



Second Year Course Handbook

Trinity College, University of Toronto

Created by the Trinity College Peer Advisor Team

2018-2019

Note to the readers:

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For other academic concerns such as degree requirements, course enrollment, or similar issues, please contact the Trinity College Registrar at registrar@trinity.utoronto.ca or 416-978-2687. We hope you enjoy this handbook and it helps you with course selection!

Sincerely,

The Trinity College Peer Advisor Team (2018-2019)

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SECTION I: LIFE SCIENCES

ANATOMY (ANA)

ANA300Y1 - Human Anatomy and Histology

Prerequisite: BIO130H1

Exclusion: BIO33H3, BIO210Y5

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B- (2017/18)

Past Formats: In past years, this full year course has consisted of 4 multiple-choice exams and 2 bell ringer exams which are short answer format. There are generally 4 hours of lecture per week with 1-hour tutorials most weeks. Tutorials are optional but are helpful for the bell ringer exam.

Personal Comments: This course is normally taught by Professor Ballyk who is a great professor. This is often viewed as a dense course with a lot of material to memorize, but Professor Ballyk is great at explaining concepts and her slides are easy to understand. Based on prerequisites, 2nd years can take this course but normally the class mainly consists of 3rd and 4th years. We would personally advise against taking this course in your 2nd year if you already have a heavy course load and take it in your 3rd or 4th year instead. While its not a requirement, many people find it helpful to take PSL300 and PSL301 prior to taking ANA300.

ANTHROPOLOGY (ANT)

ANT208H1: Medical Anthropology: An Evolutionary Perspective on Human Health

Recommended Preparation: ANT100Y1/BIO120H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B+ (2018)

Past Formats: In past years, this course has consisted of quizzes, tutorial participation, a midterm exam, and final exam which are normally multiple choice format.

Personal Comments: Many students find this a very interesting course that applies the field of anthropology to medicine. Past professors have been very knowledgeable on the topic and engaging.

BIOCHEMISTRY (BCH)

BCH210H1F: Biochemistry I: Proteins, Lipids and Metabolism

Prerequisite: CHM135H1/CHM136H, CHM151Y1

Exclusion: BCH242Y1, [CHM361H5(UTM) and CHM362H5(UTM)], [BIOC12H3(UTSC) and BIOC13H3(UTSC)], CHMB62H3(UTSC)

Breadth Requirement: The Physical and Mathematical Universes (5)

Past Course Average: C+ (2016 and 2017)

Past Formats: In past years, there have been 2 midterms and 1 final exam all of which are multiple choice and non-cumulative. In some years, they have added bonus assignments, additional mandatory assignments, or short answer questions to tests. There is no lab component.

Personal Comments: While in past years the tests have not been cumulative, many students find there is still a lot of content to memorize. It's important to keep up with your work in this course as it can get very dense. Generally speaking, the content on the final exam is the most difficult portion of the course. Some students find it helpful to take this course before taking the MCAT, as you learn all the amino acid structures which is testable MCAT material.

BCH242Y: Introduction to Biochemistry

Prerequisite: (CHM135H1, CHM136H1)/CHM151Y1

Exclusion: BCH210H1 and BCH311H1, [CHM361H5(UTM) and CHM362H5(UTM)], [BIOC12H3 (UTSC) and BIOC13H3 (UTSC)], CHMB62H3(UTSC)

Breadth Requirement: Living Things and Their Environment (4), The Physical and Mathematical Universes (5)

Past Course Average: A- (2017)

Past Formats: This course is the equivalent of BCH210 for biochemistry, immunology, and molecular genetics specialists. In past years, this course has been broken into 4 sections with a term test at the end of each. The tests are usually non-cumulative usually with a mix of short answer and multiple-choice questions. Evaluation usually consists of class quizzes (participation), term-tests, a lab component, and a group presentation.

Personal Comments: Students often find the lab component of this course to be quite relaxed and a good learning environment. The lab evaluation usually consists of a series of questions related to the experiments performed. The group presentation is usually based on a recent paper related to the field. Students often find this course has less memorization than BCH210 with a greater focus on experimental techniques.

BCH311H1: Biochemistry II: Nucleic Acids and Biological Information Flow

Prerequisite: BCH210H1

Exclusion: MGY311Y1, PSL350H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B (2018)

Past Formats: In past years, this course has had 2 term tests and a final exam all of which have been multiple choice format.

Personal Comments: This course is a continuation of BCH210. Generally speaking, people tend to do better in this course than BCH210 and find it easier as it focuses more on experimental data rather than memorization. We would personally recommend taking this course the semester after BCH210 if possible, as all the previous BCH210 content will be fresh in your memory.

BIOLOGY (BIO)

BIO220H1: From Genomes to Ecosystems in a Changing World

Prerequisite: BIO120H1

Recommended Preparation: BIO130H1, BIO230H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B (2017)

Past Formats: In past years, tests and exams have been entirely multiple choice. The course contains a lab portion which involves small writing assignments.

Personal Comments: Many students find this course very different from BIO120, so if you had a negative experience with that course you may not have the same experience with this one. In past years, the course has been taught by good professors that have excellent lectures and fair tests. Many people find the course material to be quite interesting – it includes a series of lectures on how diseases evolve and continue to create human health challenges, and some of the interventions that can be used to counteract this.

BIO230H1: From Genes to Organisms

Prerequisite: BIO130H1, (CHM135H1, CHM136H1)/(CHM138H1, CHM139H1)/CHM151Y1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B- (2017), C+ (2016)

Past Formats: In past years, this course has had a midterm and final exam both of which are multiple choice and non-cumulative. The course also includes a lab portion and in past years has had a final lab group project. Labs are every 2 weeks.

Personal Comments: In past years, there has been the option of morning or evening classes for this course. As well, portions of this course have been taught by Professor Yip who is great professor. In the past, this course has been similar in lecture style and exams to BIO130. This course has the same lectures as BIO255, but a different lab component.

BIO255H1: Cell and Molecular Biology with Advanced Laboratory

Prerequisite: BIO130H1, (CHM135H1, CHM136H1)/(CHM138H1, CHM139H1)/CHM151Y1, cGPA 3.0

Exclusion: BIO230H1, BIO240H1, BIO241H1, BIO250Y1, BIO255Y1

Recommended Preparation: BCH210H1 (taken concurrently or previously)

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B+ (2017)

Past Formats: In past years, this course has had a midterm and final exam both of which are multiple choice and non-cumulative. The course also includes a lab portion which is an advanced lab compared to BIO230 but is the same lectures. Labs are every week instead of every 2nd week compared to BIO230.

Personal Comments: Students generally find this course to be a heavier course load compared to BIO230 because there are weekly labs. Our personal suggestion would be to take this course if you want the challenge of an advanced lab or are

very interested in improving your lab skills, with the knowledge that it will likely be more work than BIO230.

BIO260H1: Concepts in Genetics

Prerequisite: BIO230H1/BIO255H1

Exclusion: HMB265H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: Not available

Personal Comments: This is an alternate genetics course you can normally take instead of HMB265. Generally, students say that this class is more challenging than HMB265, but you learn more. Taking this course is also an option if you were doing poorly in HMB265 and had to drop it, as you can take this course in the winter semester and still fulfill your prerequisite requirements for 3rd year courses. Please consult with the registrar before dropping any courses.

CHEMISTRY (CHM)

CHM217H1: Introduction to Analytical Chemistry

Prerequisites: CHM(135H/139H, 136H/138H)/CHM 151Y with a minimum grade of 63%; (MAT135H, MAT136H)/MAT137Y/MAT157Y.

Exclusions: CHM211H5, CHMB16H3

Breadth Requirements: The Physical and Mathematical Universes (5)

Past Course Average: B (2017)

Past Formats: In past years, this course has had weekly labs along with tutorials. Generally, a few small assignments are evaluated for marks in the tutorials. Usually there are 2 term tests and a final which are partially cumulative.

