CMPT470
Perspectives in Computing Science
2020/21 Fall
2020-21, Fall 3(3-0-0)

Instructor
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- Office: A214
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Class Schedule
Monday at 01:00P for 50 min in WEB
Wednesday at 01:00P for 50 min in N209
Friday at 01:00P for 50 min in WEB
*Note that items labelled “WEB” are delivered online.*

Calendar Description
A senior level seminar course dealing with special topics in computing. Particular attention will be paid to computer applications, social impacts, ethical and legal issues, worldview perspectives and potential future developments in computing.

Prerequisite: Twelve credits in computing science at the 300-level

Course Objectives and Learning Outcomes
This course is intended to reflect back on the discipline of computing science using a Christian worldview. By the end of this course students will have been exposed to aspects of the course that develops the student in the following ways:

- Consider the role of technology in society and individual lives
- More fully understand the interaction of technology and the Christian life
- Have a broader perspective on the discipline of computing science
- Discuss and present viewpoints on computing science and technology

Course Conduct
This course consists of three hours of lectures per week. During this time students are expected to contribute to discussions led by departmental faculty members, other students in the course, and invited guests. It is expected that students will behave in an honest and forthright manner in all their activities. Students should be courteous and respectful to one another. Discussion during this course is strongly encouraged; however, students are expected to complete their own work.
Online Behaviour

To accommodate students learning online, lectures will be live streamed using Zoom. Recordings of lectures and presentations may be made, but access to such recording will require a direct request to the instructor. As much of the class depends on discussions it is expected students will be synchronously present, either in-person or via Zoom.

Live streams and recordings provided to students are for their own educational purposes only. Students are not to repost or use such recordings for any purposes other than their own educational studies during the term the class occurs.

All students are to conduct themselves in a professional manner both in person and online. This includes appropriate conduct via video, audio, markups, text communications, images (such as avatar selection), and other communication methods. Inappropriate conduct should be brought to the attention of the instructor.

It is possible students will change from in-person to online as their personal situation changes, such as the need to self isolate. If the instructor becomes unable to present classes in person a message will be posted on Moodle, and the class should continue online using Zoom as as indicated in the Moodle message.

Texts and Other Resources

Students are expected to have ONE of the following four books. Either physical or digital format is acceptable.

- Cal Newport, Digital Minimalism: Choosing a Focused Life in a Noisy World.
- Jaron Lanier, Ten Arguments for Deleting Your Social Media Accounts Right Now.
- Derek C. Schuurman, Shaping a Digital World: Faith, Culture and Computer Technology.

Additional resources are available via the library. The following books are on one hour reserve.

- David M. Ermann, Computers, ethics and Society
- Rob Kling, Computerization and Controversy: Value Conflicts and Social Choices
- Kevin W. Bowyer, Ethics and Computing
- Donald Knuth, Things a Computing Scientist Rarely Talks About

The ACM database is available via the library, in particular see the Special Interest Group Computers and Society (SIGCAS).
Grade Distribution

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Description of Assignments

A. Discussions and Exit Slips

It is expected every student will participate in, and contribute to, discussions. Contributions involve not merely talking but furthering the discussion. There will be three types of discussions:

- Chapter discussions from the text books
- Discussions with invited guests
- Student led discussions

After each discussion students will complete an exit slip via Moodle for grading.

It is expected that students will arrive on time to all classes either in person or virtually.

B. Chapter Reports and Presentations

Each book is to be divided into three parts, such that a student eventually reads an entire book. Discuss with other students assigned to the same book to determine reasonable divisions (most books divide reasonable with a nearly equal number of chapters in each division). At the start of each discussion associated with the student’s book, the student is expected to hand in a brief report (approximately three pages). Students should organize their report using the following headings.

- Briefly summarize the chapters
- Mention points you agree with and why
- Mention points you disagree with and why
- Provide an overall opinion or impression of the chapters
- List two questions to ask the class that is not suitably answered with a yes or no answer

Reports should be in a **plain text format** and submitted to the Moodle class site. Reports are due by 9 a.m. on the day of the chapters discussion. Students are expected to briefly introduce the content of the chapters to their fellow classmates, and help lead a discussion.
C. Presentations

Students are expected to lead two discussions during the course. Each discussion should consist of an approximately ten minute introduction to a topic, followed by a fifteen-minute discussion. The day before the discussion the student should submit to Moodle the title and reference of the talk, and three questions that can be used to promote discussion.

One talk should be based on a historical topic in computing science and technology. The other talk should be based on a contemporary issue. For topics for historical talks see the references Computers, ethics, and Society; Computerization and Controversy; the IEEE Ethics book, or Things a Computing Scientist Rarely Talks About. All four are placed on one hour reserve in the library. For contemporary topics please see the ACM SIGCAS publications and select a publication within the last three years. For selections outside these references students require instructor approval before selecting the topic.

Please note that a student can submit their topic well in advance of their presentation date to reserve their topic (and still submit their three questions the day before).

