: **carleton.ca/sexual-violence-support**

Accommodation for Student Activities
Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist.
https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf

For more information on academic accommodation, please contact the departmental administrator or visit: **students.carleton.ca/course-outline**

Academic Integrity
Violations of academic integrity are a serious academic offence. Violations of academic integrity – presenting another's ideas, arguments, words or images as your own, using unauthorized material, misrepresentation, fabricating or misrepresenting research data, unauthorized co-operation or collaboration or completing work for another student – weaken the quality of the degree and will not be tolerated. Penalties may include; a grade

of Failure on the submitted work and/or course; academic probation; a refusal of permission to continue or to register in a specific degree program; suspension from full-time studies; suspension from all studies at Carleton; expulsion from Carleton, amongst others. Students are expected to familiarize themselves with and follow the Carleton University Student Academic Integrity Policy which is available, along with resources for compliance at: https://carleton.ca/registrar/academic-integrity/.

Sprott Student Services
The Sprott student services office, located in 710 Dunton Tower, offers academic advising, study skills advising, and overall academic success support. If you are having a difficult time with this course or others, or just need some guidance on how to successfully complete your Sprott degree, please drop in any weekday between 8:30am and 4:30pm. Our advisors are happy to discuss grades, course selection, tutoring, concentrations, and will ensure that you get connected with the resources you need to succeed! http://sprott.carleton.ca/students/undergraduate/learning-support/

Centre for Student Academic Support
The Centre for Student Academic Support (CSAS) is a centralized collection of learning support services designed to help students achieve their goals and improve their learning both inside and outside the classroom. CSAS offers academic assistance with course content, academic writing and skills development. Visit CSAS on the 4th floor of MacOdrum Library or online at: carleton.ca/csas.

Important Information:
- Students must always retain a hard copy of all work that is submitted.
- All final grades are subject to the Dean's approval.
- For us to respond to your emails, we need to see your full name, CU ID, and the email must be written from your valid CARLETON address. Therefore, in order to respond to your inquiries, please send all email from your Carleton CMail account. If you do not have or have yet to activate this account, you may wish to do so by visiting http://carleton.ca/ccs/students/