**DOUGLAS COLLEGE**
**COMMERCE AND BUSINESS ADMINISTRATION**
**COURSE INFORMATION AND SCHEDULE**
**CSIS 2175 – ADVANCED INTEGRATED SOFTWARE DEVELOPMENT**

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|---|---|---|---|
| Semester: | Winter 2021 | Time: | Thursday 15:30 – 18:20 |
| Section: | 004 | Venue: | Online |
| Instructor: | Kawal Jeet | Email: | kawaljeetk@douglascollege.ca |
| Office: | N4304 | Office Hours: | Tuesday 12:20 – 12:50 |
| | | | Wednesday 12:20 – 12:50 |
| | | | Thursday 15:00 – 15:30 |
| Lab Assistant: | Julie Kim | | Friday 12:00 – 12:30 |

**METHOD OF INSTRUCTION: ONLINE**

## COVID-19 SAFETY

**Keeping our campuses healthy**
This Fall semester, Douglas will welcome a small number of faculty and students on our campuses for in-person instruction. Other students may also attend campus to seek advice or assistance from a number of our service areas. To help ensure the safety of our campus community, please adhere to the following guidelines.

**If you come to campus:**
- Complete a daily self-assessment before coming to campus: https://bc.thrive.health/
- Follow all posted signage.
- Maintain physical distance of 2m (6 feet) from others. Do not congregate in groups.
- Wear a non-medical face mask in public areas or areas where physical distancing is not possible.

**DO NOT come to campus if:**
- You are sick.
- You have been in contact with someone with a confirmed case of COVID-19 within the last 14 days.
- You have travelled or been in contact with someone who has travelled outside of Canada in the past 14 days.

If you are unable to attend a class due to illness, contact your instructor immediately.

**Illness on campus**
If you become ill while on campus, contact Campus Security immediately for first aid and to report your symptoms. If you are concerned that you may have COVID-19, use the BC government COVID-19 self-assessment tool to help guide you on what to do. The province of BC has also set up a dedicated COVID-19 hotline at 1-888-COVID19 or text 604-630-0300. The service is available daily from 7:30 a.m. to 8 p.m. with information available in over 110 languages.

## COURSE MATERIAL AND OTHER REQUIRMENTS

**Text:** Joyce Farrell, Java Programming, 9th Edition, Course Technology, 2018.
ISBN 1285856910
**Other**: Notes provided by the instructor

**Generic hardware and software requirements**

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| Hardware | Quad-core CPU 16 GB RAM 512 GB Storage FHD (1920x1080) minimum resolution display Wifi/Ethernet Built-in or external Web Camera |
| Browser(s) | Chrome/Firefox (or your preferred browser) |
| Peripherals | headset w/ mic, or (mic and speaker) |

**Course specific software:**
Eclipse IDE for Enterprise Java Developers (https://www.eclipse.org/downloads/packages/)
Other Eclipse plugins and software as per course requirement

## CALENDAR COURSE DESCRIPTION

This is an intensive Java programming course. Students are assumed to have prior knowledge in Object Oriented Programming, data manipulation (text, binary, database), prior knowledge in GUI design, and event handling. Students will learn Java application development using packages, classes, abstract, interface, inner classes, file I/O, graphical user interface, database connectivity, and many more.

## COURSE OBJECTIVES

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

- Identify the purpose and behavior of a provided code fragment.
- Modify an existing code fragment to change its behavior.
- Modify conditional and iterative structures in a short program.
- Write well-structured, well- documented, well-commented readable code.
- Design, implement, test, and debug a program that uses each of the following fundamental programming constructs: basic computation, simple I/O, basic conditional and iterative structures, and functions.
- Describe the syntax and semantics of conditional structures.
- Use conditional structures.
- Apply the techniques of decomposition to break a program into smaller pieces.
- Describe the role of formal and actual parameters of a function.
- Describe how strings and arrays are allocated, manipulated and used.
- Compare iterative and recursive solutions for elementary problems such as factorial.
- Formulate loop invariants for simple loops.
- Demonstrate loop termination.
- Implement, test, and debug simple recursive methods.
- Explain the philosophy of object- oriented design and the concepts of encapsulation, abstraction, inheritance, interface and polymorphism.
- Describe how the class mechanism supports encapsulation and information hiding.
- Compare and contrast the notions of overloading and overriding.
- Identify the scope of the variables involved in a given code.
- Access and program databases using various classes.
- Design GUI programs.
- Implement version control.
- Construct class diagram, aggregation, and collaboration.

- Describe the significance and benefits of version control.
- Learn basic version control, assess the role of Git and create online repositories using Git.
- Describe the basic Junit framework, Design effective unit test cases for Java lasses in Junit Execution Environment.
- Design class diagrams which describe the structure of a system by modeling its classes, attributes, methods and relationships among objects.