To help with their ten minute presentations, students will prepare and submit a PowerPoint presentation. This presentation will be posted on Moodle to help students in writing their final essay.

Leading a good discussion is a skill. Your questions are designed to help you should the discussion falter. Hence a good discussion question should not have a one word, or short phrase answer.

Examples of bad questions:
• When was Donald Knuth born?
• Do you agree that computers form an important part of society?

Examples of good questions:
• What is the importance of the Intel 4004 central processing unit on the course of recent human history?
• How has the miniaturization of computing components changed society?

D. Minor Activities

There are two minor activities during this course worth 2% and 1% of a student’s final mark, respectively. If you are in doubt as to the requirements of an assignment please get clarification from the instructor.

1. List three priorities in your life that you consider extremely important (e.g. God, Family, Education, Finances, etc.) Consider a future technology purchase and comment how such a purchase would help or hinder improvements in these three priorities (positive and negative). List an overall recommendation for your decision. Upload your completed page to Moodle.
2. Consider learning objectives for the computing science program and examine how each class you have taken contributes towards these objectives. Complete the rubric and submit it to Moodle.

E. Major Activities

There are three major activities during this course worth 9%, 5% and 3% respectively as listed below. If you are in doubt as to the requirements of an assignment please get clarification from the instructor.

1. Technology Holiday (9%)

In past offerings of this course students have been required to have four, 24h periods without the use of digital technology. To accommodate a semester with Covid-19 precautions, students have a choice of ONE of the following four activities. In all cases the student must write a reflection of their activities and submit their reflection report to Moodle. Please note that the first option is the traditional requirement.

i. Take four days of technology holiday. On these days you will make no use of cell phones, computers, television, or other modern digital conveniences. Two exceptions are an alarm clock to wake you, and a video projector if your church makes use of Power Point. Note that the four days need not be consecutive, but each day must consist of a consecutive 24h period. After each day you should make notes on expected and unexpected things you notice (eg: how many times did you reach for a cell phone that wasn’t there). If you decide part way through a 24h period to end the technology holiday then you must start that day over. That is, you may not have two 12h days add up to one full day. The intention of this exercise is to help you realize where you have become dependent on digital technologies, and how they affect the way you think and act. After all four holiday days write a report incorporating your notes. You may note that some students have actually enjoyed this activity, although enjoyment is not required to benefit from this activity.

ii. Take a two day technology holiday. This is similar to the above, but for a 48h consecutive duration.

iii. Keep a technology log book for one week (seven consecutive days). Add an entry to your logbook every time you use digital technology. Each entry should include a brief description as to what the technology is, the task you are accomplishing, the duration used, and a purpose category (eg: education, entertainment, communication, etc.). Please be honest, particularly in your purpose category (eg. Is checking Facebook really communication or more entertainment?). Submit your logbook (digitally or images) along with your reflection.

iv. Digital Minimalism. Follow the advice on Digital Minimalism from the Newport book. Briefly, this includes a period of cutting digital technology back to a minimal use, and adding in digital technologies as you consider the most beneficial way to reintroduce it to your life. If you select this option you should ideally select the Newport book as your text in CMPT470. You may need to adjust the recommended timeline from the book to reasonably complete the task; it is assumed it should take you roughly one month.
Please note that if you select option i. or ii. you will need to properly prepare. Inform your family and friends in advance that you will be not checking your phone during your technology holiday time. Select in advance activities to do that do not require digital technology. Example include reading physical books, painting, cooking, board games, playing piano, hiking, etc. You may find you are less productive at homework during this time, but you may select activities to do that do not require digital technology (eg. The letter writing, see below).

2. Resumes (5%)

Based on the resume presentation, create a resume for yourself. Submit an initial resume to Moodle (2% of final mark). After meeting to discuss improvements to your resume, intergrate the feedback and resubmit your resume (3% of final mark).

3. Communication Comparison (3%)

Have three communications with people that have a similar status in your life. For example, you may select three friends, three aunts, or three grandparents. For one have a face-to-face or telephone conversation (only if it is safe to do so). For another send a hand written letter. Since letters are less common now-a-days it is recommened you write into the letter the reason you are sending it. For the third send an email. Write a brief reflection on the three “conversations” that highlights the differences in how personal each method of communication is. That is, can you significantly incorporate what make you uniquely you into an email as compared to a conversion or a written letter?

F. Final Essay

Write an essay on the topic of the place of technology in your life, reflecting on the course texts, presentations, and activities. Where do you feel technology has appropriately improved your life, and where do you feel the use of technology should be more carefully considered? Your essay should be approximately six to twelve pages. The exact page length should not be the emphasis of the essay, rather you should have enough text to demonstrate a well thought out reflection. Incorporate your world viewpoint. Emphasize points where your opinion has changed during this course. You are also encouraged to include points that may disagree with opinions expressed in the text or discussions, but remember to include supporting reasoning and examples with these disagreements. The point of this essay is not to make sure you think the way an author or instructor thinks, but to provide you with an opportunity to demonstrate thoughtful reflection on the appropriate use of technology. If you are a Christian you should include discussion concerning biblical and Christian adherence in the use of technology. If you are not a Christian you should provide evidence that your use of technology is consistent with your worldview.

