

STV205 Winter 2009 Syllabus

Dr. Scott M. Campbell

8 January 2009

1 Introduction

1.1 Calendar description

Cybernetics and Society

Cybernetics is the study of the interfaces between humans and machines. This course will present an overview of cybernetics from automation and robotics to prosthetics and wearable computing. The roles of men and women in a post-human era will be discussed along with related themes dealing with gender, cyberspace, politics and popular culture.

Credit wight: 0.5

Pre-requisite: None

1.2 Location and Time

Lectures: RCH 305, Thursday 7-9pm

- Lectures are delivered with the aid of slides, which will be available for students to download from ACE before the lectures.
- The slides do not replace lecture notes; you must be prepared to listen and take additional and effective notes
- Participation and questions from students are encouraged during lectures

Tutorials: Location TBA, Thursday 9-10pm

- Tutorial participation relies on having attended the lecture, and completing the reading material in advance.
- Student participation is expected and attendance is recorded.

1.3 Instructor

Dr. Scott Campbell, sm2campb@uwaterloo

<http://www.eng.uwaterloo.ca/sm2campb>

Office: E3X 3174 Ext. 35635

Hours: Tuesday 1-3 (or by appointment, please email)

I check email during business hours and will address short questions as quickly as possible, but longer replies may take a day or more. As a general rule, don't expect replies on weekends.

1.4 Teaching Assistant and Markers

Karl Griffiths-Fulton, kgfphoto@yahoo.ca

Office: E3X 3173

Hours: Wednesday 2-4 (or by appointment)

Wendy Stocker, wlstocke@uwaterloo.ca

Office: E3X 3171, x36215

Hours: By appointment

2 Course Details

2.1 Evaluation

The breakdown of grades for the course this term is as follows. See sections 3, 4, and 5 for more information.

Assignments	50%
Test 1	20%
Test 2	20%
Participation	10%

2.2 Website

Please use UW-ACE for access to lecture slides, assignment details and drop boxes, the course readings, a course discussion forum, and other resources.

2.3 Readings

Each lecture is accompanied by a set of readings and associated study questions, which can be found in the Reading List on ACE, under *Lessons*. The Reading List will have links to two sets of readings: primary and supplementary.

The primary readings are required. These readings should average 1 to 2 hours per week. You should read each carefully, consider the questions in the reading list, and be prepared to discuss them in tutorial. They are also directly testable: approximately one quarter to one third of the test questions will be derived from the primary readings.

The supplementary readings are not required, but are intended to fill in gaps, go a little deeper, or provide alternative views. They are not testable but may be used as suitable source material for tutorial discussions or any written work you submit this term. If you have time, you should try to read them.

2.4 Policies

2.4.1 Attendance

Attendance will be recorded in the tutorials and will be considered part of your participation grade. If you are sick, it is your responsibility to contact the instructor or your TA as soon as possible and provide a medical note within one week.

2.4.2 Academic integrity

I do encourage students to discuss their ideas with their colleagues, friends or family, or to get the same people to help proofread their writing. However, plagiarism, copying and other similar forms of intellectual dishonesty will be punished to the fullest extent of the appropriate University of Waterloo Student Academic Discipline Policies. The penalties can be quite severe and ignorance is rarely a good excuse.

Students are advised to consult the new UW academic integrity website <http://www.uwaterloo.ca/academicintegrity/index.html> for further details about expectations and possible penalties, and to contact the TA or the course instructor for guidance.

All cases of academic misconduct – even minor ones – will be reported to the appropriate academic dean. There are no exceptions to this rule!

2.4.3 Late assignments

All assignments will be penalized 1% from your final overall grade per 24 hour period past the deadline, to a maximum of the assignment value. Consideration may be granted if you contact the instructor before the due date.

There is no buffer or grace period for assignments submitted electronically. Give yourself adequate time to finish and submit before the deadline.

2.4.4 Exceptions and Extensions

A *University of Waterloo Verification of Illness* form is required within one week if a student is sick and requests an exception.

Any other exceptions to the above policies will require documentation and, wherever possible, considerable warning. Unplanned family emergencies and illnesses are generally good reasons for an exception; a heavy course load or a failure to plan ahead is not a good reason.

2.4.5 Appeals and regrading

Grades for all assignments and tests can be appealed, using the following process:

1. Talk with the person who graded your work for more information about the grade you received.
2. Submit to the instructor a written justification explaining why you feel your grade is inappropriate.
3. The instructor will regrade the entire assignment or test. The final grade may go up or down.

Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to *UW Policy 70, Student Petitions and Grievances*, <http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>.

Concerning a decision made under *Policy 33 (Ethical Behaviour)*, *Policy 70 (Student Petitions and Grievances)* or *Policy 71 (Student Discipline)*, a student may appeal the finding, the penalty, or both. Students who believe that they have grounds for an appeal should refer to *Policy 72 (Student Appeals)*, <http://www.adm.uwaterloo.ca/infosec/Policies/policy72.htm>.

2.5 Other

2.5.1 Test conflicts

Other instructors occasionally schedule tests during our official class time. In case of such a conflict, the other instructor is required to make alternate test arrangements for students with a conflict. See *University of Waterloo Examination Regulations and Related Matters*, <http://www.registrar.uwaterloo.ca/exams/ExamRegs.pdf>.

Students are expected to notify their instructors of such conflicts as soon as possible.

2.5.2 Students with disabilities

The *Office for Persons with Disabilities* (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term.

Please contact the instructor as soon as possible if you require academic accommodations.

2.5.3 Gender-fair language

Gender-fair or gender-neutral language should be used for all assignments and tests. That is, don't use "man" to refer to "humans", and don't use "he" to refer to a person unless you know that person is male. You may be penalized for failing to use appropriate terms. To familiarize yourself with gender-fair language, see: <http://www.rpi.edu/web/writingcenter/genderfair.html>.

2.5.4 Excessive Disruptions

Talking loudly during class or otherwise disrupting the lectures in a way that affects other students will not be tolerated. I discourage the use of laptop computers unless you are taking notes during the lectures; this is not the time for games, email, or chat.

2.5.5 Feedback

I encourage course feedback at all times. Contact me directly, pass a message via the TA, or submit anonymous comments on UW-ACE. Look under the *Lessons* tab for the anonymous feedback drop box. I will attempt to address all concerns as soon as possible.

3 Assignments, 50%

In addition to two test-preparation assignments, there are three writing assignments. They all require you to respond to the course material, think critically, and develop your own ideas. Some research will be required along the way, although you will be given appropriate limitations and boundaries.

In all cases, further details will be made available in class and on ACE.

3.1 Question and Answers, 10%

Due: 6pm Feb 10 and Mar 31, 5% each

There are two Question-and-Answer assignments (Q&A's). By 6pm on the due-date you must submit a short essay question, suitable for the upcoming test, and an appropriate answer (about 250 to 300 words) to ACE.

3.2 Assignment 1, 5%

Due: 6pm January 29

The first assignment is a very short one, intended to reinforce course concepts and themes early in the term. It will be based on lecture material and readings, and will require you to discover and identify appropriate examples, and discuss your findings.

3.3 Assignment 2, 15%

Due: 6pm Feb 26

The second assignment will be longer, and encourage you to think more about the relationship between cybernetics and society. Again, you will be required to discover and identify appropriate examples, and analyze and discuss your findings.

3.4 Assignment 3, 20%

Due: 6pm March 19

The final essay assignment is to be the longest, and you should spend about as much time preparing this assignment as you would spend studying for the test. For this final major assignment, you will have more freedom to develop your own ideas, but you must keep them grounded in course concepts or themes and additional research.

3.5 Resubmission, up to 5%

Due: 6pm April 8

For students who do poorly on assignment 2 or 3, a maximum of 5 additional "bonus" marks are available for anyone who re-submits either assignment and includes substantial improvements as suggested by the marker. The bonus marks cannot exceed the 80% of the assignment value or the class average, whichever is higher.

The student must submit three items on paper directly to the instructor: the original assignment (as originally submitted and marked), the rewritten assignment, and a short abstract (about 100 words) explaining what changes have been made and why they address the marker's concerns. Note, only one of the two assignments can be resubmitted, not both.

3.6 Assignment notes

- All assignments must be submitted electronically to ACE by 6pm on the due date; see above for late penalties and exceptions.

- The three written assignments must also be submitted on paper at that evening's lecture; the Q&A assignment must be submitted electronically, and the resubmission should be submitted directly to Dr. Campbell
- All assignment disputes will be resolved with reference to the electronic copy; for example, the late penalty will apply to the copy submitted to ACE. Remarking will apply to the electronic copy; any issues regarding academic integrity will be settled via the electronic copy.

