Vanier College
Faculty of Science and Technology
Computer Science Department

Introduction to Computer Science

Course Number:	420-121-VA	**Teacher:**	Tássia Camões Araújo
Section:	00003 & 00004	**Office:**	N-244
Semester:	Fall 2019	**Phone:**	744-7500 Ext. 7135
Pre-requiste:	None	**E-mail:**	MIO
Ponderation: (Theory-Lab-Homework)	2-3-2	**Office Hours:**	By appointment

Course Description

This first-semester course has the main purpose of orienting students towards a successful career in Information Technology. Students are introduced to the fundamental concepts of computer science (from algorithms to applications). The course overviews the material covered in the later program courses and the professions available to them upon completing the program. Additionnally, 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

1. Identify Vanier College student resources
2. Use office productivity software to
   (a) Produce reports
   (b) Produce tables and charts
   (c) Produce diagrams or plans
   (d) Produce presentation documents
   (e) Identify functionalities of relational databases
   (f) Share and synchronize documents
3. Understand the field of Computer Science Technology by
   (a) Gathering information on occupations and workplaces in computer science technology
   (b) Analyzing information on the companies and establishments that hire computer science technicians
   (c) Analyzing information about the occupations of computer science technician
4. Acquire general knowledge

Competencies

Number	*Statement*
0000	Analyze information about working in the field of computer science technology
00Q4	Use office productivity software

All classes take place in a computer lab. Lectures can occur at any time during the class. Students will normally use the computer lab to put concepts into practice through work on assignments and exercises. Assignments and handouts will be available on the college's Omnivox system.

Evaluation

Lab exercises	10%	Weeks 1-14
Tests (2)	15%+20%	Weeks 5, 10
Assignments (3)	10%+15%+10%	Weeks 4, 8, 13
Final exam	20%	Week 15

- No make-up tests will be given. If you miss an exam, for ANY reason (other than an emergency medical condition with an appropriate doctor's note), you will lose 40% of its marks. The other 60% will be added to the mark percentage of your final exam.
- The penalty for late assignments is 10% per day. Assignments more than 1 week late will not be accepted. Late submission of lab exercises will not be accepted.
- Students must obtain a passing mark (60%) on each evaluation criteria to pass the course
- Every student is responsible to save his/her daily computer work using the appropriate media available on the computers in the lab. The teacher and/or the college are not responsible for any partial and complete loss of any student work that is left on the computers in the lab.
- **Students are required to attend both the PASS Day activities (25 October, 2019) and the Stage presentations (during the final exam period, date to be announced when the final-exam schedule is released)**

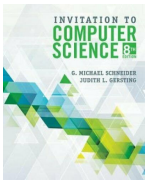
Attendance

Attendance at lectures and labs is strongly recommended. Where necessary, lab exercises will be selected by the teacher at the beginning of each lab session. You are responsible for all material covered and all work assigned, even if you are absent from class. It is student's responsibility to be aware of anything discussed in class that is considered being important for the course.

Student Learning

Do not hesitate to consult the teacher for help and suggestions. In case of a personal emergency or learning difficulties, seeking for help early might be decisive for your success in this course.

Required Textbook



Invitation to Computer Science, 8th Edition
by G.Michael Schneider and Judith Gersting
Publisher: Cengage Learning (Jan. 1 2018)
ISBN-13: 978-1337561914

Tests will be largely based on this book. It is available at Vanier College bookstore for $159.95 (members price: $151.95). Students can visit the bookstore website* for more information. Alternatively, the digital version of the book is available online at a lower price.

*http://vanier.bookware3000.ca

Additional Resources

- *New Perspectives on Computer Concepts 2018: Comprehensive*, 20th Edition, Publisher: Cengage Learning (July 25, 2017), ISBN-13: 978-1305951495.
- *New Perspectives Microsoft® Office 365 & Office 2016: Introductory, Spiral bound Version*, 1st Edition, Publisher: Course Technology (March 4 2016), ISBN-13: 978-1305879171.
- *Lab Manual for Schneider/Gersting's Invitation to Computer Science*, 5th Edition, Publisher: Cengage Learning (August 26, 2009), ISBN-13: 978-0324788631.

Academic Resources

Students should make use of the resources available at Student Services, the Learning Centre, and Academic Advising.

Lab Policies

Students are not allowed to install and use illegal software on the hard disk of any computer in the lab. In addition, students are not allowed to watch videos or play games on these computers. During the lab periods students are expected to work on their assignments. It is not permitted to use the internet during lab periods outside the scope of the lab.

General Academic Policies

It is the student's responsibility to be familiar with and adhere to all Vanier College Policies. 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. Complete policies can be found on the Vanier College website, under Policies. Your attention is drawn in particular to the following policies: policies on academic complaints; cheating and plagiarism; religious holy day absences; student misconduct in the classroom; and, student rights and responsibilities (section 3.1) in IPESA document.

Tentative Weekly Plan

Week	Lecture	Lab 1	Lab2
1	Course outline & Intro to computers and algorithms (ch. 1a)	Text files, versioning control & git	TASC workshops: time management and/or study skills
2	Algorithms & History of computer science (ch. 1b)	Writing algorithms	Documentary: Top Secret Rosies
3	Visit from Program Coordinator & Algorithm discovery and design (ch. 2)	Word processing software & MS Word (1)	Word processing software & MS Word (2)
4	Computer systems organization (ch. 5)	Spreasheet software & MS Excel (1)	Review for Test #1
5	Test #1	Spreasheet software & MS Excel (2)	Spreasheet software & MS Excel (3)
6	Introduction to system software and virtual machines (ch. 6)	MIPS (1)	MIPS (2)
7	Virtual machines & Computer networks (ch. 6 & 7)	Documentary: Revolution OS	Presentation software & MS PowerPoint (1)
8	Computer networks and cloud computing (ch. 7b)	Presentation software & MS PowerPoint (2)	Computer networks (1)
9	Information security (ch. 8)	Computer networks (2)	Diagram and case tools (1)
10	Test #2	Diagram and case tools (2)	Review for Test #2
11	Programing languages (ch. 10)	Relational databases (1)	Relational databases (2)
12	E-commerce, databases, and data science (ch. 14b)	HTML/CSS (1)	HTML/CSS (2)
13	Social issues in computing (ch. 17a)	Documentary: Nothing to Hide	Guest speaker or video on IoT
14	Social issues in computing (ch. 17b)	Visit from Employement Office & research current opportunities for recent graduates	Review for Final Exam
15	Final Exam	Information Technology careers (1)	Information Technology careers (2)