

Vanier College  
Faculty of Science & Technology  
Computer Science Department

<b>Course Title</b>	: Intro to Computer Science	<b>Teacher</b>	: Perry James
<b>Course #</b>	: 420-121-VA	<b>E-mail</b>	: through MIO
<b>Section</b>	: 4	<b>Semester</b>	: A20
<b>Schedule</b>	: M 10:00 – 11:30 W 2:00 – 4:00 Th 2:30 – 4:00	<b>Prerequisites</b>	: none
		<b>Availability</b>	: through MS-Teams

**Course Description**

This first-semester course has several purposes, all related to orienting students towards a successful career in Information Technology. Students are introduced to the fundamental concepts of computer science (from hardware to algorithms). The course overviews the material covered in the later program courses and the professions available to them upon completing the program. Students learn to use office productivity software to prepare reports, tables, graphs, diagrams, and presentations, as well as to share and synchronize these documents. Students develop basic skills to help them succeed in the Computer Science Technology Program by learning about the college resources that are available to them.

**Course Objectives**

At the end of this course, the student shall

- be familiar with computer concepts and terminology, computer applications, the Internet, and other technologies, particularly those pertaining to the business world,
- be able to plan and budget their time,
- be able to do research on computer-related topics, as well as to write reports to communicate the results of their investigation, and
- be able to describe the kind of work they expect to have when they graduate.

The course will focus not only on computer skills, but also on student skills: reading and writing for a purpose, critical thinking, research techniques, working with a study partner, note-taking, and so on.

**Competencies Related to this Course**

0000 Analyze information about working in the field of computer science technology  
00Q4 Use Office productivity software

**Ponderation: 2 – 3 – 1**

This course has two hours of theory, three hours of laboratory, and one hour of homework per week.

### **Textbook and materials**

- *Invitation to Computer Science, 8th ed.* G. Michael Schneider and Judith L. Gersting. Cengage Learning, 2018. **Required:** tests will be largely based on this book.
- USB flash drive, to store your assignments and other materials for this and other courses.

### **Additional Reading**

- Online MS-Office tutorials (E.g., [www.gcflearnfree.org](http://www.gcflearnfree.org))
- W3Schools online web tutorials ([www.w3schools.com](http://www.w3schools.com))

### **Teaching and Learning Techniques**

- Class time will be divided between lectures and laboratory activities. Lectures will be used to introduce new concepts, which will then be further explored during hands-on activities.
- Assignments and handouts will be available on the college's Omnivox system: <https://vaniercollege.omnivox.ca>.
- To contact you individually, I will use MIO.

### **Evaluation Procedures and the Breakdown of Marks**

Lab exercises, assignments: 30% (about 8-12 throughout the semester)

Tests: 70% (3)

	<b>Test 1</b>	<b>Test 2</b>	<b>Test 3</b>
<b>Weight</b>	20%	25%	25%
<b>Week (approximate)</b>	5	10	15

You will be informed of the format and exact date of each test at least one week in advance.

To pass the course, you must obtain (1) an overall passing grade and (2) a passing grade on the weighted average of the tests.

No late assignments will be accepted. If you need more time for an assignment, speak with your teacher well before the assignment is due.

No make-up tests will be given. Instead:

- If you miss a test and provide a doctor's note that clearly states that you were too ill to write the test, then your test average will be based on the tests that you did write.
- An unexcused missed test will receive a grade of 0.

### **Attendance**

You are responsible for all material covered and all work assigned, even if you are absent from class. All class sessions will take place synchronously online using MS-Teams. That is, we will meet at the scheduled times for both lectures and labs. A few labs (e.g., watching documentaries) may be held asynchronously, and I hope to communicate these at least a week in advance.

Lectures will be held online, via Microsoft Teams, using PowerPoint slides, as per the regular course schedule; recordings of those online lectures will be made available whenever is possible (no guarantee, given potential technical problems).

You understand and agree that your image and/or voice could be recorded. The recording will only be available to other students in your group through Microsoft Teams/Stream and will be deleted once the semester has ended.

You are reminded that any material produced as part of a course (including this online course), including, but not limited to, any pre-recorded or live video is protected by copyright, intellectual property rights, and image rights, regardless of the medium used. It is strictly forbidden to record, copy, redistribute, reproduce, republish, store in any way, retransmit or modify this material. Any contravention of these conditions of use may be subject to sanction(s) by the College under the Code of Conduct.

This course, including your participation, will be recorded on video and will be available to students in the course for viewing remotely and after each session. Course videos and materials belong to your teacher and the college and are protected by copyright. Do not download, copy, or share any course or student materials or videos without the explicit permission of the teacher. Any contravention of these conditions of use may be subject to sanction(s) by the College under the Code of Conduct.

