DOUGLAS COLLEGE

COMMERCE AND BUSINESS ADMINISTRATION
COURSE INFORMATION AND SCHEDULE

CSIS1175 Introduction to Programming

Instructor: Simon Li
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Semester: Winter 2017
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Section 002 Tue Time: 09:00 - 11:50 N5107
Section 009 Wed Time: 09:00 - 11:50 N5107

Office Hrs: T/W/R 12:00-12:30

COURSE MATERIALS REQUIRED

Printed Text*: Starting out with Visual C#, 4th Edition ISBN-13: 978-0-13-438260-9
*if you prefer to use the eText for the same book at a cheaper price, you can do so.

Software to be used: Microsoft Visual Studio **2015**.

USB drives (min 8 GB) are required for all assignments and exams. You must delete all files from the USB drive before using it for exams. During exams, student using any USB drives that contain files other than those authorized for the exams will be considered as cheating in exams. College policy on academic dishonesty will strictly be enforced in this course.

Any student who hands in a program (exam or assignment) that is similar in style as in another program submitted by another student(s) in the same or previous semesters will be considered as cheating in exam / assignment. College policy on academic dishonesty will be applied against all those students involved, including the one who gives out his program to others.

Academic Integrity Policy can be found at:

https://www.douglascollege.ca/~/media/27C599ABC76048A0A713648565906273.ashx

CALENDAR COURSE DESCRIPTION

This course introduces students to a programming environment and language. It includes program design and fundamental building blocks for programming in Visual C#. Topics cover, but are not limited to forms, controls, properties, events and event handlers, data types including arrays, operators, control structures, methods, classes and objects.

COURSE OBJECTIVES

Upon completion of this course, the student will be able to:

1) explain what a form is, how to create it, and be able to manipulate the properties of a form;
2) explain what menus are and how to add them to a form;
3) explain what objects are, and be able to add controls to a form;
4) use the properties of a control and explain the events that can occur with a control;
5) explain the differences among the various data types;
6) explain the differences between variables and constants, and be able to use them in programs;
7) select appropriate scope for a variable, explain the differences between variables that are global to a project and those visible only to a form;
8) perform number and string manipulations including the use of built-in methods;
9) explain how to accept input through input boxes;
10) format values for output using formatting methods and output boxes;
11) explain the purpose of methods and be able to write reusable code using void or value methods;
12) explain the role of parameters and be able to differentiate between value and reference parameters;
13) evaluate conditions using the relational operators and combine conditions using logical operators;
14) explain and code selection logic using if, if..else, if..else..if, and switch statements;
15) explain and code looping routines do..while, while, for, and foreach;
16) explain what arrays are and use one-dimensional arrays to hold data;
17) explain and write code to interact with text files;
18) pass arrays as parameters between methods;
19) use object-oriented terminology correctly;
20) explain the difference between a class and an object;
21) create a class that has properties and methods;
22) use property procedures to set and retrieve properties of a class;
23) make use of overloaded constructors and overloaded methods;
24) explain the difference between shared members and instance members.
25) be familiar with some of the fundamental searching and sorting techniques and LINQ.

EVALUATION

A final course grade will be determined based on the following instruments and their corresponding weighted percentages:

Programming Assignments	25 %
Quiz	5 %
Mid-term examination	30 %
Final examination	40 %

NOTE: A student MUST *complete* at least 71% of all the evaluations for this course in order to obtain credits; otherwise, he/she will be assigned a final grade of UN.

Programming assignments are due at the specified date and time and are to be submitted to the instructor directly. An incomplete assignment, including missing files / folders, will end up with zero mark.

Since this is a computer programming course, all students are expected to have attained a minimum level of knowledge in mathematics and logical thinking. This course also requires a fair amount of typing VC# codes both in class and at home. If a student requires special accommodations as deemed necessary by the college's Student Services, he/she must contact the instructor the Center for Students with Disabilities in the beginning of the semester so that the proper arrangements can be made with Student Services.

REGULATIONS FOR STUDENTS

Attendance and Participation: Students are expected to prepare for, attend and actively participate in all class sessions and exercises, to sit the required tests and final examination, and to submit assignments as and when required. A student missing 30% or more of classes will receive a final grade of UN regardless of his/her performance in the course.