Personal Comments: In the past, students have learned introduction analytical chemistry techniques and instrumentation. Some students find the weekly labs can be quite hectic. In previous years, the professor has been a good lecturer and uploads lecture recordings regularly; the course material may get confusing though for some students. We would personally recommend not taking this course unless you are a chemistry major or specialist.

CHM220H1: Physical Chemistry for Life Sciences

Prerequisite: (CHM135H1/CHM139H1, CHM136H1/CHM138H1)/CHM151Y1; (MAT135H1, MAT136H1)/MAT137Y1/MAT157Y1

Recommended co-requisite: MAT235Y1/MAT237Y1

Exclusion: CHM225Y1/CHM222H1, CHMB20H3, JCP221H5/CHM221H5

Breadth Requirement: The Physical and Mathematical Universes (5)

Past Course Average: C+ (2016)

Personal Comments: This is a 2nd year life sciences physical chemistry course that focuses on thermodynamics and quantum mechanics. The department has been making some recent changes to this course. In past years, tests have been short answer format and involved more written explanation than a typical chemistry

course. Students often find the textbook as a good resource to better understand the concepts for this course. We recommend knowing basic calculus for the quantum mechanics section.

CHM222H1: Introduction to Physical Chemistry

Prerequisites: CHM(135H/139H, 136H/138H)/151Y with a minimum grade of 63%; MAT(135H, 136H)/137Y/157Y; PHY(131H, 132H)/(151H, 152H)

Exclusions: CHM220H1, CHM225Y1, CHMB20H3, CHM221H5, JCP221H5

Co-requisites: MAT235Y/237Y

Breadth Requirement: The Physical and Mathematical Universes (5)

Past Course Average: C+ (2017)

Personal Comments: This course is the specialist version of CHM220. Students often find there is little qualitative explanation compared to CHM220; it is almost exclusively math-based. This course only covers thermodynamics as quantum mechanics is covered in the winter semester course, CHM223. We recommend knowledge of multivariable calculus for this course. Generally, students find the corequisite course MAT235Y does help with concepts in multivariable calculus but taking it as a co-requisite is not strictly enforced by the department. In the past, it's also been structured in such a way that you won't actually get to the multivariable calculus part until very late in the semester, so be prepared to do some practice on your own. The professor usually goes over most of the mathematical concepts you need in the first class. Otherwise, the tests are usually fair and in past years the professor has been generous with curves.

CHM223H: Physical Chemistry: The Molecular Viewpoint

Prerequisites: CHM220H1 with a minimum grade of B, or CHM222H1.

Co-requisites: MAT235Y/237Y recommended, but may be required for prerequisite in 3rd year

Exclusions: CHM225Y1, CHM221H1, CHMB21H3

Breadth Requirement: The Physical and Mathematical Universes (5)

Past Course Average: B- (2018)

Personal Comments: This course is a continuation of CHM223 and covers quantum mechanics. Students often find this a math-heavy course but students usually learn some basics of MatLab and programming. Some people find that having taken CHM220 is more helpful for this course (as opposed to CHM222), since CHM220 also covers some quantum mechanics.

CHM247H1: Introduction to Organic Chemistry II

Prerequisite: (CHM135H1/CHM139H1, CHM136H1/CHM138H1)/CHM151Y1

Exclusion: CHM249H1, CHM243H5, CHMB42H3

Breadth Requirement: The Physical and Mathematical Universes (5)

Past Course Average: C+ (2017), B (summer 2017)

Past Formats: In past years, this course has had 2 terms tests, a lab component, and a final exam which consist of short and long answer questions.

Personal Comments: This is a 2nd year life sciences organic chemistry which some students are required to take. Overall, students often find this course better than first year organic chemistry but the chemistry can get complicated. Generally,

the tests get harder as you learn more in the course and the final exam can be challenging. Our personal recommendation is to try and do well on the first test and the labs, in case you find the final exam challenging. Past students have found the labs are generally easy to do, but the write ups can be difficult.

CHM249H1: Organic Chemistry

Prerequisite: CHM151Y1/(CHM135H1/ CHM139H1, CHM136H1/ CHM138H1) with a minimum grade of 63%

Exclusion: CHM247H1, CHM243H5, CHMB42H3

Breadth Requirements: The Physical and Mathematical Universes (5)

Past Course Average: Not available

Past Formats: In the past, this course has had weekly labs along with term tests and a final exam.

Personal Comments: This course is the chemistry major/specialist version of 2nd year organic chemistry (CHM247). In the past, the weekly labs have come with weekly lab reports. This is manageable at the beginning of the semester because they are only partial lab reports, but some students find the reports can get busy at the end of the semester when you have to submit full lab reports. In past years, the tests/exams have had no trick questions and if you know your reactions and put the pieces together, synthesis questions are quite manageable.

HUMAN BIOLOGY (HMB)

HMB265H1: General & Human Genetics

Prerequisite: BIO120H1, BIO130H1, (CHM135H1/CHM139H1, CHM136H1/ CHM138H1)/ CHM151Y1

Exclusion: BIO260H1/ BIO207H5

Recommended Co-requisite: BIO230H1/BIO255H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: C+ (2017)

Past Formats: The course usually consists of weekly tutorial quizzes, a midterm exam, and a final exam. In the past, all these evaluations have been multiple choice format.

Personal Comments: This is a 2nd year genetics course that most life science students take. Past students have found it is manageable to get high scores on the tutorial quizzes if you study beforehand, which can help raise your mark. Our personal advice to do well in this course is to study for the weekly quizzes, do the problem sets, and do past tests. The tests may not always represent the lecture content, so you may need to practice in order to do well especially when it comes to timing.

HMB200H1: Introduction to Neuroscience

Prerequisite: BIO120H1, BIO130H1

Recommended Preparation: PSL300H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B (2018)

Past Formats: The professor for this course usually changes every year, so the format of the course also changes. Usually there are weekly tutorials along with 1-2 term tests and a final exam.

Personal Comments: This course is required for any neuroscience majors/specialists, but other life science majors sometimes take it because it is generally a straightforward course which mainly involves memorization. You may find this course helpful if you want to take any neurobiology courses in the future.

HMB201H1: Introduction to Fundamental Genetics and its Applications

Prerequisite: BIO120H1, BIO130H1

Recommended Preparation: HMB265H1/ BIO260H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B (2018)

Past Formats: In past years, this course has consisted of one written assignment, one midterm, one final, and quizzes.

Personal Comments: This is a mandatory course for those in the Fundamental Genetics and Its Applications Major. In past years, students have learned about a handful of the topics covered in HMB265, but in the context of how they are being used in biotechnology. This is generally a straightforward course, with tutorial quizzes in the same structure as HMB265. This is a course sometimes recommended as an elective for life science students, due to the simplicity of material and light workload if you have taken related courses before.

HMB202H1: Introduction to Health and Disease

Prerequisite: BIO120H1, BIO130H1

Exclusion: HMB203H1/ HMB204H1

Recommended Preparation: BIO230H1/ BIO255H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B+ (2017)

Past Formats: In past years, this course has consisted of labs and lectures. The term tests and final exams are usually multiple choice and short answer format.

Personal Comments: This course is required for all Health and Disease Students. In past years, some students have found it takes a while to get used to the lecture style of this course. Students often state the labs are generally easy to do well in, if you review the material for the quizzes. In past years, there has been a group presentation in the lab where you have to present a current scientific article. Some students have found the tests in this course are not always representative of the lecture content, yet the past course averages have still been pretty high. Many 4th year students take this course as an elective.

HMB203H1: Introduction to Global Health

Prerequisite: BIO120H1, BIO130H1

Exclusion: HMB202H1/HMB204H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B+ (2018)

Past Formats: In past years, this course has consisted of one midterm in multiple choice format, one final with multiple choice and short answer, one case study completed in a group, and one additional group project.

