

ANTHROP 4GS3: GENETICS AND SOCIETY

Winter 2019

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Course Description

The term “genetics” is a loaded word. At the extremes, some believe the word encapsulates the future of medicine and the panacea for the control and cure of harmful diseases. To others it is seen as a harmful misused power that has a questionable past and will be improperly used in the future. For many of us, there are grey areas between these extremes. This class will explore these areas and how society perceives the terms and technologies, with an emphasis on their impacts (both positive and negative) at home and across the globe. In this way, we will build a familiarity with the powers and limitations of genetics (i.e. theories and testing).

Intended Learning Outcomes (ILOs)

By the end of the course you should be able to:

1. Describe what DNA is with a level of understanding that is applicable to use in discussions and the following intended learning outcomes. We will start with the very basics and build upon your knowledge base as needed as we move through different topics and concepts.
2. Describe the ways that DNA is present in and affects our lives.
3. Apply the ethics of DNA analysis and its use in research.
4. Analyze the portrayal and use of genetics in popular culture and society through media articles, criminal cases, etc.

You will:

5. Use and improve your Critical Thinking Skills throughout the exercises in the course, but in particular through the discussion posts on Avenue and the Critical Review.
6. Use and improve your presentation skills through the creation and presentation of a conference style poster on a topic relevant to the course.

Required Materials and Texts

- No required text for the course. We will be using journal articles and media articles for material for our discussions.
- If you have a laptop, please bring it to class. Our classes are in an active learning classroom where those at each table can connect their computer to show different ideas, concepts, or media articles that you may have come across during the course of this class. And, you are encouraged to feel free to share. If you do not have a laptop, please note that you will not be excluded from this opportunity. If you share the links, or email me the document you wanted to show the class.

Class Format

This course will primarily be seminar and discussion based. The first few weeks I will have some lectures to introduce key concepts regarding DNA and in genetics so that the class will be equipped to engage in discussions in the weeks to come. Throughout the course, we will also regularly be engaging in active learning activities to have a variety of ways to engage with the material.

Course Evaluation – Overview

Assessment	Due Date	Intended Learning Outcomes Addressed	Weight
1. Participation	Expected each class	#1, 2, 4, 5	15%
2. Discussion Posts on Avenue	Monday each week	#5	20%
3. Poster Proposal	January 30	#2, 4	10%
4. Critical Review	February 13	#2, 3, 4, 5	15%
5. 1st Draft of Poster	February 25	#2, 4, 5, 6	0%
6. Ethics Assignment	March 13	#2, 3	5%
7. 2nd Draft of Poster	March 18	#2, 4, 5, 6	0%
8. Poster	Send Final copy April 1 Poster symposium April 3 in class	#2, 4, 5, 6	30%
9. Peer Evaluation of Poster	April 11	#6	5%
			TOTAL: 100%

Course Evaluation – Details

Participation (15%), expected each class

This is a fourth-year seminar course, and participation is expected from everyone in these discussions. Discussions are a way for you, as the learners, to take the

knowledge from lecture and the readings and apply that to different scenarios; assess the validity of specific ideas; critically analyze specific concepts; etc.

Participation grades will be assigned based on participation in class discussions. Attendance will be taken, but does not guarantee full participation marks. Grades will take into account the frequency of participation, degree of preparation demonstrated by the responses given, and ability to address questions posed by the instructor and other members of the class.

Assignment 1 Critical Thinking Discussion Posts (20%), due Monday of each week by noon

This assessment is all about engaging with and developing your Critical Thinking Skills. Through the posts each week you will slowly build your critical thinking skills and work on creating useful and effective discussion questions. We will start with using “The Ultimate Cheatsheet for Critical Thinking” posted in the assignment folder on Avenue and eventually build up to posting your own, original discussion questions. More detail will be posted in the Critical Thinking Discussion Posts folder on Avenue.

Assignment 2 Poster Proposal (10%), due January 30 by 6pm

This proposal will begin your research for your poster to be presented at the end of the course. Through our discussions of the different topics we explore the first two weeks of classes, choose a topic that interests you and you would like to explore further. The proposal is an opportunity to ensure you have a clear plan in place at an early stage of the course.

Your proposal should include a title, a brief description about the research you will conduct (~500 words), and a list of at least 3 appropriate academic sources that relate to your research (i.e., academic books, articles from peer-reviewed journals, or chapters in conference proceedings) as well as 2 non-academic sources related to the research (i.e., newspaper article, popular science book, blog post, online news post). More detail will be discussed in class and provided on Avenue.

