CARLETON UNIVERSITY
BUSI 2402 / A
2019/FALL

BUSINESS APPLICATIONS DEVELOPMENT

Instructor: Sam Khataei
Office: TBA
Office Hours: Wednesdays 16:30 – 18:00 Hrs. or by appointment
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TA:
Office Hours:
Email:

Course meets:

Class Time		
Section	**Day**	**Time**
A	Thursday	08:35 – 11:25

Lab Time/Tutorial		
Section	**Day**	**Time**
A1	Thursday	13:35 – 14:25
A2	Thursday	12:35 – 13:25
A3	Thursday	11:35 – 12:25

Pre-requisites: Second year standing
Precluded Courses: COMP 1006 and COMP 1406

Course Calendar description from the 2019/2020 University calendar:
Introduction to programming. Fundamentals of structured and object-oriented
programming using an OO programming language. Treatment of objects, abstraction and
inheritance, event-driven programming, iteration, sequence and selection. Consideration
of algorithms for searching, sorting, string processing and numerical analysis. Emphasis
on the development of business applications.
Lecture three hours and tutorial one hour a week.

Course Description:

This course is an opportunity for business students to learn how to take a problem, figure out the algorithm to solve it, and write the code. An ability to define the computing requirements of a problem and to understand typical processes to design appropriate solutions based on established design principles and with an understanding of the trade-offs involved in design choices.

If you pick a career as a technical business analyst, project manager or product manager in the field of software, you do not write code per se in the day to day job but you need to have enough knowledge of how the system works technically as well as functionally. This course lay down the groundwork so you can put yourself in a developer shoe. Therefore, we will ask you to THINK as a business analyst, not a programmer. Your job is to come up with solutions to problems you have never seen before. The solution is not in a textbook. As a beginner programmer, you will attempt to construct a viable solution using the tools you learn in your courses. You will be expected to think and use your creativity to solve problems. This is the fun part of this work, dreaming up ideas to solve problems.

The best way to perform well in this course is to practice what you learn. Spend time coding up the examples presented in class, talk to your classmates, and the teaching assistant(s). Do your assignments on your own. Aim to get programs written at least 4 days before the due date. This gives you time to test your code, review it, and properly comment it and present it. Keep up with your reading. Your book contains many good examples, which you can study for ideas. Unless you are prepared to spend a significant amount of time working, trying out the examples, experimenting with them, and doing some of the things above, you will find it difficult to both complete the assignments, and pass the midterm and final exams.

Learning Outcomes:

The student will be able to learn basics of Java programming, deconstruct problems to develop algorithms and eventually program code.

- Design, develop and test Java programs using classes, methods, conditionals, loops, etc.

- Be able to develop simple data structures in object-oriented form.

- Use an appropriate programming environment (eclipse) to design, code, compile, run and debug computer programs.

- Demonstrate basic problem-solving skills: analyzing problems, modeling a problem as a system of objects using basic UML notation, creating algorithms, and implementing models and algorithms in an object-oriented computer language (classes, objects, methods with parameters, and inheritance).

- Illustrate basic programming concepts such as program flow and syntax of Java.

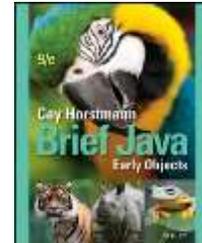- Demonstrate working with primitive data types, strings and arrays.

Reading(s)/Textbook(s)/Required Materials:
In this course I'm following Brief Java Early Object 9th edition by Cay Horstmann, ISBN: 978-1-119 49913-8. Due to the heavy workload of this course, many topics may only get cursory mention during the lectures. You will pick up the required details by reading your book.

Having said that, the previous year textbook for BUSI2402
Java Concepts: Early Objects, 8th edition by Cay Horstmann
ISBN-13: 978-1-119-05650-8 should also cover all the
required topics.

There are many other books on JAVA programming. Seek
out other books in our library if you need additional
material. No single book contains enough examples or
information to satisfy everyone.

In addition to the above text books, there are plenty of free
Java resources on internet which are designed for beginners
with no previous programming experience. My favorite is
https://www.w3schools.com/java/

Course Requirements & Methods of Evaluation (including due dates):

	Date	Weight
Assignments	- A01 – Sep 27th, 2019 - A02 – Oct 11th, 2019 - A03 – Nov 15th, 2019 - A04 – Nov 29th, 2019	- A01 – 5% - A02 – 10% - A03 – 10% - A04 – 10%
Midterm Exam	Oct 17th, 2019	25%
Hands on (Lab) Exam	Dec 5th, 2019	15%
Final Exam	TBA	25%

Students will be evaluated in this course according to the above table. Please note, **in order to pass this course, you must write the midterm, lab and final exam.**

Assignments
- Four **Individual** Assignments are due on Carleton's CU Learn at the date and time indicated on the course's website. Marks and marked assignments will be available there as well.
- There will be **ONLY** a 24 hours period to submit late assignments. If an assignment is marked late it will be penalized 25%. No assignments will be accepted after that. Missed assignments will be tabulated as 0.
- After the 24 hours window for late assignments, a solution to the assignment will be available in the course's site on Carleton's LMS. This is important because some assignments may build on previous ones. Obviously, we cannot accept any assignment after the solution is posted.

Midterm Exam
There will be a 2-hour midterm exam (in class) and it will cover material taught in class up to and including the lecture before the exam. Students can bring their own **handwritten** cheat sheet.

Hands on (Lab) Exam
A computer-based exam that will take place during lab times on the last week of the semester.

Final Exam
The traditional paper-based exam will take place during the formal examination period. It will cover the entire course and will be closed book.

Course Schedule:

Lecture 1 **Sep 5th 2019**	Welcome to the course – course administration – Introduction to Computers, Programs, Programming, IDEs and Java. Problem-Solving (Chapter 1 – Companion Site)
Lecture 2 **Sep 12th 2019**	The OO Paradigm. UML. Using Objects (Chapter 2)
Lecture 3 **Sep 19th 2019**	Implementing Classes (Chapter 3, Appendix B)
Lecture 4 **Sep 26th 2019**	Fundamental Data Types (Chapter 4), and Date, the lost class
Lecture 5 **Oct 3rd 2019**	Decisions (Chapter 5)
Lecture 6 **Oct 10th 2019**	Loops (Chapter 6 – 6.1 to 6.8)
Lecture 7 **Oct 17th 2019**	Midterm Exam
	Reading Week
Lecture 8 **Oct 31st 2019**	Arrays and Array Lists (Chapter 7)
Lecture 9 **Nov 7th 2019**	Designing Classes (Chapter 8), Inheritance (Chapter 9)
Lecture 10 **Nov 14th 2019**	INPUT/OUTPUT and Exception Handling (Chapter 11)
Lecture 11 **Nov 21st 2019**	Object-Oriented Design (Chapter 12)
Lecture 12 **Nov 28th 2019**	Final Exam Review
Lecture 13 **Dec 5th 2019**	Hands-On (Lab) 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/