Personal Comments: In past years, this course has been taught by Maria Papaconstiniantou, the same professor who normally teaches HMB265. There is usually no textbook required, just the occasional article posted on Quercus. Students generally find this a straightforward class, and a good way to do well is to study the lecture slides and the posted articles. Some students find it quite easy to do well in this course, as it does not require an extensive science background.

IMMUNOLOGY (IMM)

IMM250H1: The Immune System and Infectious Disease

Recommended Preparation: BIO120H1, BIO130H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B+ (2017), B (2016)

Past Formats: In past years, this course has involved a midterm exam consisting of multiple-choice questions, an essay, and a final exam.

Personal Comments: In the past, this course hasn't had any required prerequisites so any students can take it. Therefore, it is often taken by non-science students because it is a straightforward course and is structured as a breadth requirement. You can take this course both in the fall and winter semester. With a science background and a little biology knowledge, this is typically an easy course for Life Science students.

PHILOSOPHY (PHL)

PHL281H1: Bioethics

Exclusion: PHLB09H3, PHL283H5

Breadth Requirement: Society and its Institutions (3)

Past Course Average: B (2016)

Past Formats: In past years, this course has involved multiple essays and a final exam.

Personal Comments: In the past, this course has been required for all 3rd year bioethics courses. This course usually contains tutorials where you go over readings and talk through different ethical arguments.

PHYSIOLOGY (PSL)

PSL300H1: Human Physiology I

Exclusion: PSL201Y1, PSL302Y1

Recommended Preparation: BIO130H1/BIO150Y1; CHM138H1/CHM151Y1;

and 1 FCE from any of the following: MAT135H1, MAT136H1, MAT135Y1, MAT137Y1, MAT157Y1, PHY131H1, PHY132H, PHY151H1, PHY152H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B- (2017)

Past Formats: In past years, this course has consisted of 2 term tests and a final exam, all of which were multiple choice format. The course is broken up into different sections and there is a different professor for each section. Topics include neurophysiology, endocrinology (hormones), and reproductive physiology

Personal Comments: In past years, there have been no required prerequisites for this course so anyone can take it. Yet, most life science students take it in their 2nd or 3rd year. Some students prefer to take this course in their 3rd year because 2nd year is already very heavy - especially 1st semester of 2nd year. As well, a lot of the main concepts of this course (i.e. structure dictates function, enzyme kinetics) are drilled into your head in 2nd year, so by 3rd year you have the concepts down. Granted, this course can also be helpful for MCAT studying so sometimes students prefer to take it in 2nd year. This course is also good preparation if you want to take ANA300, but it is not required. Practice tests are a great resource and in past years, the undergraduate physiology students' association has sold past test packages before the term tests.

PSL301H1: Human Physiology II

Exclusion: PSL201Y1, PSL302Y1

Recommended Preparation: BIO130H1/BIO150Y1; CHM138H1/CHM151Y1; and 1 FCE from any of the following: MAT135H1, MAT136H1, MAT135Y1, MAT137Y1, MAT157Y1, PHY131H1, PHY132H, PHY151H1, PHY152H1

Breadth Requirement: Living Things and Their Environment (4)

Past Course Average: B (2018)

Past Formats: In past years, this course has consisted of 2 term tests and a final exam, all of which were multiple choice format. The course is broken up into different sections and there is a different professor for each section. Topics include respiratory, cardiovascular, gastrointestinal, and renal (kidney) physiology. Very similar in format to PSL300 but the topics are not related.

Personal Comments: Similar to PSL300, this course can also be helpful for MCAT studying and/or ANA300. You are not required to take PSL300 as a prerequisite, but many students find it helpful to take both these courses in the same year because their format is quite similar. People generally do better in PSL301 compared to PSL300 because they are familiar with the format of the class and exams if they've previously taken PSL300. Practice tests are a great resource and in past years, the undergraduate physiology students' association has sold past test packages before the term tests.

PSYCHOLOGY (PSY)

PSY201H1: Statistics I

Prerequisite: PSY100H1

Exclusion:

ECO220Y1/ECO227Y1/EEB225H1/GGR270H1/HMB325H1/POL232H1/POL242Y1/ SOC202H1/STA220H1/STA248H1/STA288H1

Recommended Preparation: Grade 12 Calculus

Breadth Requirement: The Physical and Mathematical Universes (5)

Past Course Average: B (2017)

Past Formats: The format of the course varies depending on the professor and the year. Generally, there will be at least 1 term test and 1 final, consisting of both multiple choice and short answer questions. In past years, there has also been weekly online problem sets.

Personal Comments: In past years, this course has had priority enrollment for psychology specialists, majors, minors, but it is possible to get in after priority enrollment is completed. This is generally considered one of the easier statistics courses to take. We recommend taking it if you only need 1 statistics course and don't plan to pursue statistics any further. This course counts as one of the mandatory statistics courses life science students have to take (versus STA220 or STA288).

General Advice for Psychology Students:

- Take at least introductory course; maybe audit the class to understand behavioral and experimental economics -- which is a huge thing

RESEARCH OPPORTUNITY PROGRAM (ROP)

ROP299Y/399Y: Research Opportunity Program

Prerequisites: Students applying for 299Y Fall/Winter ROPs must have successfully completed 4-9 FCE before the beginning of the Fall term. Students applying for 399Y Fall/Winter ROPs must have successfully completed 9.5-14 FCE.

Breadth requirement: N/A

Past Course Average: N/A

Past Formats: This course generally consists of a 2-4-page interim report, an 8-10-page final report, a poster presentation, and a skills/participation grade. All of these are marked by the professor whose lab you are working in.

Personal Comments: This course allows you to work in a research lab for 1 full course credit. This can be over the full academic year or over summer. You cannot CR/NCR this course. This course is a really good way to get research experience. Applications for the course usually open after the winter reading week and are due in March/April. For more info look here:

http://www.artsci.utoronto.ca/current/course/rop/index_html#intro. In previous years, students have been allowed to apply to up to 3 different labs. Our personal advice is to apply to 2 labs you're really interested in and 1 backup lab that may have more available positions. This could increase your chances of getting into a lab as the application process can be competitive. As well, we recommend tailoring each application towards the lab you are applying to. This course may be helpful if you plan on doing a 4th year thesis research project. This course doesn't only have science research projects, but it also has projects available for math, statistics, social sciences, humanities, etc.

STATISTICS (STA)

STA130H1: An Introduction to Statistical Reasoning and Data Science

Prerequisite: N/A

Exclusion: Any of STA220H1/ STA255H1/ STA248H1/ STA261H1/ ECO220Y1/ ECO227Y1/ STAB22H3/ STA220H5/ STAB57H3/ STA258H5/ STA260H5/ ECO220Y5/ ECO227Y5 taken previously or concurrently

Breadth Requirement: The Physical and Mathematical Universes (5)

Past Course Average: B- (Winter 2018)

Personal Comments: (Peer Advisors 2019-2020) This course is a conceptual intro to statistics, covering many methods of inference and data analysis. It is a requirement for the Statistics Major, and a genuinely good gauge of what's in store if you continue with a statistics program (although the WORK done in later courses is pretty different). The course instructors are very dedicated and available for conversations about the course topics or statistics program; it is meant to be a helpful introduction into the department community! Students of STA130 will also have access to the course mentorship program, giving them access to a team of upper year mentors and curated activities.

STA220H1: The Practice of Statistics I

Prerequisite: Grade 12 Mathematics and one University course in the physical, social, or life sciences

Exclusion: ECO220Y1/ ECO227Y1/ GGR270H1/ PSY201H1/ SOC300Y1/ STA250H1/ STA261H1/ STA248H1/ STA288H1/ EEB225H1/ STAB22H3/ STAB57H3/ STA215H5/ STA220H5/ ECO220Y5/ ECO227Y5/ STA258H5/ STA260H5

Breadth Requirement: The Physical and Mathematical Universes (5)

Past Course Average: C+ (2016 and 2018)

Past Formats: In past years, there has been both an online and lecture-based component of this course. For the online portion, there is a midterm and final exam both of which are multiple choice format. For the lecture-based section, the past midterms have been short answer and the final exam multiple choice. There has also been online weekly modules and quizzes for both the lecture and online section as well as class participation in the lecture sections.