Your essay should be well written, demonstrating your ability to communicate ideas and opinions clearly. Include a thesis statement in your essay that is strongly supported throughout the essay. Do not merely ramble while trying to fill up space. To assist you with your writing there may be a peer review session of your essay in the week before the final due date. Keep this in mind, and thus do not include things in your paper of a confidential nature.
Topical Outline and Schedule

From books:

- Digital Minimalism: Choosing a Focused Life in a Noisy World
- Ten Arguments for Deleting Your Social Media Accounts Right Now
- Weapons of Math Destruction: How Big Data Increases Inequality and Threatens Democracy
- Shaping a Digital World: Faith, Culture and Computer Technology.

From Invited Guests:

Each guest has been asked to give a presentation to introduce students to a topic, and then help lead a discussion. Each guest is asked to discuss a topic that intersects computer science or technology and their areas of expertise. Please note that the guests and schedule are subject to change to accommodate the schedule of guests.

From student discussions: As selected by students

Key Term Dates

- September 16, 2020: Last day to add Fall term courses or change audit to credit
- September 16, 2020: Last day to drop Fall term courses and receive full refund
- September 23-24, 2020: Interdisciplinary Studies Conference, regular classes cancelled
- September 25, 2020: Last day to withdraw from Fall term courses and receive partial refund
- October 12, 2020: Thanksgiving Day; no classes
- October 13, 2020: Fall Break; no classes
- October 15, 2020: Last day to change a course from credit to audit
- November 11, 2020: Remembrance Day; regular classes cancelled
- November 18, 2020: Last day for withdrawing from Fall term courses
- December 11, 2020: Last day of classes in Fall term
- December 14-21, 2020: Fall term examination week
Attendance Policy
The University expects students to attend all classes, seminars and laboratory periods. Part of a student’s responsibility in contributing to the community of the University is his or her contribution to and participation in each class. Students should note that some classes (e.g., physical activity courses, Choir) have minimum attendance requirements. Students auditing a course must attend at least 80% of the lectures.

Academic Supports

Student Support Services

Students with disabilities or medical conditions who require academic accommodations in this course must contact a Coordinator in the Student Support and Accessibility Office (SSAO) to complete a registration form and receive the necessary Letters of Accommodation.

After registering with the Student Support and Accessibility Office, students must present their Letter of Accommodation and discuss their needs with their professor as early in the term as possible.

Please note that more information including deadlines for the submission of documentation and completed forms to Student Support and Accessibility Office are available on the website:

https://www.kingsu.ca/current-students/student-support-and-accessibility

Tutoring Services

Students can access tutoring help through the Tutoring Registry in the Academic Enrichment Centre in the Library, which allows students to hire a tutor at $15/hr. Students will also be able to apply to become a tutor through this Registry.

The Writing Centre, also housed within the Academic Enrichment Centre in the Library, will be offering weekly group tutorials for English as well as individual tutoring in writing. Some academic departments offer weekly group tutorials in the areas of Math, Chemistry and Biology. There is an Academic Support Assistant, who can share effective study techniques and time management skills. Book appointments by emailing academic.support@kingsu.ca
Mental Health Supports

**Counselling Services:** Book appt online through kingsu.janeapp.com.

**Wellness Room:** Join King’s Wellness Room on FB

**Campus Minister:** Tim Wood (Tim.Wood@kingsu.ca)

**Spiritual Mentor and Life Coach:** Bob Foo (Robert.Foo@kingsu.ca) or Val Martens (Val.Martens@kingsu.ca)

**Student Life:** slo@kingsu.ca – to help you find supports in your area

Check out the King’s website for more support information.

Academic Honesty

The University disciplinary code defines the following as offenses. Committing these or aiding another student in committing these is academic misconduct.

**Cheating** includes: obtaining or providing information or material from or to others during an exam; allowing another student to observe answers during an exam; or possessing or attempting to acquire or distribute unauthorized material relating to an exam.

**Plagiarism** includes: representing another’s work in whole or in part as one’s own in an exam or paper, knowingly including a false statement or reference as if it were true, or submission by the student of the work prepared for a different course without the express consent of the instructor.

**Other offenses** are: tampering or attempting to tamper with examinations, class work, grades or class records; failure to abide by instructor directions regarding the individuality of work; impersonation of another student in an examination or other class assignment; falsification or fabrication of lab reports; the non-authorized recording of lectures; failure to obtain approval, permission, or to otherwise follow procedures, as required by the University as outlined in the University Calendar.

The first occurrence of plagiarism in any course results in a zero for the assignment, test, or exam; the second case in any course results in a zero for the course; and the third case in any course results in academic suspension. Occurrences of plagiarism will also be noted on the student’s academic record. For more information see the King’s Calendar (http://registry.kingsu.ca/Calendar).

Other Information
### CMPT 470 Fall, 2020 - Tentative Calendar

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