

STV203 Fall 2010 Syllabus

Dr. Scott M. Campbell

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1 Introduction

1.1 Calendar description

Biotechnology and Society

Biotechnologies are currently migrating from the laboratory to a wide range of consumer products. In everything from foods to pharmaceuticals, genetic engineering is entering daily life. The biotechnology revolution will likely have as much of an impact on our lives as the information technology revolution. However, there is a wide and potentially dangerous gap between research and development on the one hand and societal awareness of its impact on the other. This course is intended to help students gain a deeper appreciation for the issues, including ethics, surrounding biotechnology and society. It will do this through an investigation of such interactions between biotechnologies and society as genetics and the law, foods and the media, and soil remediation and the environment. Consideration will also be given to the role of computing in biotech research and in the human genome project.

Credit weight: 0.5

Pre-requisite: Level at least 2A

No background in biotechnology is assumed.

1.2 Location and Time

RCH 209, Thursday 7-9:50pm

The general pattern each night will be an introductory lecture regarding the week's topic followed by class discussion of the readings or in-class group work, with a single break around the mid-point of the evening. Occasionally, the lecture may be enhanced via guest lectures or screening of videos.

Lectures are delivered partially with the aid of slides, which will be available for students to download on ACE. However, all students must be prepared to discuss, listen and take effective notes.

1.3 Instructor

Dr. Scott Campbell, sm2campb@uwaterloo

<http://cstv.uwaterloo.ca/people/campbell.html>

Office: E3X 3174 Ext. 35635

Hours: Tuesday 12-2pm (or by appointment, please email)

1.3.1 Electronic communication policy

I will reply to student email as soon as possible, but students should not expect a reply before 48 hours have passed. Nor should they expect a reply on weekends or evenings. I will prioritize my attention in favour of students who make use of the following advice:

- Write from your UW or UW-ACE account; it helps me identify students faster and is less likely to be rejected as spam
- Include the course number in your subject line (I teach several different courses), and a helpful subject line
- Choose an appropriate greeting (“Dr.” or “Prof.”, not “Hey”), be polite, and proofread what you’ve written

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.

Projects	40%
Test 1	20%
Test 2	20%
Participation	20%

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 Textbook and Readings

There is no physical textbook for this course.

However, there are weekly required readings that will be available online. The reading list with links to the required reading material and an accompanying set of study questions, can be found on ACE and will be updated regularly. Students are expected to complete each week’s readings before the lecture and to be prepared to discuss the contents and study questions.

2.4 University Policies

The following sections are University Policies that apply to every undergraduate course at the University of Waterloo and must appear on a syllabus.

2.4.1 Academic Integrity

In order to maintain a culture of academic integrity, members of the University of Waterloo community are expected to promote honesty, trust, fairness, respect and responsibility. Check www.uwaterloo.ca/academicintegrity/ for more information.

2.4.2 Discipline

A student is expected to know what constitutes academic integrity (check www.uwaterloo.ca/academicintegrity/) to avoid committing an academic offence, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course instructor, academic advisor, or the undergraduate Associate Dean. For information on categories of offences and types of penalties, students should refer to Policy 71, Student Discipline, www.adm.uwaterloo.ca/infosec/Policies/policy71.htm. For typical penalties check Guidelines for the Assessment of Penalties, www.adm.uwaterloo.ca/infosec/guidelines/penaltyguidelines.htm.

Note that all cases of academic misconduct – even minor mistakes or apparently trivial cases – must be reported to the appropriate academic dean. There are no exceptions to this rule!

2.4.3 Appeals

A decision made or penalty imposed under Policy 70 (Student Petitions and Grievances) (other than a petition) or Policy 71 (Student Discipline) may be appealed if there is a ground. A student who believes he/she has a ground for an appeal should refer to Policy 72 (Student Appeals) www.adm.uwaterloo.ca/infosec/Policies/policy72.htm.

2.4.4 Grievance

A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70, Student Petitions and Grievances, Section 4, www.adm.uwaterloo.ca/infosec/Policies/policy70.htm. When in doubt please be certain to contact the department’s administrative assistant who will provide further assistance.