Personal Comments: This course counts as one of the mandatory statistics courses you have to take as a life sciences student (versus PSY201 or STA288). Some students find this course similar to Grade 12 Data Management in Ontario.

STA257H1: Probability and Statistics I

Prerequisite: (MAT135 (70%), MAT136(70%))/MAT137/MAT157

Exclusion: ECO227Y1, STA247H1, MAT377H1, STAB52H3, STA256H5, ECO227Y5

Breadth Requirement: The Physical and Mathematical Universes (5)

Past Course Average: C (Fall 2018)

Personal Comments: (Peer Advisors 2019-2020) As an intro to foundational theory of probability and statistics, this will be the first rigorous statistics experience you have! As STA130 is a good general-interest litmus test, STA257 curriculum and homework are indicative of what will follow in upper year statistics classes. Unlike STA130, you won't be working with data sets (save that for third year!), but rather computations and proofs. Note: as with many statistics courses, the prof can make or break the experience, so shop around at the beginning of the year for one which fits your learning style.

STA261H1: Probability and Statistics II

Prerequisite: STA257

Exclusion: ECO227Y1/ STA248H1/ STA255H1/ STAB57H3/STA260H5/ECO227Y5

Breadth Requirement: The Physical and Mathematical Universes (5)

Past Course Average: C (Fall 2018)

Personal Comments: (Peer Advisors 2019-2020) The more computational sequel to STA257! STA261 introduces concepts relating to statistical inference, and more of the topics introduced in STA130. Brush up on that distribution knowledge, but otherwise this course is relatively self-contained. The curriculum is foundational for subsequent statistics courses, particularly STA302. Be sure to drill practice questions before quizzes and midterms, and you should be well prepared! Note: as with many statistics courses, the prof can make or break the experience, so shop around at the beginning of the year for one which fits your learning style.

STA288H1: Statistics and Scientific Inquiry in the Life Sciences

Prerequisite: BIO230H1/ BIO255H1

Exclusion: STA220H1, PSY201H1, GGR270H1, ECO220Y1, ECO227Y1, SOC202H1, EEB225H1, HMB325H1, STA248H1, STA261H1, PCL376H1

Breadth Requirements: The Physical and Mathematical Universes (5)

Past Course average: B (2018)

Past Format: In past years, there has been a large lab component for this course which including learning how to code. There have also been lab assignments, as well as a final group project.

Personal Comments: This course counts as 1 of the mandatory statistics courses you have to take as a life sciences student (versus PSY201 or STA220). In past years, there has been very little math in this course. Instead it is focused on

statistical methods and understanding. Most questions give you the context for a research question, or an experimental design, and task you with identifying the proper test to use. You also analyze scientific papers and evaluate their use of statistics. You are required to provide a list of the problems with their analysis, and which tests they should have used instead. There has been a somewhat large lab component where students learn to code in R, which is a popular statistical software package. Students have coded for lab assignments, as well as a final group project. Students often find this course is quite a bit of work weekly, but marks are generally high, and the knowledge you gain is useful in the applied life sciences. With statistical packages now the norm, the need to compute statistical formulas by hand is limited, and this course can train you well for using statistics in applied settings.

General Advice for Statistics Students:

- STA257, STA261
- STA302, STA305, STA347, STA452, STA453, STA457
- One advice: be careful with this department. I did not have a good time with any course I have taken with regular professors in the statistics department. However, it is the $n=1$ case, and it is on you to extrapolate if you like. However, the courses mentioned above are useful for economics and are a good signal to both grad schools and employers.

RECOMMENDED BREADTH REQUIREMENT COURSES FOR LIFE SCIENCES

Some Recommended Breadth Requirement Courses:

ANT100Y (Introduction to Anthropology) - Category 3 + 4
CLA201H1S (Latin and Greek in Scientific Terminology) - Category 2
CLA203H1S (Science in Antiquity) - Category 2
PHL245H1F/S (Symbolic Logic) - Category 2
PSY100H1F/S (Introduction to Psychology) - Category 2
PSY270H1F (Introduction to Cognitive Psychology) - Category 2
HPS100H1F (Introduction to History and Philosophy of Science) – Category 2
HPS200H1F/S (Science and Values) – Category 2
HPS210H1F (Scientific Revolutions I) – Category 2
HPS211H1S (Scientific Revolutions II) – Category 2
ANT200Y (Introduction to Archaeology) – Category 3

SECTION II: Social Sciences and Humanities

ANTHROPOLOGY (ANT)

ANT204H1: Social Cultural Anthropology and Global Issues

Exclusion: ANT204Y1

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Klara, 2016-2017) This is required course for the general Anthropology major and minor. It is a very interesting course with different instructor from year to year. The topics studied include: new patterns of global inequality, war and neo-colonialism, health and globalization, social justice and indigeneity. Be prepared for frequent assignments as well as quite a few readings

ANT207H1: Core Concepts in Social and Cultural Anthropology

Prerequisite: none specified

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Klara, 2016-2017) This is required course for the Anthropology specialist and a course you can take for the other majors and minors. ANT204 and 207 build off of each other and there are many crossovers between the two courses. The readings are a very important part of the course.

ANT253H1: Language and Society

Prerequisite: none specified

Exclusion: JAL253H1

Breadth Requirement: Thought, Belief and Behaviour (2)

Personal Comments: (Klara, 2016-2017) This is a course that you can take for the minor (as well as other majors offered by the Anthropology department). If Professor Danesi is the instructor, take this course (even as an elective!), he is amazing. The content is interesting and not necessarily something people think of taking. The readings are very interesting and not too challenging and the exam is straightforward (everything is taken from the textbook).

COMPUTER SCIENCE

General Advice for Computer Science Students:

- CSC108, CSC148 at the least
- Try some machine learning courses; good for data manipulation
- This will get you RAship positions with professors at Munk School, Rotman, Economics Department & the Faculty of Law, etc.

CRIMINOLOGY (CRI)

CRI205H1: Introduction to Criminology

Prerequisite: Min. 4.0 FCEs

Corequisite: CRI225H1

Exclusion: WDW205H1, WDW200Y1

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Zachary, 2017-2018) This half-year course is taught by Professor Scot Wortley. It is a basic introduction to the study of criminology and various criminological schools of thought. It consists of a draft paper, final paper, midterm and final exam. **The course was very textbook heavy;** exam material consisted of both lecture material as well as an abundance of textbook material which never appeared explicitly in lectures. Exam typically involved multiple choice, short answer and essay questions; (tip: lists were extremely important; many exam questions were simply "I listed 12 facts about x in lecture, write 6)

CRI210H1: Criminal Justice

Prerequisite: CRI205H1, CRI225H1

Exclusion: WDW210H1, WDW200Y1

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Zachary, 2017-2018) This half-year course is taught by Professor Scot Wortley. It builds off of CRI205, and covers topics such as policing, crime enforcement and prevention etc. It consisted of a draft assignment, final assignment, midterm and final exam. Like CRI205, the course was very textbook heavy; exam material consisted of both lecture material as well as an abundance of textbook material which never appeared explicitly in lectures

CRI215H1 : Introduction to Sociological Studies

Prerequisite: Min. 4.0 FCEs

Exclusion: WDW215H1

Personal Comments: (Zachary, 2017-2018) This half-year course is taught by Professor Catherine Evans. It introduces students to different methods of criminological studies and research, as well as different criminological theories. The course consisted of two smaller assignments, a midterm, a final paper and a final exam.

CRI225H1: Criminal Law

Prerequisite: Min. 4.0 FCEs

Corequisite: CRI205H1

Exclusion: WDW225H1, WDW220Y1

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Zachary, 2017-2018) This half-year course is taught by Professor Danny O'Rourke-Dicarolo. It covers more nuanced topics in criminal law (precedent, common law, defences etc.). The course consisted of smaller case studies, a take home midterm, a final case study and a final exam.