**ONLINE SPECIFIC GUIDELINES**

The minimum requirements to attend Douglas College's online courses are published on the college's website. Instructor could use any combination of the college's available services in order to deliver the course. The student is advised to make sure that all the hardware/software that he/she intends to use during the semester are following the college's published minimum requirements.

In order to maintain overall standards, unless agreed in advance by the instructor, the student may not use non-approved hardware/software. Using non approved hardware/software may put the student in a difficult situation to complete the course assessments.
https://www.douglascollege.ca/student-services/essential-resources/online-learning/Online-Learning-Requirements

**REGULATIONS FOR STUDENTS**

**Assignment due dates:** Every assignment will be given a due date. Students are responsible for submitting the assignment to blackboard properly before the due date. **NO late assignments will be accepted.**

**Quizzes and examinations**: Quizzes and examinations will be held according to the schedule. If you have a doctor documented illness which prevents you from writing the test on schedule, please bring it to my attention prior to the quiz/exam. Missing a quiz/exam without a valid medical excuse will result in a mark of "0". Please note that a simple doctor's note is NOT good enough. You must provide a letter from your doctor outlining your medical conditions that prevent you from writing the test.
You must answer the questions and submit the answers before the end of the test as instructed. Failing to upload the relevant files will result in no mark in these questions.

**Rules and Regulations for Tests/Exam:** When use of computer is allowed, you are NOT allowed to use the internet for web browsing and/or communication. Except for the permitted application(s), you are required to close and unpin the web browser and ALL applications on the computer. Communicating and exchanging information with others are not allowed. Violation of the above rules and regulations will result in a mark of "0" and will be asked to leave the test/exam venue immediately.
**No make-up quiz/exam will be held in any circumstance.**

**Preparation, Attendance and Participation:** Attendance will be taken on a frequent but irregular basis. Even though the course is delivered online the students are expected to prepare for, attend and actively participate in all class sessions and exercises, to sit the required tests, quizzes and examination, to submit assignments and projects, and to deliver an oral presentation as and when required. If missed, certain assessments such as labs, quizzes, assignments, presentations cannot be taken at a later stage.

If there is a medical reason, please submit to your instructor as soon as possible a medical note from a BC registered doctor that must have: clinic's letterhead with contact info (address, telephone number), the number of days covered by the note, the doctor's full name (no initials) and the doctor's signature. Only the original note is accepted; no scans, photocopies or faxes. No nurse notes will be accepted.

The method of delivery includes classroom discussion and lab exercises; and students need to be present both in order to participate and to learn. **Your final mark depends in part on your record of attendance and your reasonable preparedness to contribute to the discussion.** In the curriculum outline on the last page, reading assignments are included for each day's class: it is your responsibility to have completed the reading and to have absorbed the material sufficiently well for spontaneous discussion. Students are expected to behave appropriately while attending Douglas College. While in class, please turn off (or do not bring) your cell phone. Cell phones going off in the middle of class are disruptive and exhibit a lack of consideration for your fellow-student.

**Bonus Marks**
The instructor could offer Bonus Marks (fractions or full points or percentages). These marks are over and above the original 100% marks allocated to the course. Bonus marks will not be awarded in the detriment of the 100% marks covered by the CG and/or CO. These Bonus Marks could be offered for either team or individual work. Before the activity for which bonus marks would be awarded, the Instructor will explain the conditions under which the student can achieve the bonus marks. The students have the right to not participate in any or all bonus mark activities. The students have to actively accept or reject participating in the Bonus Mark event or activity by communicating with the instructor in advance of the event or before a specified deadline that was marked to award Bonus Marks. A submission of the result of the activity will be considered active acceptance.

**Academic Integrity:** The College values academic integrity.

**Plagiarism** is presenting or submitting as one's own work, research, words, ideas, artistic imagery, arguments, calculations, illustrations or diagrams of another person or persons without explicit or accurate citation or credit; this includes submission of purchased material as well as material in which the student has permitted someone else (a fellow student, tutor, mentor or teaching assistant, friend, etc.) to contribute unacknowledged. Persons include past and current students. Unless explicitly awarded by the Instructor, in a written document or communication, the right to submit common/team work by two or more students, the submission/presentation is considered plagiarism.

**Self-plagiarism** is submitting one's own work for credit in more than one course without the permission of the instructors, or re-submitting work, in whole or in part, for which credit has already been granted.

**Cheating** is the possession or provision of unauthorized aids, assistance or materials in the preparation of assignments, during examinations or in the completion of practical work (in clinical, practicum or lab settings).