Plagiarism and Cheating: Douglas College in common with other educational institutions condemns cheating or attempted cheating within its community. Reprimands and appeals will be exercised according to official college policy. Regarding the details of the policy on Academic Dishonesty, please refer to the official college calendar.

Student Conduct: College students, employees, and users are entitled to engage in the educational process, or the provision of educational services, free from disruptive or inappropriate behaviors. For details, please refer to the official college calendar.

Missed tests or final examination: Tests and final examination will be offered only during the scheduled date and time of sitting. NO make-up exam or test will be provided in any situation. It is the responsibility of the student to inform the College and the instructor prior to the exam or test. Otherwise, the student will receive a ZERO mark for any missed test(s) and will receive a final course grade of UN for missing the final examination. Please do not make any travel arrangement until you have found out the exam dates and are sure that you do not have any time conflict with the exams.

Extra Copies of Assignment: Students are required to keep extra copies (i.e. file backups) of their assignments in case of any possible misplacement by the instructor. If such incident does occur, the student will be allowed to submit the extra copy for grading.

Assignment Submission: In general, students will be required to submit their assignments, using USB drive, to the instructor on or before a specified date/time. If students are asked to submit their assignments in person, then they must do so before the class starts.

Late / Incomplete assignments: Late / Incomplete assignments will be given a ZERO MARK with the exception of extraordinary circumstances or prior arrangements made with the instructor.

Late Policy: The Faculty of Commerce & Business Administration has passed a policy regarding students who go to their classes late. The policy is as follows: "Learners are expected to be on time for class. Arriving on time is a matter of respect: for the instructor and fellow students. Late entry disrupts the learning environment. After due warning, students who are repeatedly late for class can be prohibited from entering the classroom/lab until there is a natural break in that day's class."

Use of Cell Phone: During class/lab time, students are not allowed to use cell phones except in special circumstances. If a student must use a cell phone, he/she is required to leave the lab before communicating with another party.

Internet Access: During class/lab time, students are not allowed to access the Internet unless they are instructed to do so by the course instructor.

CHANGES TO THE COURSE INFORMATION AND SCHEDULE

The course information and schedule is subject to change (consistent with College Policy and with notice to the students).

Week	TOPICS AND ACTIVITIES	Readings & exercises*
1 (Jan 1- 7)	• Create forms with labels, buttons, and picture boxes and learns to modify control properties. • Organizational structure of name-spaces, classes, and methods. • Label and picture box controls • Write simple event-driven applications • Button click event, changing background colors, messagebox, the sender object • Commenting code	Chapters 1 & 2
2 (Jan 8 -14)	• Variables and data types • Use of local variables and variables declared as fields within a form class • Read input from TextBox controls • Mathematical operations, and formatted output. • ToString method • Exception errors due to invalid data • Simple exception-handling code • Named constants • Break point and debugging • Graphical user interface issues	Chapters 2 & 3 Q 5, 6 P 196 Q 9, 10 P 197 Q13, 14 P198
3 (Jan 15-21)	• Decision structures • If and if then statements • The TicTacToe program • Relational operators • Nested decision structures • Logical operators • Boolean data type • String comparison • Conversion exception and input validation • Radio buttons and check boxes	Chapter 4 Q 2, 3, 4, 5 P264 Q 7, 8 P265 Q10, 11 P 266 Q12 P267 TicTacToe

	• Listbox and formats • Switch statements	
4 (Jan 22 – 28)	• Loops, while statement • Endless loops and counter variables • For loop and do while loop • Simple file input and output • File I/O and loops • Random numbers	Chapter 5 Q 4, 5, 6 P338 Q 7, 8, 9, 10, 11, 12 P339 Q13, 14 P 340
5 (Jan 29 – Feb 4)	• Loops to create repetition structures • The While loop, the for loop, and the do-while loop • Counters, accumulators, and running totals • Sequential file input and output and using text files. • Pseudorandom numbers	Chapter 5 Q1, 3, 4, 7, 9,11
6 (Feb 5 – 11)	• Write and call void methods • Benefits of using methods to modularize programs • Pass arguments to methods • Passing by value, by reference • Output parameters • Write value-returning methods	Chapter 6 Q1, 2, 4, 5, 6, 9, 10
	• Study break – class cancelled (Feb 12 – 18)	
7 (Feb 19 – 25)	• **Midterm exam (week 1 – 6) 30%**	Chapters 1-6
8 (Feb 26 – Mar 4)	• Difference between value type and reference type objects • Arrays and lists are reference-type objects in C • Single-dimensional and two-dimensional arrays • Pass arrays as arguments to methods • Transfer data between arrays and files • Work with partially filled arrays • Create jagged arrays • Create List objects and store data in them • Sorting and Searching on arrays	Chapter 7
9 (Mar 5 – 11)	• More on arrays and lists	Chapter 7 Q1, 4, 5, 6, 7, 8, 9