CRI300H1 : Theories of Criminal Justice

Prerequisite: (CRI205H1 and CRI225H1) or (1.0 FCE 300+ level from HIS/PHL/POL/SOC and a min cgpa of 2.5)

Exclusion: WDW300H1

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Zachary, 2018-2019) This half-year course is taught by Professor Vincent Chiao. It covers theories of punishment (both theories on the morality behind punishment and theories on why we punish etc.). The course consisted of tutorial/group discussion, two papers and a final exam. **Readings for this course are crucial;** often times the professor would provide a detailed synopsis of the reading in class, but for the exam you are expected to be able to identify specific passages by author etc.

ECONOMICS (ECO)

ECO206Y1 : Microeconomic Theory

Prerequisite: ECO100Y1(70%)/(ECO101H1(70%), ECO102H1(70%));
MAT133Y1(63%)/(MAT135H1(60%),
MAT136H1(60%))/MAT137Y1(55%)/MAT157Y1(55%)

Exclusion: ECO200Y1, ECO204Y1

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Christopher 2017-2018 and Talha 2016-2017) This could be quite challenging but a course you must take not only for getting into Specialist Program but also if you want to understand the foundations of microeconomic theory and want to go to grad school. It requires a good understanding of calculus and requires more mathematical maturity than other similar courses. I would highly recommend taking ECO210 along with this course in addition to MAT223/MAT224. They are not a must but would make your life much easier. Second year is generally difficult for everyone, so do not overburden yourself if you are thinking to pursue specialist stream and are also taking ECO208Y1 and ECO220Y1/ECO227Y1/STA257/261 (if you are also interested in a statistics program I would recommend taking STA257/261). There is one key aspect that you should always keep in mind throughout the course: intuition. Don't let maths misguide you. At the end of the day, it is a tool that economists use to solve the problems. The exams in this course tend to be about half written answers and half mathematical calculations/demonstrations. Go in expecting to have to explain your reasoning without economic jargon - you can't always get away with just doing math.

ECO208Y1: Macroeconomic Theory

Prerequisite: ECO100Y1(70%)/(ECO101H1(70%), ECO102H1(70%));
MAT133Y1(63%)/(MAT135H1(60%),
MAT136H1(60%))/MAT137Y1(55%)/MAT157Y1(55%)

Exclusion: ECO202Y1, ECO209Y1

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Christopher 2017-2018 and Talha 2016-2017) This is a computationally intensive course and requires less effort than ECO206Y1. Try all

different and weird cases of all models and you should be end with a shining 4.0. Although the course does not require higher level of calculus, you should be extremely comfortable with doing algebra. It is okay if you are not good at it right now, make sure you keep it on your radar so that you practice when you are doing the course. Try just deriving all the models yourself - that is the best practice for doing well on the exams.

ECO210H1: Mathematical Methods for Economic Theory

Prerequisite: [ECO100Y1](#)(67%)/([ECO101H1](#)(63%), [ECO102H1](#)(63%)/[ECO105Y1](#)(80%); [MAT133Y1](#)(63%)/([MAT135H1](#)(60%), [MAT136H1](#)(60%)/[MAT137Y1](#)(55%)/ [MAT157Y1](#)(55%)

Corequisite: ECO200Y1/ ECO204Y1/ ECO206Y1

Breadth Requirement: Society and its Institutions (3), The Physical and Mathematical Universes (5)

Personal Comments: (Talha 2016-2017) This is a really good course that prepares you for 4th year courses and/or graduate school. The course follows Martin Osborne's Math Tutorial (an online website) with a mix of both linear algebra and single variable and multivariate calculus overlapping with maths courses such as MAT223. I advise taking this course with ECO206 since it makes ECO206 much easier.

ECO220Y1: Introduction to Data Analysis and Applied Econometrics

Prerequisite: ECO100Y1(67%)/(ECO101H1(63%), ECO102H1(63%)/ECO105Y1(80%); MAT133Y1/(MAT135H1, MAT136H1)/MAT137Y1/MAT157Y1

Exclusion: GGR270H1, PSY201H1, PSY202H1, SOC300H1, STA220H1, STA221H1, STA247H1, STA248H1

Breadth Requirement: Society and its Institutions (3) + The Physical and Mathematical Universes (5)

Personal Comments: (Christopher 2017-2018) Professor Murdock is an excellent professor, she actually cares that you learn the material. There are weekly quizzes, and bi-weekly Excel tutorials; which require you to stay on top of your work by doing the practice problems. There are also iClicker questions in lecture so make sure you attend all the lectures. The iClicker questions are not difficult but they do help you understand the material. The course has 4 term tests which consist of about 7-9 questions with multiple parts – Professor Murdock posts tonnes of practice tests to help you! This is one of the few courses at UofT where I felt like I was learning practical skills I would use in the workplace. The workload is not light but the material is relevant and interesting, and highly cumulative. I would advise forming a study group or taking it with a friend to help keep on top of things.

General Advice to Economics Students (from Talha Naeem):

Those of you who are trying to pursue a specialist in Economics or aiming to go to graduate school, I would like to share what I hope I knew when I was in my first/second-year. This also applies to those who are interested in Major programs

if they want to differentiate themselves from other students. It is not intended for students who are doing Rotman as for them some courses are a must, but you are more than welcome to try material outside of your program to earn that comparative advantage.

The department provides you a list of set courses that you need to complete to graduate with a specific program, follow that to get the degree, BUT that is not what is going to differentiate you or make you unique regarding your academic training. You have to take the lead concerning your course selection and be willing to take calculated risks with the understanding that your cGPA might vary a bit.

Consider your undergraduate degree as a portfolio and the courses you are taking as assets. Some are risky assets, while some are less risky. Risk-free is often rare; that is, there are hardly any bird course per se (also, who said being a bird is easy? Try flying!) Portfolio theory suggests that you adjust your portfolio with a mix of assets that minimizes variance and maximizes return. Every asset has different classes (for instance, you get ECO200/ECO204/ECO206, ECO206 might be the stock with AAA rating while the other could be riskier than others.), but it is difficult to know the type of asset before adding it to your portfolio. In my personal view, an economics student should focus on four more disciplines in addition to economics and try to integrate them in her degree in a way that suits her. The courses keep on changing, so the following should only provide a general guideline or classes that I think would be useful to consider when selecting courses for upcoming years:

Economics:

- Take all math intensive economics courses (e.g., ECO206/ECO208..). There is an implicit *course premium* attached to all such courses.
- ECO210, ECO325, ECO326, ECO331, ECO364, ECO365, ECO372, ECO374, ECO375, ECO462, ECO463, ECO464, ECO465, ECO466, ECO475, ECO499
- Also, in your fourth year, you can ask the department to let you take Ph.D. courses. They are difficult but an excellent signal if you do well in them. What's the best part of those courses? They end before the drop date, so you can drop the course after you see your grade (Did I mention arbitrage?)

ENGLISH (ENG)

ENG220H1 : Intro to Shakespeare

Prerequisite: 1.0 ENG FCE or any 4.0 FCE

Exclusion: ENG220Y1, ENG320Y1

Breadth Requirement: Creative and Cultural Representation (1)

Personal Comments: (Usman, 2016-2017) You may not have liked Shakespeare in High School, but oh boy are you going to love it now! This course is a brisk overview of Shakespeare's most popular plays and is generally a very accessible and non-obtuse look at the well-known works. There are a lot of opportunities for

bonus marks and there is a large participation percentage of the grade (25%) which means attending tutorial and lectures is heavily incentivized. Tests have very little analysis, more quotation identification and multiple choice with a few short answer questions- so it is important to at least read all the works and not analyze any test too deeply in preparing for tests Fun and laid back tutorials- just do the reading every week (preferably while listening to the audio, it honestly makes it a lot more engaging!).