Students should note that since recordings are to be permitted, their voice may be recorded by others during the class. As warned at the beginning of a recording in Microsoft Teams meeting (online lecture), if you do not agree with these terms, you must disconnect immediately from the meeting. Or, make sure to maintain your microphone and camera in the "off" position, and not generate any entry in the chat section of the meeting, from the moment you join the meeting until the moment you disconnect. For questions about recording and use of videos in which you appear please contact your teacher.

In accordance with Quebec's Act to secure handicapped persons in the exercise of their rights with a view to achieving social, school and workplace integration, 2004, persons who have special needs will be accommodated.

Students agree to the following terms when creating recordings of class sessions:

Recordings are not to be distributed without the permission of the teacher via the Internet, using social media such as Facebook, peer-to-peer file sharing such as Google Drive, One Drive or Dropbox, or other distribution channels.

Recordings are not to be shared with other classmates unless they are to be used in collaborative assignments, or if the teacher permits for other reasons.

Non-compliance with these terms violates a teacher's intellectual property rights and the Canadian Copyright Act. Any contravention of these conditions of use may be subject to sanction(s) by the College under the Code of Conduct.

Students creating unauthorized audio recordings violate a teacher's intellectual property rights and the Canadian Copyright Act. Any contravention of these conditions of use may be subject to sanction(s) by the College under the Code of Conduct. Course videos may not be reproduced or posted or shared anywhere and should only be used by students currently registered in the course. Because recordings will be provided for class sessions, students may not create additional audio or video recordings without written permission from the teacher.

### **College Policies & Procedures**

It is your responsibility to be aware of the various policies and procedures governing your rights and obligations while you are attending Vanier College.

It is the student's responsibility to be familiar with and adhere to all Vanier College Policies and potential modifications due to the COVID-19 situation. A summary of the course-level policies that apply in this and all other Vanier courses can be found under "Course-Level Policies" in Important Vanier Links on Omnivox, or by following this link: <http://www.vaniercollege.qc.ca/psi/course-level-policies/>.

Complete policies can be found on the Vanier College website, under [Policies](#).

### **Tentative Course Content**

From the textbook

- Introduction to Computer Science and Its History (1)
- Algorithm Discovery and Design (2)
- Computer Systems Organization (5)
- Introduction to System Software and Virtual Machines (6)
- Computer Networks, the Internet, and the World Wide Web (7, 10.3.2-3)
- Information Security (8)
- Electronic Commerce and Databases (14, 10.3.1)
- Computer Graphics and Games (16)
- Social Issues in Computing (17)

Outside the textbook

- Omnivox: application software for students
- Essential computer skills
- College services
- Outline of the Computer Science Program
- Writing professional documents
- Personal time management
- Using the Internet and libraries for research
- Careers in Computer Science
- Project management

### **Tentative Schedule**

Lecture and lab sessions will normally take place synchronously online using MS-Teams. That is, we will meet at the scheduled times for both lectures and labs. A few labs (e.g., watching documentaries) may be held asynchronously, and these modifications will be communicated in advance. Most labs will have assessments attached to them that must be completed during the lab time. The table below is a tentative plan and is subject to change.

Week	Starting	Lab 1	Lecture topic	Lab 2
1	24-Aug	Intros, course outline	Ch1 - Intro to Comp Sci / Algorithms	Ch1 - Algorithms / History of Comp Sci
2	31-Aug	Writing Algorithms	TASC workshops time management / study skills	Documentary: <i>Top Secret Rosies</i>
3	7-Sep	<i>Labor Day</i>	Ch2 - Algorithm Discovery and Design	Program Coordinator / Word 1
4	14-Sep	Word 2	Ch5 - Computer Systems Organization	Finish Word / review for Test 1
5	21-Sep	Excel 1	Test 1	Excel 2
6	28-Sep	Excel 3	Ch6 - Intro to System Software and VMs	MIPS 1
7	5-Oct	MIPS 2	Ch6 - Ch7 Computer Networks	Documentary: <i>Revolution OS</i>
	12-Oct	<i>Thanksgiving &amp; Study week</i>		
8	19-Oct	PowerPoint	Ch7b - Computer Networks and Cloud Computing	Network lab
9	26-Oct	UML & Visio 1	Ch8 - Information Security	Visio 2
10	2-Nov	review for Test 2 / Access 1	Test 2	Access 2
11	9-Nov	Access 3	Ch10 - Programing Languages (for web dev) - Ch14	Html/CSS lab 1
12	16-Nov	Html/CSS lab 2	Ch14 - Ecommerce, Databases, and Data Science	Documentary: <i>Nothing to Hide</i>
13	23-Nov	Employment Office & ATE	Ch16 - Computer Graphics and Games - Ch 17	Careers lab 1
14	30-Nov	Careers lab 2	Ch 17 - Social Issues in Computing	Complete any remaining material
15	7-Dec	review for Test 3	Test 3	Documentary