



**Carleton**  
**University**

**Sprott**  
**School of Business**

CARLETON UNIVERSITY  
SPROTT SCHOOL OF BUSINESS

**BUSI2402 A**  
**FALL 2023**

## **BUSINESS APPLICATION DEVELOPMENT**

**Instructor: Alejandro Ramirez, PhD**  
**Office: 7027 Nicol Building**  
**Zoom Office Hours: Fridays 13:00 – 15:00 Hrs.**  
**Email: Alex.Ramirez@Carleton.ca**  
**Phone Number: 613-520-2600 x8767**

**TA: TBA**  
**Email: TBA**

### **Class Times**

<i>Section</i>	<i>Day</i>	<i>Time</i>	<i>Location</i>
A	Friday	8:35 – 11:25 hrs.	446 TB

### **Lab Times/Tutorials [From 2023/09/15 to 2023/12/01]**

<i>Section</i>	<i>Day</i>	<i>Time</i>	<i>Location</i>
A1	Friday	11:35 – 12:25	509 SA
A2	Friday	12:35 – 13:25	509 SA
A3	Friday	13:35 – 14:25	509 SA

**Modality: In person.**

**Pre-requisites & precluded Courses: Second year standing - Precludes additional credit for [COMP 1006](#) and [COMP 1406](#).**

### **Course Calendar description from the 2023/2024 University calendar:**

BUSI 2402 [0.5 credit]

Business Applications Development

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  
Lectures three hours a week and tutorial one hour a week

### Course Description:

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 course's 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. 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. There are many 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.

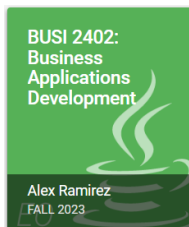
We will ask you to THINK as a business analyst, not a programmer. Your job is to come up with solutions to problems you have never seen before. The solution is not in a textbook. As a beginner programmer, you will attempt to construct a viable solution using the tools you learn in your courses. You will 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.

Ask many questions. Ask your instructor, TAs, and classmates. You will learn a great deal by talking about various issues related to computer-based business solutions with your classmates. Make this a part of your learning style. 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:

1. To develop proficiency in the Java Programming Language.
2. To understand and apply the Object-Oriented Approach using UML notation.
3. To understand and develop Class diagrams to represent the group of objects needed to develop a business application.
4. To translate the Class Diagram associated with a business application into fully functional Java classes, with all their attributes, constructors, relationships, and methods.

### Reading(s)/Textbook(s)/Required Materials (incl. technical requirements):



#### Java Early Objects with zyLabs

1. Sign in or create an account at [learn.zybooks.com](https://learn.zybooks.com)
2. Enter zyBook code: **CARLETONBUSI2402RamirezFall2023**
3. Subscribe

This text is tailored to this course, and it is designed specifically for experiential learning.

Additionally, students will need the **Java Virtual Machine** and **Eclipse Integrated Development Environment** installed in their own computers [*recommended*] or use Sprott's Virtual Desktop Interface through **Carleton's CU Desktop** [<https://cudesktop.carleton.ca/>].

Students will be guided by the TA how to install these resources in their computers during the first tutorial – therefore is extremely important to attend the tutorial at the time you are registered.

**Course Requirements & Methods of Evaluation (including due dates):**  
**To pass this course, you must write both the Midterm and Final examinations.**

Students will be evaluated in this course according to the following:

Component	Weight %
4 Assignments	35%
A01 [DUE: Thursday September 28, 2023] 10:00 PM	5%
A02 [DUE: Thursday October 12, 2023] 10:00 PM	10%
A03 [DUE: Thursday November 09, 2023] 10:00 PM	10%
A04 [DUE: Thursday November 23, 2023] 10:00 PM	10%
Take Home Midterm: Available October 14-18	25%
30 minutes Quiz 01: based on ZyBook.	10%
30 minutes Quiz 02: based on lectures & assignments.	10%
PDF solution to UML Business Case assigned.	5%
Participation Activities in ZyBook complete	10%
Chapters 1-6   Due on Friday October 13, 2023	5%
Chapters 7 – 14   Due on Friday December 8, 2023	5%
Final Exam	30%

### ***Assignments***

Four **Individual** Assignments are due on Carleton's Brightspace at the date and time indicated on the course's website. Marks and marked assignments will be available there as well.