ENG215H1: The Canadian Short Story

Prerequisite: 1.0 ENG FCE or any 4.0 FCE

Breadth Requirement: Creative and Cultural Representation (1)

Personal Comments: (Usman, 2016-2017) Easy and brisk readings, only 1 or 2 short stories per week which range from 8 to 20 pages a piece. Lectures can be informative but can also be boring. The instructor Sarah Caskey is very nice and personable, and the lectures are very cohesive and planned out- but the stories themselves can be not the most exciting and this is reflected in the lectures. Marking wise this course is mild- not as easy as Shakespeare but not as hard as Intro to American Literature. More so than other English courses, it's important to start essays early and consult with the Professor. There are no TAs in this class, but Caskey has a very warm personality... but sometimes her niceness gets in the way of providing harsh (but useful and productive!) critiques of your work, a fact you will only discover when you get your mark back after thinking you nailed the essay

ENG250H1: Introduction to American Literature

Prerequisite: 1.0 ENG FCE or any 4.0 FCE

Breadth Requirement: Creative and Cultural Representation (1)

Personal Comments: (Usman, 2016-2017) Incredible, chronological reading list that comprises the best of American classics like *Scarlet Letter* and *The Sound and The Fury*. Lectures are very dense and can be dry, the professor (Alan Ackerman) who has been teaching the course for a few years now is either very respected or despised, depending on the student for this very reason- despite their density, they are nonetheless brilliant in their theses. Lectures do a good job of preparing students for essays and tests, tutorials are also great opportunities to examine the text in more intimate detail. Tests are not hard but do require that students have done a fair amount of the readings (~70%) and have attended lecture. Also, these tests require a lot of writing, not much time to think. Consult with the TA early on regarding the essay, they can give a solid direction as to what the expectations are and are more than happy to conduct follow-ups. Considered one of the most difficult second year English courses (%60-ish class average compared to 70% in other courses)

ETHICS, SOCIETY AND LAW

- Program is **type 2:** limited enrolment program

- If you apply at the end of first year, enrolment is limited to students with an overall average of 77% or higher in 3 FCEs (at the end of first year) selected from courses that are categorized as BR=2 and/or BR=3.
- For students applying at the end of second year, a minimal overall average of 77% is required in 3 FCEs from courses that count towards the program including at least 1.0 FCE from:

TRN203H1: Society, its Limits and Possibilities

Prerequisite: Active in ASMAJ1618

Breadth requirement: Society and its Institutions (3)

Personal Comments: (Nicole, 2017-2018) This course discusses key texts from various disciplines that introduce fundamental features, limitations, and possibilities of contemporary society. Political consent, economics, governmental administration, the global / post-colonial world, historical transformation, gender politics, and media may be addressed.

TRN204H1: Introduction to Law and Legal Reasoning

Prerequisite: Active in ASMAJ1618

Breadth requirement: Society and its Institutions (3)

Personal Comments: (Nicole, 2017-2018) This course is introduction to legal reasoning. The first half of the course focuses on criminal law and the second half focuses on tort law. Both professors are from the UofT Law School. It is required for the ESL major and has weekly tutorials.

TRN303H1: Ethics and Society

Prerequisite: TRN203H1 and active in ASMAJ1618

Breadth requirement: Thought, Belief and Behaviour (2)

Personal Comments: (Nicole, 2018-2019) This is a seminar style course with one of the ESL professors. The topic varies from year to year but it heavily focuses on arts-based research and getting students involved in quantitative and qualitative analysis. Participation is worth a lot of your grade and class attendance is mandatory.

TRN304Y1: Law and Social Issues

Prerequisite: Active in ASMAJ1618

Breadth requirement: Society and its Institutions (3)

Personal Comments: (Nicole, 2018-2019) This is a full-year course that is similar to and taught by the same professor as TRN305Y. It focuses on the different parts of the legal system

TRN305Y1: Basic Principles of Law

Prerequisite: Active in ASMAJ1618 only if enrolling in the Fall/Winter session. A student must be in third or fourth year.

Exclusion: TRN305H1

Breadth requirement: Society and its Institutions (3)

Personal Comments: (Nicole, 2018-2019) This is a full-year course on the different areas of law (private law, criminal law, tort law, etc.). It is taught by the Law Professor Hillary Evans Cameron who is an amazing and caring Professor. The workload is heavy but it is very rewarding. A lot of ESL students take this course.

HEALTH STUDIES (HST)

HST209H1: Introduction to Health: Determinants of Health & Health Care

Exclusion: UNI209H1

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Maya, 2016-2017) This course examines the social, cultural, economic and political influences that impact health, focussing on Canada. 10% Paper, 35% Midterm, 15% Presentation, 35% Research Paper and (2) 5% Quizzes.

HST211H1: Health Policy in Canada

Exclusion: UNI211H1

Breadth requirement: Society and its Institutions (3)

Personal Comments: (Maya, 2016-2017) This course is an introduction to health policy in Canada, focusing on social determinants of health.

HST250H1: Introduction to Research Methods in Health Studies

Exclusion: UNI250H1

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Maya, 2016-2017) Research Methods Course usually consists of 8 Weekly assignments (40%), Midterm Test (25%), Final Exam (35%)

INTERNATIONAL RELATIONS

ECO230Y1: International Economic Institutions and Policy

Prerequisite: ECO100Y1(67%)/(ECO101H1(63%), ECO102H1(63%))/ECO105Y1(80%)/enrolment in the International Relations Specialist or Major Programs, or the IR/Peace and Conflict Studies joint Specialist Program

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Dhvani, 2016-2017) This course is required for the IR major and specialist programs. It reviews key concepts of international trade and finance within a broader understanding of international relations issues. Completing past practice exams and tests is essential to succeeding in the course.

POL208Y1: Introduction to International Relations

Prerequisite: 1.0 POL credit /4.0 full course equivalents

Exclusion: POLB80H3/POLB81H3/POL208Y5

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Amira, 2017-2018) This course is IR major and specialist programs. It can also be for the political science specialist, major and minor programs. The structure and content of the course depends on the professor but for the most part the course looks at different themes and issues in global politics through different lenses, namely, Realist theory, Liberalism, Marxism, and Constructivism. Overall, the course is not difficult if you have grasped what the different IR theories are and can apply them to different global issues and also can define key terms, give an example and counterexample of key concepts and bring back to the IR theories. I would advise taking this course during your second year since it is a prerequisite for interesting third year courses such as POL361/362 Global Political Economy, POL340 International Law, POL380 International Politics.

TRN250Y1: Ordering International Relations in the Age of Empire

Prerequisite: Admission to International Relations Major or Specialist program

Breadth Requirement: Society and its Institutions (3) + Thought, Belief and Behaviour (2)

Personal Comments: (Dhvani, 2016-2017) This course is required for all IR specialists and majors. It needs to be taken during your second year since it is a foundational IR course. The course examines origins and development of 3 fundamental norms in IR, namely, sovereignty, free trade, and human rights in their historical, imperial context. The course is mainly taught from a social constructivist view. I would highly advise to practice the past exams and tests available on the exam repository before exams. In addition, make use of the writing centre services for the final research paper.

PHILOSOPHY (PHL)

PHL210Y1: 17th-and 18th-Century Philosophy

Exclusion: PHLB35H3, PHL210Y5

Breadth Requirement: Thought, Belief and Behaviour (2)

Personal Comments: (Christopher, 2017-2018) This course has changed lecturers a fair bit in the last few years but generally, the course will cover a few major philosophers in a fair bit of depth - dense but relatively little reading in absolute terms. This course is very much skewed towards metaphysics and epistemology - if you're more interested in ethics and political philosophy it might be better to take Ancient Philosophy.

PHL265H1: Introduction to Political Philosophy

Exclusion: PHLB17H3, PHL265H5

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Christopher, 2017-2018) Generally, this course is much more contemporary in focus than similar courses like POL200, although this varies depending on which prof is teaching the course. In our year, we almost entirely

used an excellent if somewhat advanced text on contemporary political philosophy by Kymlicka instead of reading the philosophers directly.