Assignment 3 Critical Review (15%), due February 13 by 6pm

For the critical review, you will be provided with a short list of representations of genetics in popular media. You will select one of these options, that is related to your poster topic, and then write a brief (max 1500 words) review of the depiction, including its scientific accuracy, effect on society as presented, and its actual effect on society (if applicable). This assignment is meant to provide an opportunity to begin to think critically about the topic and representations of genetics we see in society. If the list provided does not have a representation that relates to your chosen poster topic, please see me and we will find a suitable alternative for you.

1st Draft of Poster (0%), due February 25 by 5pm

This is your opportunity to get your first round of feedback from not just myself, but also your peers on your poster. You will have the feedback from your proposals to work towards your poster, and your critical review will have helped build some of the content. Please upload your first draft to the dropbox on Avenue by 5pm. This ensures that I have time to look over each draft to prepare some points to discuss with you in class that week. You may send your first draft in actual poster format (Powerpoint slide, PDF), or you may send it in a word document with clearly marked headings for each section. If you are sending a word document, please have some graphic to indicate how you are planning on organizing your material. Bring this first draft to class on February 27. We will have a portion of class dedicated to discussing your posters with your peers to receive feedback, as well as time to go over some key points with me during class. Further comments and feedback will be provided in Avenue.

Assignment 4 Ethics Assignment (5%), due end of class March 13

In class this week will have a guest speaker come talk to us about the ethics review boards here at McMaster and the Health Science centre. They will tell us about the process for completing the applications and receiving clearance. We will follow with a discussion on other key points specifically with regards to DNA analysis to consider. The ethics assignment will consist of working through one of the scenarios provided; filling out the mock ethics application with regards to the scenario; and answering the questions given along with the mock application.

2nd Draft of Poster (0%), due March 18 by 5pm

Round 2 for feedback on your poster! This is going to run just like last time, except that by now you should have your information mostly finalized and you should have your information in your powerpoint slide. Some of the aspects we will concentrate on here is placement and organization on the poster; how to balance the amount of content in the poster; etc. We will discuss what degree of completion to aim for at this point leading up to this week and it will be posted on Avenue the week before. Please upload your draft to the dropbox March 18 and I will come prepared with some key points to discuss with you in class again.

Assignment 5 Poster (30%), due April 1, final April 4 at noon

Email your powerpoint slide of your poster to me by noon April 1. This is to ensure that myself and our guest judges can prepare questions for your poster by class time on the 3rd. Please upload the final copy of your poster in the dropbox by Avenue on April 4 by 11:59am. Further instructions and expectations will be presented separately in class and posted to Avenue.

Please note that 20% of this grade will be towards your actual, finished poster, and 10% will be towards your presentation of your poster, including your ability to discuss your research and poster. This will be based upon discussions with myself and our guest judges.

Assignment 6 Peer Evaluation of Poster (5%), due April 11

You will (anonymously) assess some of your peers' posters using clearly defined criteria. These will be anonymous in the sense that the peer you evaluate will not know who conducted the peer reviews. These evaluations will be done during the poster session in the final class and I expect you to send your feedback in the provided form on Avenue by April 11th. Please note that I will be taking these evaluations into account when marking your peers' posters, so be respectful and fair. Also, remember that I too am evaluating these same posters, and I will see if you are being fair in your judgments or not. The evaluation will be sent (again, anonymously) to the peer you reviewed along with their final mark for their poster.

Weekly Course Schedule and Required Readings

Week 1 (January 7-11)

January – Introduction, Housekeeping

Readings: TBD

Notes: No Discussion Post Due

Week 2 (January 14-18)

Date – Continuation of Introduction to Genetics & Common Misconceptions of DNA and Genetics in the Mainstream Media

Readings: TBD

Notes: Discussion post due January 14 by noon

Week 3 (January 21-25)

January 23 – Genomics and Personalized Medicine

Readings: TBD

Notes: Discussion post due January 21 by noon

How to make a conference Poster

Readings: TBD

Week 4 (January 28-February 1)

January 30 – Forensics and DNA Databases – good, bad, ugly?

Readings: TBD

Notes: Discussion post due January 28 by noon

Poster Proposal is due January 30th by 6:30pm

Week 5 (February 4-8)

February 6 – Making Money from DNA

Readings: TBD

Notes: Discussion post due February 4 by noon

Week 6 (February 11-15)

February 13 – TBD

Readings: TBD

Notes: Discussion post due February 11 by noon

Week 7 (February 18-22)

Reading Week

Week 8 (February 25-March 1)

February 27 – TBD

Readings: TBD

Notes: Discussion post due February 25 by noon

Send first draft (however rough) of poster to me by 5pm February 25th

Bring this draft to class February 27th. Half of the class will be spent workshopping the poster, getting peer review and some brief time to discuss your poster and how it is developing with me.