2.4.5 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 Course Policies

The following policies are specific to STV203.

2.5.1 Attendance

Attendance will not be recorded.

2.5.2 Late submissions

Any submission that arrives past the deadline will be penalized 1% from your final overall grade per 24 hour period past the deadline, to a maximum of the assignment value. This includes weekends for those portions which can be submitted online. Consideration may be granted if you contact the instructor for an exception *before* the due date (see 2.5.7).

There is no buffer or grace period for online submissions. Give yourself adequate time to finish and submit.

2.5.3 Group work

There will be group work this term and students are expected to collaborate freely and cooperate amongst themselves.

In the case of individually assigned work, I expect students to develop their own ideas in their research and writing, but I also encourage them to approach their colleagues, friends or family to discuss their ideas or help proofread essay drafts.

2.5.4 Regrading

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

1. Talk with the instructor 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 new grade may be higher or lower than the original, and will be considered final.

See 2.4 above for more information concerning appeal and grievances.

2.5.5 Test conflicts

Other instructors occasionally (and improperly) schedule tests during our official class time. In case of such a conflict, the other instructor is required to provide 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.

2.5.6 Gender-fair language

Gender-fair or gender-neutral language should be used for all written work. 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>.

2.5.7 Exceptions and Extensions

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

All exceptions to the course policies require documentation and, wherever possible, advance notice. 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.

2.5.8 Excessive disruptions and portable computers

This course is run much like a seminar; the instructor will lead discussion and all students are expected to participate. Fairness demands appropriate behaviour and attention when others are speaking.

As such, I will not tolerate distracting, disruptive or off-topic activities such as irrelevant web surfing or social networking or too-loud private discussions which may affect other students. Students who persist in such activity will be warned once and may forfeit half (10%) of their participation grade.

2.5.9 Feedback

I encourage course feedback at all times. Contact me directly 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 Projects, 40%

There are two major projects for this course. The first is a group project with a presentation and a handout, the second is an essay, submitted individually.

3.1 Group Presentation, 20%

Presentations to be held in class on October 14; handout and any electronic slides (PowerPoint, PDF, etc) are due the same day at noon.

Students will work in groups of three or four and analyze a particular interaction between biotechnology and society from a list of topics. On October 14 each group will present the results of their analysis to the class.

By noon that day groups are also expected to submit to ACE a handout no more than two pages long that includes a brief summary of their results and a bibliography. If they plan to use electronic slides, such as PowerPoint or PDFs they must submit them by noon as well. I will provide copies of the handout for the rest of the class and will have the slides ready at the beginning of class.

Further instructions, expectations, topic options, and a rubric will be provided in class and on ACE.

3.2 Essay, 20%

Deadline, 6pm November 18

For the second project each student will write an essay; topics are to be chosen from a list, although students may suggest alternate topics for approval by the instructor. Successful completion of the essay will require careful research and writing. Further instructions, expectations, topic options, and a rubric will be provided in class and on ACE.

3.3 Use of Turnitin

Plagiarism detection software (Turnitin) will be used to screen certain assignments in this course. This will be done to verify that use of all materials and sources in assignments is documented. In the first week of the term, details will be provided about arrangements for the use of Turnitin in this course.

Students who prefer not to use Turnitin must meet with the instructor at least two weeks before the relevant assignment deadline to discuss alternatives. Suggested alternatives include submitting one or more of the following in advance: an annotated bibliography or a multi-page outline or draft.

3.4 Assignment notes and general specifications

- Always include your name and student ID (and those of your group members), date, page numbers, and a title; title pages, folders, duo-tangs are unnecessary
- All documents should use a 12-point Times Roman font, 1" margins, and double-spaced text. This corresponds roughly with 250-300 words per page.
- All assignments must include citations in the text (footnotes, endnotes, or in-text) 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 penalty.