3.7 Specifications

- Always include your name, student ID, date, page numbers, and a title; title pages, folders, duo-tangs are unnecessary
- All documents should employ 12-point, Times Roman font, 1" margins, and be double-spaced. This corresponds roughly with 250-300 words per page.
- Include a word count at the end of your assignment. Notes and the bibliography should not be included in the count.
- All assignments must include citations in the text (footnotes, endnotes, or in-text), especially when quoting, as well as a bibliography. References must be consistent and must employ a known citation style.
- Improper citation style, failure to include a bibliography, and inappropriate references to Wikipedia are all grounds for failing an assignment.

3.8 Writing Assistance and Guidance

A folder on ACE contains a series of documents with advice on writing, tailored for students taking STV courses. I encourage you to read these documents.

Although the TAs and I are primarily interested in your ideas, we are also going to evaluate your ability to express yourself coherently, and we expect proper spelling, grammar, and formatting. We also expect you to defend your ideas with suitable references and evidence, without vast generalizations.

The English Language Proficiency Program also offers help for students who need help. Visit the Writing Centre in the PAS building <http://elpp.uwaterloo.ca/writingcentre.html>. They are not a proofreading service, but will help all undergraduates with their writing.

4 Tests, 40%

Feb 12 and Apr 2, 20% each

There will be two in-class midterm-type tests, worth 20% each. Each will be two hours, with short answers, paragraph-length questions and essays. The tests are closed-book and non-accumulative with respect to each half of the course. That is, the second test deals almost exclusively with material from the second half of the course.

Further details will be made available in class and on ACE, where a sample of the *type* of questions can be found.

5 Participation, 10%

One of the overall goals for this course is to learn to appreciate cybernetics and technology from the perspective of others. As such, students will get a chance to share responses to the course material with other students. To encourage this, three student activities will be recorded: tutorial attendance, use of the discussion board on ACE, and timely completion of course surveys on ACE, all of which will be used to generate a participation grade.

Students who attend all their scheduled tutorials, complete all course surveys on time, and post useful, interesting or insightful comments or links to the discussion board should receive the full 10% for their participation grade.

5.1 Tutorials

The class will be randomly divided into tutorial sections of approximately 20 students. Tutorials occur after the main lecture, generally at 9pm, and each section will meet four times as indicated on the schedule: the first two sections will meet before the first midterm, and the latter two sections will meet after the midterm. The tutorials are led by the instructor and the TA.

All tutorial students are expected to be ready to discuss and debate the current week's reading. Of course, discussion is not just talking, it also requires listening and thinking. Your instructor or TA will moderate the discussion, as well as address questions about the course material, but the purpose of these sessions is for students to engage actively with the course material and other students.

5.2 Discussion Board

Look on ACE for the discussion board under the *Lessons* tab. It is there for students to discuss the course material and readings, post links to interesting events or items in the news, or ask administrative questions.

I suggest you subscribe to the discussion board, to avoid missing any useful messages. I will contribute regularly and monitor the board.

5.3 Surveys

Some weeks, a survey will be posted to ACE after a lecture, and students are expected to respond in a timely and honest fashion. The instructor will collate the answers for discussion at the following lecture.

6 Schedule (Tentative)

Date	Event or Deadline	Lecture Topic	Tutorial
Jan. 8		0. Welcome	
Jan.15		1. What is cybernetics?	1,2
Jan 22		2. Human machines I	1,2
Jan. 29	Due: Assignment 1	3. Human machines II	1,2
Feb. 5		4. From cyborgs to cyberspace	1,2
Feb. 10	Q&A 1 due		
Feb. 12	Test 1		
Feb. 17	Reading Week	No lecture	
Feb. 26	Due: Assignment 2	5. Cyberspace I	3,4
Mar. 5		6. Cyberspace II and affective computing	3,4
Mar. 12		7. Artificial Intelligence	3,4
Mar. 19	Due: Assignment 3	8. Gender and cybernetics	3,4
Mar. 26		9. The Singularity, progress and the future of cybernetics	Reserved
Mar. 31	Q&A 2 due		
Apr. 2	Test 2		
Apr. 8	Due: A2 or A3 resubmission		

Some lectures may run long, and tutorials may be cancelled, so students should not schedule other activities during the 7-10pm block, regardless of which tutorial they are in.

Final grades will be uploaded to Quest when the marking is completed – please don't ask when, it is impossible to predict. Also note that final grades will be rounded by ACE and Quest using a round-to-even method, which is more fair statistically, but perhaps not what all students are used to.

See <http://www.quest.uwaterloo.ca/undergraduate/dates.html> for more information regarding university dates for drop deadlines and related penalties.