Week 9 (March 4-8)

March 5 – TBD

Readings: TBD

Notes: Discussion post due March 4 by noon

Week 10 (March 11-15)

March 13 – Ethics!

Readings: TBD

Notes: Discussion post due March 11 by noon

We have a guest speaker from one of the ethics boards here at McMaster this week. The Ethics assignment will be due by the end of class March 13

Week 11 (March 18-22)

March 20 –TBD

Readings:TBD

Notes: Discussion post due March 18 by noon

2nd draft of poster due March 18 by 5pm. Bring this draft to class March 20th. Like last time, some of the class will be spent work-shopping the poster, getting peer review and some brief time to discuss you poster and how it is developing with me.

How to present a poster, organizing the visuals

Week 12 (March 25-29)

March 26 – TBD and the Poster (Elevator) talk

Readings:TBD

Notes: Discussion post due March 25 by noon

Week 13 (April 1-5)

April 4 – Poster Symposium!

Readings: No readings, this will be the culmination of all of your hard work this term and your chance to discuss your research and show it off to your peers, the department and your family and friends if you so wish.

Notes: Please send final draft of your poster by April 1 at noon so the guest judges and myself may prepare questions. Have your final poster ready to go for the start of class April 3. We will discuss and decide the order for presenting the posters the week before.

Course Policies

Expectations for Students and Instructor - *To be discussed and further established in the first class.

Student expectations	Instructor expectations
<i>Your learning</i> – it is your responsibility to keep up with the readings – do not leave them until the night before the exams. Attendance in this class is essential if you want to do well in this course. You are expected to think about	<i>Your learning</i> – it is my responsibility to come prepared to class each week to facilitate the discussions and teach (when necessary) on the material for that week. <i>Classroom behavior</i> – I promise to be

<p>the readings and integrate them into the information and concepts presented during lecture and the discussions.</p> <p>Classroom behavior – Please do not be afraid to ask questions or provide constructive comments! If you do not understand something, or if I have gone over a concept too fast, stop me and ask a question. Chances are if you do not understand something, other people in the class are in the same position. Please listen and respect others in the course.</p> <p>Please ensure that cell phones are turned off or on silent (including text messaging, Twitter, etc...) and arrive on time for class. If you have to leave class early, please sit near one of the exits.</p> <p>Laptop computers may be used in class for taking notes and are encouraged to be used to show any new material (news articles, advertisements, etc.) that you find during discussions. But, students using their computers for any other purpose (e.g., checking Face-book) will be asked to turn their computers off.</p>	<p>engaged and to enthusiastically discuss and facilitate the material in each class. I also promise to be open to any and all questions made during class or sent in emails.</p> <p>I will listen and be respectful of student's views</p> <p>Cell phone – I promise to have my cell phone on silent during class and to not use it. The exception for this will be when I use it for a timer during active learning activities.</p> <p>Availability – I will be available during my office hours each week, as well as for appointments at other times if the posted office hours do not work for your schedule. I will be in class at least 5 minutes before and after class.</p> <p>Grading and Assignments – I will grade objectively, consistently and in a timely manner. I will accommodate for differences in students' learning.</p>
<p>Please remember, if you have any questions, comments or concerns, to let me know right away. I welcome any feedback that you may have. I will also periodically open up the floor in class for feedback on activities and assignments.</p>	

Submission of Assignments

All assignments should be submitted digitally via Avenue to Learn. Assignments will not be accepted in any other form (unless stated otherwise), and if students encounter errors with submitting assignments on Avenue they will be expected to notify me prior to the deadline.

Please have all assignments (apart from the poster) written in Times New Roman, 12-pt font with 1 inch margins. You may use any citation style of your choosing (APA, AAA, etc.), just remember to be consistent throughout your document.

Grades

Grades will be based on the McMaster University grading scale:

MARK	GRADE
90-100	A+
85-90	A
80-84	A-
77-79	B+
73-76	B
70-72	B-
67-69	C+
63-66	C
60-62	C-
57-59	D+
53-56	D
50-52	D-
0-49	F

Late Assignments

A penalty of 5% per day will be applied to late assignments (that were not discussed with me at least one day prior to the deadline) for **a maximum of 4 days**, including weekends. After 4 days, assignments will no longer be accepted, and a grade of zero will be assigned.