10 (Mar 12 – 18)	• **Quiz (5%)** • String and character processing • Use structures to encapsulate several variables into a single item • Create and use enumerated types • Image-List control, a data structure for storing and retrieving images	Chapter 8 Q 9, 11, 12
11 (Mar 19 – 25)	• Random class • Random class and the coin class • Create fields, methods, and constructors and learns to implement properties. • Parameterized constructors and overloading • Create arrays of objects and storing objects in a List and arrays • Create multiple form classes in a project, instantiate those classes, and display them.	Chapter 9 and notes
12 (Mar 26 – Apr 1)	• Application of classes • Inheritance	Chapter 9 Q 2, 5, 6
13 (Apr 2 – 8)	• Inheritance and polymorphism • Base classes, derived classes • method overriding, and polymorphism • Abstract classes and abstract methods • LINQ	Chapter 10 web
14 (Apr 9 – 15)	• LINQ	web
15 (Apr 16 -	April 13 last day of Winter semester classes. College closed on Good Friday (Apr 14) College closed on Easter Monday (Apr 17) Final exam period April 19 – April 27***	Comprehensive final exam (Chapters 1 – 10, LINQ, notes)

*** Do NOT make any travel arrangement before April 27. We will not change the final exam dates to accommodate your travel plans at all.

RULES (applied to CB&A)

1. If you are repeatedly LATE for the class, you will be warned by the instructor and will NOT be allowed to enter the classroom as you will be interrupting the class in progress. In that case, you may only enter the classroom during the natural break. If such a person still enters the classroom after the class has started, he/she will be considered disturbing the class. This individual will be escorted out by the security guard and will be given a warning for

misconduct. A subsequent offense will result in possible suspension from the College.

2. Unless otherwise stated, all the assignments MUST be submitted in person at the beginning of the class BEFORE the lecture begins. Any assignment submitted after the lecture has started will be considered LATE and will be given a ZERO mark except for extraordinary circumstances or prior arrangements with the instructor. Printer problem in the computer lab is NOT a valid reason for handing in an assignment late.

3. If you are going to miss a scheduled test or examination, make sure that you inform your instructor (by phone or via e-mail) ON THE SAME DAY; otherwise, you will be given a ZERO mark for that evaluation even though you may have a valid reason. In the case of illness, a doctor's note MUST be shown to your instructor as proof before or during the next class that you attend.

4. If you DO NOT write the midterm or final examination, you will be given a final grade of UN regardless of your achieved percentage up to that point. A UN grade will be assigned a 0.00 GPA.

5. If you DO NOT submit assignments or write quizzes with a combined weight of 30% or more, you will be given a final grade of UN regardless of your achieved percentage up to that point. A UN grade will be assigned a 0.00 GPA.

6. If you are caught cheating, you will receive a ZERO mark for that evaluation and a written warning for the first offense. However, if you are caught for a subsequent offense, you will be expelled from the College.

7. You will receive handouts (if any given out by your instructor) ONLY if you show up in class. If you cannot attend the class, make sure that you inform your instructor so that he can save you a set of the handouts; otherwise, you will NOT receive anything from your instructor. Also, you may NOT take any extra handouts for your friends who do not attend the class.

8. If you talk loudly during the class, you will be given a warning for disturbing your classmates. Any subsequent offense will result in possible suspension from the College.

9. All cellular phones and pagers MUST be turned OFF BEFORE you enter the classroom.

10. You are NOT allowed to use any calculators, language translators or dictionaries during any quiz or examination in this course.