PHL271H1: Law and Morality

Exclusion: PHLB11H3, PHL271H5

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Nicole, 2017-2018) This is one of the elective courses in the ESL major program and many ESL students do take this course. The course instructor varies from year to year but it is often taught by professors from UofT Law School. The course content varies from year to year but it largely focuses on Mill and Dworkin.

POLITICAL SCIENCE (POL)

POL200Y1: Political Theory: Visions of the Just/Good Society

Exclusion: POLB70H3/POLB71H3/POLC70H3/POLC71H3/POL200Y5

Breadth Requirement: Society and its Institutions (3) + Thought, Belief and Behaviour (2)

Personal Comments: (Amira, 2017-2018) This course is required for the Political Science major and specialist programs. If you are interested in pursuing a Political Science specialist you must take the course during your second year since it is a prerequisite for POL320 Modern Political Thought – a third year required course. If you are in the major but intend on taking more political philosophy courses then take this course during your second year. The books for this course are usually: Plato's *Republic*, Aristotle *Politics*, Machiavelli *The Prince*, Hobbes *Leviathan*, Locke *The Second Treatise* and *Letter on Toleration*. The readings are very long but lectures do a good job of summarizing readings regardless of who the Professor teaching the course is so GO TO CLASS. The course is usually three essay and one exam. For the exam, a list of 10-12 potential questions distributed and 4 come up of which you answer 2. The first two essays are usually about a theme in one of the books and the third essay - double the grade of the first two essays and longest essay - asks you to compare one Ancient Philosopher with a Modern Philosopher e.g. compare Plato with Machiavelli. Essays are similar to the POL101 essay on populism in Hungary. Biggest tip for this course is to focus on themes in readings instead of the little details. Draw comparisons between the different philosophers and books – e.g. Plato and Aristotle on the family or Hobbes and Locke on the state of nature. To draw comparisons doing minimal readings try to link different lectures together - for example, after lecture on the Hobbesian state of nature and Lockean state of nature try to come up with three similarities and three differences from just lecture notes and then go back and try to add quotes and more details from readings.

POL201Y1: Politics of Development: Issues and Controversies

Prerequisite: 1.0 POL credit / 4.0 full course equivalents

Exclusion: POLB90H3/POLB91H3

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Mariah, 2017-2018) This course is a nice alternative to POL208. The content is very interesting and it is not difficult to get a good grade in this course. If you memorize, memorize, memorize key terms, you will be golden for this course.

POL214Y1: Canadian Government and Politics

Prerequisite: 1.0 POL credit / 4.0 full course equivalents

Exclusion: POL214Y5/POL224Y1/POLB50H3/POLB50Y3/POLB52H3

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Amira, 2017-2018) You are required to take either POL214 or POL224 for the Political Science major and specialist programs. The course is usually two essays, two essay-based exams and tutorial participation. If you have no background in Canadian politics, this can be a difficult course and POL224 may be a better course to take. This course does not require any previous background in Canadian politics but most students in the course tend to have some background. If you have some background in Canadian politics or how a parliamentary system works then this course is not difficult. Exam questions are short argumentative essays on a debate discussed in the textbook or mentioned during lectures or tutorials on common topic in Canadian politics - e.g Is Quebec a distinct society? Or does the Charter of Rights and Freedoms hinder democracy? For the two essays, you are provided with a long list of questions (from 10-35 questions depending on the professor) you can choose from on various topics.

POL222H1: Introduction to Quantitative Reasoning I

Prerequisite: 1.0 POL credit

Exclusion:

POL242Y1/POL242Y5/POL322H1/ECO220Y1/GGR270H1/PSY201H1/SOC202H1/STA220H1

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Amira, 2017-2018) This course is required for the Political Science major and specialist programs. It usually consists of two essays, final and participation (iClicker+tutorial). It is not a difficult course – the exam and essays are very similar to the tutorial problems. If you solve the tutorial problems before tutorial and fully understand them this will be a very easy course for you. For more mathematically inclined students, consider waiving the course and taking STA220 instead. Can also be waived for ECO220 or other Quantitative Methods courses -- see Political Science department about that.

POL224Y1: Canada in Comparative Perspective

Prerequisite: 1.0 POL credit or 4.0 full course equivalents

Exclusion: POL111H5/ POL 214Y5/ POLB50Y3

Breadth Requirement: Society and its Institutions (3)

Personal Comments: (Mariah, 2017-2018) You are required to take either POL214 or POL224 for the Political Science major and specialist programs. This course is not as comparative as you may think but this is not a difficult course. You can definitely only go to lectures or do the readings -- if you are very familiar with one of those, the exam will be a piece of cake! For the final, it is important to be very comfortable with different types of electoral systems and how they function -- what would be a better model for Canada to adopt for example and what's an example of a country that has done this before? The midterm and the final are both two prompts which you have about an hour each to answer.

Section III: Physical and Mathematical Sciences

MATHEMATICS

MAT223H1: Linear Algebra I

Prerequisite: High school level calculus

Exclusion: MATA23H3, MAT223H5, MAT224H1, MAT240H1, MAT240H5, MAT247H1, MAT247H5

Breadth Requirement: The Physical and Mathematical Universe (5)

Past Course Average: C+ (Fall 2017)

Personal Comments: (Talha, 2016-2017) This is a first-year course for many students but contrary to what the math department recommends it is not necessary to take it in first year if you are only planning on completing a minor (or potentially even a major). A relatively straightforward course - Jason Siefken is a good course coordinator and I find that his flipped classroom works very well for this course. Linear algebra is highly cumulative - it's very important to understand all the course concepts that have been covered. Nicholas Hoell is also a great option. He is a fair examiner. If you do what he asks you to do and attend his lectures, you'll end with that 4.0.

Personal Comments: (Peer Advisors 2019-2020) This course is one of the more straightforward and computational second-year math courses. It is accessible to first-year students, and many do choose to take it then. Practice is key here; once you have a process/computation down, you will be set for the assessments! The curriculum introduces vector and matrix operations, transformations, and foundational concepts with eigenvalues.

MAT224H1: Linear Algebra II

Prerequisite: MAT221(80%)/MAT223/MAT240

Exclusion: MAT247H1

Breadth Requirement: The Physical and Mathematical Universe (5)

Past Course Average: C+ (Winter 2018)

Personal Comments: (Peer Advisors 2019-2020) This is the more theoretical sequel to MAT223. Personally, I found it very clarifying, as the curriculum brings to light many cool connections and realizations in the field! The textbook is a wonderful resource. A successful strategy is to honestly (honestly!) read the applicable textbook chapters *before* class, focusing heavily on understanding the worked examples. Highlight what you don't understand, and ask the professor in class the next day. Having a solid conceptual understanding is key throughout the course, and in the final weeks: practice putting matrices into Jordan-Canonical form!

MAT240H1 /247: Algebra I/II

Prerequisite: High school level calculus (but an implicit mathematical maturity is assumed)

Corequisite: MAT157

Personal Comments: (Lucy, 2018-2019) This is a highly theoretical course in linear algebra for first years in math related programs, but some take it second year. Proof-based and highly theoretical, though some calculations are done. Very good course for building a solid foundation in linear algebra for programs requiring a theoretical understanding of the subject, highly recommended if you want to get a taste for proof based maths but if you are just looking to learn how to do the calculations MAT223 might be a better choice. Meinrenken's tests were straightforward and a good mix of proof/calculation questions and reasonable in terms of expectations, though by no means easy; course not curved.

Personal Comments: (Peer Advisors 2019-2020, MAT240 specific) This course is an introduction to linear algebra, with a decent mix of concept and computation. It is a requirement for the Math Specialist program and a corequisite with MAT157. The matrix skills taught in this class are essential for any higher-level math (most, if not all, math courses after this one will reference or use what you learn here!). MAT240 is more theoretical and proof-based than MAT223. While the professors and TAs are very helpful, there is strong emphasis on self-accountability. Forming a study group can be a huge asset in this course.