Absences, Missed Work, Illness

Students who will be absent from class or expect to miss work for any reason should notify me prior to the class time or deadline. Extensions may be granted for illness, provided students discuss this with me at least one day before the deadline. In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar, "Requests for Relief for Missed Academic Term Work." If you have any questions about the MSAF, please contact the Associate Dean's office.

http://academiccalendars.romcmaster.ca/content.php?catoid=11&navoid=1698#Requests_for_Relief_for_Missed_Academic_Term_Work

Course Materials and Avenue to Learn

In this course we will be using Avenue to Learn. Students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

Lectures will be presented using Power Point, **abbreviated** versions of which will be posted weekly on A2L. Grades will also be posted on A2L. You must be registered in the course to have access to the 4GS3 site.

University Policies

Academic Integrity Statement

You are expected to exhibit honesty and use ethical behavior in all aspects of the learning process. Academic credentials you earn are rooted in principles of honesty and academic integrity.

Academic dishonesty is to knowingly act or fail to act in a way that results or could result in unearned academic credit or advantage. This behavior can result in serious consequences, e.g. the grade of zero on an assignment, loss of credit with a notation on the transcript (notation reads: "Grade of F assigned for academic dishonesty"), and/or suspension or expulsion from the university.

It is your responsibility to understand what constitutes academic dishonesty. For information on the various types of academic dishonesty please refer to the Academic Integrity Policy, located at www.mcmaster.ca/academicintegrity.

The following illustrates only three forms of academic dishonesty:

1. Plagiarism, e.g. the submission of work that is not one's own or for which credit has been obtained.
2. Improper collaboration in group work.
3. Copying or using unauthorized aids in tests and examinations.

Academic Accommodation of Students with Disabilities

Students who require academic accommodation must contact Student Accessibility Services (SAS) to make arrangements with a Program Coordinator. Academic accommodations must be arranged for each term of study. Student Accessibility Services can be contacted by phone 905-525-9140 ext. 28652 or e-mail sas@mcmaster.ca. For further information, consult McMaster University's Policy for [Academic Accommodation of Students with Disabilities](#).

Religious, Indigenous and Spiritual Observances (RISO)

The University recognizes that, on occasion, the timing of a student's religious, Indigenous, or spiritual observances and that of their academic obligations may conflict. In such cases, the University will provide reasonable academic accommodation for students that is consistent with the Ontario Human Rights Code.

Please review the [RISO information for students in the Faculty of Social Sciences](#) about how to request accommodation.

Requests for Relief for Missed Academic Term Work

McMaster Student Absence Form (MSAF)

In the event of an absence for medical or other reasons, students should review and follow the Academic Regulation in the Undergraduate Calendar “Requests for Relief for Missed Academic Term Work”.

On-line Elements

In this course we will be using Avenue to Learn. Students should be aware that, when they access the electronic components of this course, private information such as first and last names, user names for the McMaster e-mail accounts, and program affiliation may become apparent to all other students in the same course. The available information is dependent on the technology used. Continuation in this course will be deemed consent to this disclosure. If you have any questions or concerns about such disclosure please discuss this with the course instructor.

Faculty of Social Sciences E-mail Communication Policy

Effective September 1, 2010, it is the policy of the Faculty of Social Sciences that all e-mail communication sent from students to instructors (including TAs), and from students to staff, must originate from the student’s own McMaster University e-mail account. This policy protects confidentiality and confirms the identity of the student. It is the student’s responsibility to ensure that communication is sent to the university from a McMaster account. If an instructor becomes aware that a communication has come from an alternate address, the instructor may not reply at his or her discretion.

Privacy Protection

In accordance with regulations set out by the Freedom of Information and Privacy Protection Act, the University will not allow return of graded materials by placing them in boxes in departmental offices or classrooms so that students may retrieve their papers themselves; tests and assignments must be returned directly to the student. Similarly, grades for assignments for courses may only be posted using the last 5 digits of the student number as the identifying data. The following possibilities exist for return of graded materials:

1. Direct return of materials to students in class;
2. Return of materials to students during office hours;
3. Students attach a stamped, self-addressed envelope with assignments for return by mail;
4. Submit/grade/return papers electronically.

Arrangements for the return of assignments from the options above will be finalized during the first class.

Course Modification

The instructor and university reserve the right to modify elements of the course during the term. The university may change the dates and deadlines for any or all courses in

extreme circumstances. If either type of modification becomes necessary, reasonable notice and communication with the students will be given with explanation and the opportunity to comment on changes. It is the responsibility of the student to check his/her McMaster email and course websites weekly during the term and to note any changes.

Extreme Circumstances

The University reserves the right to change the dates and deadlines for any or all courses in extreme circumstances (e.g., severe weather, labour disruptions, etc.). Changes will be communicated through regular McMaster communication channels, such as McMaster Daily News, A2L and/or McMaster email.