See the Academic Integrity policy for other definitions of academic dishonesty. Academic dishonesty will be treated as a serious offence. Disciplinary measures can range from a zero grade on the exam or assignment for which the offence occurred to suspension or expulsion from the College. The use and/or reference of any/all websites which host copies of Douglas College course work assessments such as but not limited to quizzes, assignments, midterms, labs, exams, practical work, etc., constitutes plagiarism. Douglas College condemns cheating or attempted cheating within its community. Regarding the details of the policy on Academic Integrity Policy, please visit
https://www.douglascollege.ca/sites/default/files/docs/finance-dates-and-deadlines/Academic%20Integrity%20Policy%20w%20Flowchart.pdf

**CLASS CANCELLATION**

In the event that a class is cancelled due to instructor illness or other unforeseen circumstance, a notification will be made through **Blackboard** to every student enrolled in the course. It is the responsibility of students to be proactive and to check their announcements and/or e-mail before coming to class. Every effort will be made to ensure that the notification is made as soon as possible.

**EVALUATION**

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

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| Assignments | 20% |
| Quizzes | 10% |
| Midterm | 30% |
| Final | 40% |
| **Total** | 100% |

In order to pass the course, students must, in addition to receiving an overall course grade of 50%, also achieve a grade of at least 50% on the combined weighted examination components (including quizzes, tests, exams).

To receive a non-zero grade in the course, a student must attempt and hand in for marking at least 70% of the assignments, examinations and quizzes; and must be present at 70% or more of all scheduled class times. Work not handed in, or handed in too late for marking, will automatically receive a zero. The student's achievement will be converted to a letter grade, in accordance with department policy.

You must take the FINAL EXAM in order to get a grade; OTHERWISE you will receive an automatic "UN" grade for the course. 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.

**A student is required to produce his or her ID card during examinations.**

**GRADING SYSTEM**

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| A+ | = | 95%-100% | C+ | = | 65%-69% |
| A | = | 90%-94% | C | = | 60%-64% |
| A- | = | 85%-89% | C- | = | 55%-59% |
| B+ | = | 80%-84% | P | = | 50%-54% |
| B | = | 75%-79% | F | = | 0%-49% |
| B- | = | 70%-74% | UN | completed < 70% of total evaluations or missed >30% of classes where attendance is required | |

**The final grade is a fair assessment to your overall performance and it is non-negotiable.**

**ONLINE CLASS ARRANGEMENT**

This session is an asynchronized class. The meeting ID will be posted on Blackboard prior to the scheduled class.

- **Attendance Taking:** A student will be considered as **ABSENT** for the week if he/she cannot meet **EITHER** one of the following conditions:
    1. Attend the online lecture on time. Being 5 minutes late to the class or leaving the class before finish will be considered as absence.
    2. Submit the lab exercises as instructed by instructor every week. Lab exercise will not be graded, but will be randomly checked for the completeness.

- **Email Communication:** The common form of communication is email via the college email addresses. Students is obligated to check your college email for any announcement or notice frequently and proactively. The instructor will not respond to those emails from unidentifiable senders.

- **Lab Assistant:** A lab assistant will be present in the lecture and lab session to provide assistance to students. However, the lab assistant has no responsibility to answer any email or provide any form of assistance out of the lecture and lab hours.

**COURSE SCHEDULE**

| Week | Date | Lecture/Lab | Chapter | Due Dates |
|---|---|---|---|---|
| 1 | Jan 07 | Course overview<br>Introduction to Java programming and Integrated Development Environment (IDE) | 1, 2 | |
| 2 | Jan 14 | Basic object-oriented concepts: methods, classes and objects | 3, 4 | |
| 3 | Jan 21 | Conditional statements, Loops | 5, 6 | Assignment #1<br>(5%) |
| 4 | Jan 28 | Files, Characters and Strings | 7, 13 | Quiz #1<br>(Ch1-6)<br>(5%) |
| 5 | Feb 04 | Arrays | 8, 9 | Assignment #2<br>(5%) |
| 6 | Feb 11 | Mid-term Examination (Ch1-8, 13) | | (30%) |
| *7* | *Feb 18* | *Study break - classes cancelled* | | |
| 8 | Feb 25 | Database Programming | Lecture Notes | |
| 9 | March 04 | More on OO Programming: method overloading, copy constructors, | 10 | |
| 10 | March 11 | More on inheritance: dynamic binding, interface | 11 | Assignment #3<br>(5%) |
| 11 | March 18 | Exception handling<br>Recursion | 12 | Quiz #2<br>(Ch8-12 and Database Programming)<br>(5%) |
| 12 | March 25 | Git<br>JUnit | Lecture Notes | |
| 13 | April 01 | GUI and event-handling | 14 | |
| 14 | April 08 | Advanced GUI | 15 | Assignment #4<br>(5%) |
| **April 14-22<br>Final Examination** | | | | **(40%)** |

**Note that the exact course content and schedule of topics shown above may be altered at the instructor's discretion.** ***Exam dates will NOT be changed to accommodate your travel plan. You must not make any travel arrangement before April 22.***

**Students are responsible for all the announcements made in classes concerning course information and schedule changes WHETHER OR NOT they are in attendance.**