3.5 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 I am primarily interested in your ideas, I will also evaluate your ability to express yourself coherently via proper spelling, grammar, and formatting. I also expect you to defend your ideas with suitable references and evidence, without vast generalizations or factual or historical inaccuracies.

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%

See the schedule below in section 6.

There will be two in-class tests, worth 20% each. Each will be two hours, open-book, and (mostly) non-accumulative. They are essay-based, and primarily designed to test a student's overall understanding of course concepts, not their ability to regurgitate examples or facts.

Further details will be made available in class and on ACE.

5 Participation, 20%

One of the overall goals for this course is to learn to appreciate the perspectives of others. As such, students are expected to actively participate in course discussions, to share their own responses to the course material with other students, and learn from other students in return. Students can expect to be called upon at random for their thoughts. Those who are shy, or otherwise find it difficult to speak up in class should speak to the instructor early in the term to discuss alternate arrangements.

There are three components to the participation grade: in-class discussion, online discussion, and weekly “homework”. Each will be evaluated out of 10. The final participation grade will be the sum of the two highest grades; the lowest grade will be dropped.

5.1 In-class discussion

Although this is not strictly a seminar course, a considerable amount of the in-class time will be devoted to class discussion. Students are expected to prepare by studying the required readings and accompanying questions, and completing the homework (see below). Remember, however, that discussion requires everyone to do three things: to think, to talk, and *to listen*.

As such, participation in each week’s discussion will be monitored, in terms of both quantity and quality of a student’s contributions.

Students will be given an estimated evaluation of their in-class participation at the mid-point of the term.

5.2 Online discussion

There is also a discussion forum for this course on UW-ACE. Students are expected to use it to ask questions or discuss the course material and readings, post links to interesting events or websites, or ask administrative questions. The instructor will monitor the board and contribute regularly. It is suggested that students use the subscription function, to avoid missing any useful messages.

Students will receive a grade proportional to the quality and quantity of their posting history. Timing is also relevant: flooding the discussion forum the day before the second test is inappropriate and will not be rewarded. Instead, it is expected that students contribute throughout the term. Please note that merely *reading* the forum does not count as participation and postings made after the second test will not count towards the participation grade.

Students will be given an estimated evaluation of their online participation at the mid-point of the term.

5.3 “Homework”

Ten times this term, students will be given a short homework assignment that is related to the following week’s lecture or activities. Completing the short assignment may require, for example, research or creative thinking, surveying friends and family, or finding something to show the rest of the class, and should not take more than one hour. Complete instructions, with examples or templates as necessary, will be discussed in class and posted to ACE. Normally, students will be required to bring their completed homework to class, discuss their findings, and submit their work at the end of the evening.

Grading the homework will be straight-forward: every homework assignments completed in full and submitted on time will be given 1 mark, for a total of 10 marks. Note, that I reserve the right to deduct marks for particularly egregious submissions which indicate lack of goodwill or collusion, or otherwise fail to live up to the expected standards of academic work.

6 Schedule (Tentative)

This is the tentative schedule. As we move through the term, external or internal events may lead to changes to the course content, but the assignment deadlines and test dates are fixed.

Date	Week and Lecture Topic	Deadline
Sept. 16	0. Welcome	
Sept. 23	1. Biotechnology and Society	Homework 1
Sept. 30	2. Agriculture and Nutrition	Homework 2
Oct. 7	3. Biodiversity	Homework 3
Oct. 14	4. Presentations	Noon: Handouts & Slides
Oct. 19		Homework 4
Oct. 21	5. Test 1	
Oct. 28	6. Biotechnology and Ethics	Homework 5
Nov. 4	7. Cloning, Gene Therapy and Eugenics	Homework 6
Nov. 11	8. Business, Policy and Security	Homework 7
Nov. 18	9. Biotechnology and Culture	6pm: Essay assignment Homework 8
Nov. 25	10. Biotechnology and Progress	Homework 9
Nov. 30		Homework 10
Dec. 2	11. Test 2	

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

6.1 Final grades

Final grades will be rounded using a round-half-to-even method, which is more fair statistically, but perhaps not what all students are used to.