Personal Comments: (Peer Advisors 2019-2020, MAT247 specific) This is the sequel to MAT240, and MAT157 is a corequisite. The content builds on and dives deeper into what was learned in MAT240. It is heavily theoretical, with some computation. It is a Math Specialist requirement and tends to go more smoothly than MAT240 because you will be used to the theory and matrix work.

MAT235Y1: Calculus II

Prerequisite: (MAT135H1/MATA30H3/MATA31H3, MAT136H1/MATA36H3/MATA37H3)/MAT135Y5/MAT137Y1/MAT137Y5/MAT157Y1/MAT157Y5

Exclusion: MAT237Y1, MAT257Y1, MATB41H3, MATB42H3, MAT232H5, MAT233H5, MAT236H5, MAT368H5, MAT291H & MAT294H

Breadth Requirement: The Physical and Mathematical Universe (5)

Personal Comments: (Christopher, 2017-2018) This course is very much focused on science applications, particularly in physics. I found this course got significantly more difficult over the year - quite a few people dropped out, so the tests had to get significantly harder to maintain the approximately C+ average. Overall, though, it's fairly doable and a useful course to take if you need to know multivariable calculus in your field.

MAT237Y1: Multivariable Calculus

Prerequisite: MAT137/MAT157/(MAT135, MAT136(90%)), MAT223/MAT240

Exclusion: [MAT235Y1](#), MAT257Y1, MATB41H3, MATB42H3, MATB43H3 & MAT368H5

Breadth Requirement: The Physical and Mathematical Universe (5)

Past Course Average: C+ (2018/2019)

Personal Comments: (Peer Advisors 2019-2020) This course is the higher-dimensional calculus follow-up to MAT137. You will cover many of the same topics as in MAT137, but generalizing to operations with vectors and beyond! As the course relies on some linear algebra, it can be helpful (but in no way required) to take MAT223, Linear Algebra I, prior or simultaneously. This course can be a challenge, as it is notably harder than MAT137. Hence, you may wish to observe a few lecture sections to find the professor who explains these concepts best for you. If no lecture is adequate (and warning, sometimes they aren't!) the online notes are your best bet!

MAT244H1: Introduction to Ordinary Differential Equations

Prerequisite: (MAT135, MAT136)//MAT137/MAT157, MAT223/MAT240

Exclusion: MAT267H1, MAT212H5, MAT258Y5

Breadth Requirement: The Physical and Mathematical Universe (5)

Past Course Average: C+ (Winter 2019)

Personal Comments: (Peer Advisors 2019-2020) The quiz and exam questions are taken exactly from the assigned homework! These are tricky if you don't attempt the problems beforehand, so consistent practice before each quiz is imperative. In my experience there were no out-of-the-blue questions, and if you had done the practice the assessments were very routine and doable. In this course more so than others, if you are willing to put in the work you will do well!

MAT246H1: Concepts in Abstract Mathematics

Prerequisite: MAT133Y1/(MAT135H1, MAT136H1)/MAT137Y1, MAT223H1

Exclusion: MAT157Y1

Breadth Requirement: The Physical and Mathematical Universe (5)

Past Course Average: C (Fall 2018)

Personal Comments: (Talha, 216-2017) This course had a very low average (C) in fall 2018; usually dependent upon who is teaching. Unless you want to get interested in number theory, set theory, and abstract mathematics generally, the specific content in the course is likely not useful going forward. However, the course is very good at making you get better at proofs and mathematical thinking, and the content is quite interesting even if you're not super interested in math. This course exposes you to a couple of different things in mathematics, which could be useful to those who are thinking to take more courses in mathematics.

Personal Comments: (Peer Advisors 2019-2020) A wonderful course to learn abstract mathematical proofs! Overall the content is pretty united and interesting, although the experience and theoretical nature varies substantially depending on the professor. Professor Soheil, for example, teaches a very abstract course entirely based on proofs. This is a great course for learning how to do proofs, much more so than MAT137 in my opinion. Proofs are logical, and many have recognizable approaches you can apply to other proofs in the course.

MAT257Y1: Analysis II

Prerequisite: MAT157/ MAT157Y5, MAT247H1/ MAT247H5

Breadth Requirement: The Physical and Mathematical Universe (5)

Personal Comments: (Peer Advisors 2018-2019) This is the second-year multivariable calculus course for math related specialists, covers differentiation and integration in \mathbb{R}^n and on manifolds. As with all math specialist courses, this is very proof-based and requires a very high degree of mathematical maturity; you will find it very enjoyable if you enjoy proofs. Historically Bierstone's average has been very high (in the high 70s) after curving (they were in the 40s before curving, he is known to give very hard tests) but he has indicated he does not want to curve in the future so not sure what will happen with that.

Personal Comments: (Peer Advisors 2019-2020) This course is the Math Specialist upper dimensional calculus (or analysis) requirement. As the course often begins with a bit of topology, it can be helpful (but in no way required) to take MAT327, Introduction to Topology, alongside MAT257. The TAs for this course are usually very passionate and eager to help students, which is always great. It is especially helpful when this course can be quite difficult. Having access to multiple books is highly Required and very helpful in order to get varying descriptions of certain high-level concepts.

MAT267H1: Advanced Ordinary Differential Equations

Prerequisite: Mat157Y1/ MAT157Y5, MAT247H1/MAT247H5

Corequisite: MAT257Y1

Exclusion: APM288H1, MAT244H1, MATB44H3, MAT242H5, MAT252H5, MAT234H1, MAT292H1

Past Course Average:

Personal Comments: (Peer Advisors 2018-2019) This is a theoretical introduction to ODE's, but you are still expected to do quite a bit of calculations. Mary Pugh introduced weekly quizzes to the course, so far they have been straightforward solving ODE's, and she also introduced an essay worth 5%, which can be written on any topic you want.

Personal Comments: (Peer Advisors 2019-2020) This is a theoretical course on ODEs (Ordinary Differential Equations). It is a requirement for the Math Specialist program, with MAT157 and MAT247 as prerequisites and MAT257 as a corequisite. Going to the professor's office hours is quite beneficial for this course. I would also recommend Paul's Online Math Notes, which is a free resource that follows the beginning of this course quite closely and is very helpful in ensuring that you have a strong grasp of the basics, which is essential to doing well in the rest of the course.

General Advice for Mathematics Students:

- MAT257 (preferred)/237 (really good alternative as 257 is not easy) /235 (at least)
- MAT223, MAT224, MAT244
- MAT327 (not directly useful but good for mathematical maturity and opens your option to take MAT357!)
- MAT357/MAT337 (at least -- get 90+ -- for some reason, grad school care a lot about real analysis; not the end of the world if you get lower than that.)
- MAT246 (if you have not done MAT257), APM462

- I understand some of these courses are very advanced, but I think you should sit in a lecture and see if you can handle the rigor. I did not know about all these specialist level courses, so I ended up taking major-level courses. Major level courses are good enough for anywhere, but Specialist level mathematics courses make you unbeatable candidate. Don't end your undergraduate career without taking some risks and pushing yourself outside of your comfort zone; you will never get this opportunity again!

PHYSICS

PHY254/256/250/252: Classical/Quantum/E&M/Thermal Physics

Personal Comments: (Lucy, 2018-2019) These are all pretty much the same, with problem sets worth something like 20% to 30%, a midterm worth 20% to 40%, and as a physics specialist you don't really get to choose whether or not to take these lol. If you get Steinberg for PHY256, prepare to do a lot of self studying since his lectures can be very disorganized and hard to understand; Steinberg also had a significantly harder final than other profs in our year. Bob Orr's thermal physics has a very different mark breakdown with problem sets worth 10-15% each with 50% in total, so it'd be wise to spend a lot more time on these problem sets. Other than that the strategy to do well in all of these courses is pretty much the same, as always in physics just make sure you understand everything and know how to do a variety of different problems, past midterms/finals are particularly helpful in this aspect.