### **Late Assignments**

There will be **ONLY** a 24-hour 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.

### **Solutions**

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.

### ***Participation Activities in ZyBook completed.***

The text includes participation activities to help you understand the concepts while reading the text. You cannot get them wrong, but you need to work on them to indicate that you completed them. These will be prorated accordingly up to 10% of your final grade – there are two deadlines, the first before the midterm, the second on the last day of classes. During some lectures, if time permits, I will allow you to work on these activities at the end of the class. That way you will be up to date every week.

### ***Take Home Midterm***

There will be a midterm exam covering material in the textbook and taught in class up to and including the lecture before the exam. The exam will be available on Brightspace from Saturday October 14 to Wednesday October 18. It consists of 2 Quizzes [30 minutes each] and one UML Business Case.

### ***Final Exam***

The final exam will take place during the University's examination period December 10-22, 2023.

**Detailed Course Schedule**

Lecture Date	Topic
Lecture 1 Sep 8	Welcome – Course administration – Introduction to Java. (Chapter 1)
Lecture 2 Sep 15	The OO Paradigm. UML. Basic Objects (Chapter 2)
Lecture 3 Sep 22	Implementing Classes – Basic Methods + Classes (Chapter 3)
Lecture 4 Sep 29	Data Types (Chapter 4), and Date, the lost class
Lecture 5 Oct 6	Branches (Chapter 5)
Lecture 6 Oct 13	Loops (Chapter 6)
Lecture 7 Oct 20	Arrays (Chapter 7), Methods Continued (Chapter 8)
Oct 27	Fall Break – No Lecture
Lecture 8 Nov 3	Inheritance (Chapter 9), Classes Continued (Chapter 10)
Lecture 9 Nov 10	INPUT/OUTPUT (Chapter 11), Exceptions (Chapter 12)
Lecture 10 Nov 17	Object-Oriented Design - Searching and Sorting Algorithms (Chapter 13)
Lecture 11 Nov 24	Graphical User Interfaces (Chapter 14) GUIs in Java
Lecture 12 Dec 1	Advanced User Interfaces & Final Exam Review
Dec 10-22	Final Exam

**CONTRIBUTION TO LEARNING GOALS OF THE PROGRAM (BCOM, BIB)**

Program Learning Goal	Competencies Not Covered	Competencies Introduced (only)	Competencies Taught, But Not Assessed	Competencies Taught and Assessed
<b>BC1 Knowledge</b> <i>Graduates will be skilled in applying foundational business knowledge to appropriate business contexts.</i>		<b>X</b>		
<b>BC2 Collaboration</b> <i>Graduates will be collaborative and effective contributors in team environments that respect the experience, expertise and interest of all members.</i>	<b>X</b>			
<b>BC3 Critical Thinking</b> <i>Graduates will be discerning critical thinkers, able to discuss different viewpoints, challenge biases and assumptions, and draw conclusions based on analysis and evaluation.</i>			<b>X</b>	
<b>BC4 Communication</b> <i>Graduates will be effective and persuasive in their communications.</i>	<b>X</b>			

<b>BI5 Global Awareness (BIB ONLY)</b> <i>Graduates will be globally-minded.</i>	<b>X</b>			
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### 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.

#### Grading

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 Accommodation

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](https://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](https://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](mailto: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](https://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 its 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](https://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](https://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.

Process: If an alleged violation occurs, all relevant documentation will be forwarded to the Dean. If the allegation proves true, the 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. **For a first offence, at a minimum, the penalty assigned will normally be a zero on the submitted work and at least a minimum full grade reduction of the final course grade. For a second offence, at a minimum, the penalty assigned will normally lead to a suspension from studies.**

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 Undergraduate Student Services Office offers program advising and overall student success support. Our team is available to discuss your academic goals and your program progression plans. We can also work with you to develop strategies for success, including study skills for Business. If you experience any difficulty this term or if you would like to access support, please contact our team at [bcom@sprott.carleton.ca](mailto:bcom@sprott.carleton.ca) or at [bib@sprott.carleton.ca](mailto:bib@sprott.carleton.ca).

### **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](http://carleton.ca/csas).

### **Important Information:**

- Students must always retain a 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 <https://carleton.ca/its/get-started/new-students-2/>
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